# AN ANALYSIS OF DESIGN THINKING IN APPLIED GAME DESIGN

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Bournemouth University in collaboration with HKU University of the Arts Utrecht

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## ABSTRACT

The design of an applied game is complicated by needing to balance its usefulness, gameplay experience, and sustainability. In the applied design process, game designers occupy a pivotal position between game design knowledge, development team, co-designers, and players. From this complex web of interaction, the designer is still expected to invent a new game. From a design investigation perspective, there is an opportunity to expand our general knowledge of game design by exploring first-hand the design and development of an applied game.

The aim of this practice-led PhD research was to design and develop a pervasive multiplayer applied video game as a tool for psychiatric healthcare workers treating patients suffering from depression and psychosis. The applied game Moodbot was co-designed during an intensive iterative process with healthcare experts and patients from Altrecht Mental Healthcare Institute and developers from the HKU University of the Arts.

The following exegesis highlights game design knowledge gained from the development of the applied game Moodbot co-created with psychiatric healthcare workers, psychiatric patients, game artists, programmers, audio designers, and game designers. A design decision tool based on epistemic frameworks is used in this dissertation to structure and explore the applied game decision-making that shaped Moodbot and specifically examines a critical design decision moment, which looks at the influences from technology and co-designers on the design and designer.

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# **AUTHOR'S DECLARATION**

The work in this thesis has been written in compliance with the Bournemouth University Code of Practice for Research Degrees. The work is original except where indicated specifically by reference. During the course of the research findings were presented in the following publications:

Hrehovcsik, M. and van Roessel, L., 2013. Using Vitruvius as a Framework for Applied Game Design. *Games for Health: The 3rd European conference on gaming and playful interaction in health care*. Amsterdam.

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# **1. INTRODUCTION**

Games specifically designed for a purpose, apart from pure entertainment, to impact a domain or target audience are considered 'applied games'. Applied game refers to the multitude of games designed with a real-world application, e.g. training, persuasion, education, exercise, health, human-computing, etc. 'Applied' refers to the tactical use and usefulness of the game activity outside the domain of the game itself (Roessel and Mastrigt 2011). In contrast, entertainment games are designed to be played for fun, even when knowledge and skills are accurately represented or simulated. Typically, these games have fictional themes (e.g. fantasy, science fiction, horror, etc.) and belong to a known genre (e.g. shooter, racing, platform, fighting, action RPG, etc.). Gamers and potential gamers have come to expect production values in commercial entertainment to apply to all games in all areas, regardless of context. Applied games have a reputation for either sacrificing entertainment value for applicability or emulate entertainment games at the expense of the applied potential. An aspect of this research aims to demonstrate there should be little or no distinction in the player's gaming experience when comparing entertainment and applied games. As an applied game designer there is a tremendous amount of opportunity for invention and creativity in the design of applied games. Applied games often require the designer to combine game elements in new and surprising ways to accomplish the applied purpose of the game. In comparison, innovation in entertainment games is more often based on remixing game mechanics from successful genres. However, there is simply a lack of applied game examples both successful and unsuccessful in all the possible *domains* to identify any kind of genre to be remixed by the applied game designer. Therefore, many applied game projects need to be novel or built from scratch, allowing for the applied game designer the creative freedom and creative stimulation to re-imagine how game mechanics can be formulated in this context.

The investigation into the practices of *game designers* in comparison to other design disciplines (e.g. industrial design, architecture, cinematography) is a relatively new undertaking in the field of game design (Kreimeier 2003). Investigation that specifically explores applied game design use *practice-led research* methods with outcomes: looking for applied game design guidelines (Spek 2011); validating design through demonstrating results (Keetels 2012); and developing models to identify tensions that arise in applied game design (Harteveld: 2011, 2012). The following exegesis is also practice-led research based on the design and development of the applied game known as *Moodbot*, which was

designed as a tool for psychiatric healthcare workers treating patients suffering from depression and psychosis. The research aims to investigate applied game design and the knowledge gained from co-creation with psychiatric healthcare workers, psychiatric patients, game artists, programmers, audio designers, and game designers.

The exegesis will analyse the decision-making process, reflecting on the role of the game designer operating at the centre of the co-creation and development of the applied game *Moodbot*. Game development is a collaborative effort of game artists, programmers, audio designers, and game designers. The development of this specific applied game adds an extra set of complexities to game design due to co-design process with psychiatric healthcare workers and psychiatric patients. In order to reflect this, the analysis will provide insight into the creative vulnerability of the applied game designer by examining decision-making through an *epistemic* approach. Formulated in questions these would be: Q1) How does a design decision change affect a game artefact? Q2) At what point in the process do design decisions occur? Q3) What influences game design decisions? As a result of this analysis, and the accompanying practice-led research, the aim is to establish methods and new knowledge associated with the specifics of applied game design, so that these may be applied more broadly in an expanding area of research and professional activity.

Whilst game design aiming to create entertainment is often satisfied with any kind of *game-play experience* so long as it is considered *fun*, there is often no consideration for an outcome beyond the game in this approach for the designer or studio. Applied game design should not be seen as the design of applied games, rather it is argued that it is game design "applied" to achieve an intended gameplay experience and outcome (Roessel and Mastrigt 2011). Part of this research will argue that no distinction should be made between an applied game designer and an entertainment game designer. The competence of an 'applied game designer' need not be based on specialisation in a particular domain, underlining the idea by Adams and Rollings (2007) that a game designer should be able to design many different types of games. Furthermore, in addition to this point, it can be argued that an 'applied' game designer must be able to design many types of games for many different domains. This additional aspect places the game designer in far more complex situations, where more than just trying to make a 'fun' game influences design decisions. This research, therefore, targets game designers, and its results are meant to

contribute to the field of knowledge about game design and development. The benefits of which, can 1) lower the intrinsic risks connected to innovation and 2) provide insight into the design of games meant to be both meaningful and applied.

The structure of this dissertation covers the research context, method, narrative, and finishes with the research conclusion. The contextualization establishes the principles of applied games and a connection to previously conducted applied game design research. It continues to explore how games have been applied in *psychiatry* and become a part of a service. The research method section describes the project's process, resulting artefact, ethical considerations, and methods considered and adopted in order to investigate design. The third section covers the research narrative, which outlines the vehicle of the practiceled research; the design and development of the applied game Moodbot. Within this narrative, a critical design moment has been selected as a *snapshot* to highlight the complexity, practices, decision-making and creative freedom available during applied game design. The conclusion summarises the results of the research and looks at future research opportunities.

## **2. CONTEXTUALIZATION**

The purpose of the contextualization is to connect to topics relevant to the practice-led research. And represents the scope of my exploration into principles of applied game design, applied game design research, applied games in the domain of psychiatry, and the periphery field of service design. It is the intention that the following review positions my research in terms and principles, in similar research, in a specific domain, and likeness to other fields of design. The first topic of this review is applied games, a taxonomy and a framework, are used to help distinguish the difference between applied games from serious games. The taxonomy categorises applied games based on deployment as opposed to categorization by domains. The framework offers a perspective on the design tensions that come from trying to balance a game's meaningful experience, applied purpose, and sustainability as a service. Included in the contextualization is applied game design research, which establishes the kinds of research (e.g. goals, methods, and results) already conducted by practice-led researchers. By reviewing this kind of research, some similarities and some differences can be found in my research. The contextualization also includes a review of games designed and developed for psychiatry, which are included to identify similarities and differences when compared to the design of Moodbot. The last topic in the contextualization includes the peripheral field of service design, included to better understand how Moodbot goes beyond the aims of therapeutic results but attempts to change the way healthcare worker and patient interact.

#### 2.1. APPLIED GAMES

There are many terms that are used to describe the various games used for non-entertainment purposes, e.g. serious games, persuasive games, games for health, advergames, etc. These terms are based upon the different values and perspectives from society, business and politics (Mayer et al. 2015). Similarly, the term *applied game* is well suited to a game design-oriented perspective, and for that reason the term was adopted for this dissertation.

As already briefly introduced, applied game is the term used to specify games designed with a purpose other than entertainment. Applied game refers to the multitude of games designed with applied purposes, e.g. education, therapy, rehabilitation, behaviour change, human computing, persuasion, training, etc. *Applied* refers to the tactical use and usefulness of the game activity outside the domain of the game itself (Roessel and Mastrigt 2011), which makes the use of the term applied games more inclusive. According to the definition given by Michael and Chen (2006), a serious game is "a game in which

education is the primary goal, rather than entertainment". The definition, which is used by many professionals limits serious games to those games used for education and training. Another significant difference is the definition includes COTS (Commercial off-theshelf) entertainment games that are not designed but repurposed for education and training. COTS include the use of such entertainment games, such as *Civilization* (MicroProse 1991) for the subject of history or *Rollercoaster Tycoon* (MicroProse 1999) for math (Eck 2009).

#### **2.1.1. TAXONOMY**

Entertainment game genres (e.g. action, role-playing, fighting, racing, etc.) provide game designers with known sets of mechanics, which are used as a foundation to design entertainment games. While existing serious games taxonomy in comparison focuses on domains that use serious games or the purpose of the serious game. On the other hand, new arguments outline four ways applied games can be categorised based on their tactical purpose. The tactical use of applied games can be categorised (see *figure 1*) as *Transmitting* (top left), *Aggregating* (top right), *Collaborating* (bottom right) and *Adapting* (top right) (Hrehovcsik et al. 2014).

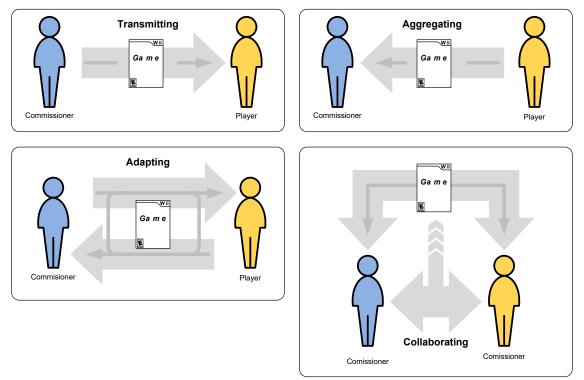


Figure 1: Taxonomy of applied games based on tactical form (Hrehovcsik et al. 2014).

*Transmitting* applied games achieve their purpose by sending through the game's *declarative* and *procedural* content (knowledge, skills, rhetoric, physical activity, etc.) to the

player. Figure 1 (top left) visualizes how a commissioner (client) uses the game to transfer their content to the player. Examples of games that use this kind of tactical form include: America's Army (United States Army 2002), Re-Mission (Realtime Associates 2006), Darfur is Dying (Ruiz et al. 2009), My Cotton Picking Life (Auroch Digital 2012), etc. Aggregating applied games achieve their purpose by taking and collecting data and/or creative-solutions from the player. Figure 1 (top right) visualizes how a game is used to transfer player output to the commissioner. Examples of games that use this kind of tactical form include Foldit (University of Washington Center for Game Science 2008), Phylo (McGill 2017), etc. Collaborating applied games achieve their purpose by facilitating players by creating dialogues, cooperation and problem-solving. Figure 1 (bottom right) visualizes how a game that is designed and played at the same time develops output for the commissioner. Examples of games that use this kind of tactical form include De Climategame (Tygron 2017), Deltaviewer (Deltacommissaris 2012), Urban Strategy (TNO 2017), etc. Adapting applied games works by collecting data and/or creative-solutions from players and sending declarative and procedural content to players. An expertuser can then interact with the player through the game and adapt the game to accomplish the purpose. Figure 1 (bottom left) visualizes how a commissioner uses the game to interact with the player by collecting player output and using this to alter content that is transmitted to the player. This kind of tactical form is clearly evident in Moodbot (Altrecht et al. 2013), but also includes examples such as DJ Fiero (Kenniscentrum Revalidatiegeneeskunde Utrecht and HKU University of the Arts Utrecht 2017).

#### 2.1.2. FRAMEWORK

The biggest challenge of applied game design is a consideration for how conflicting factors (e.g. the game's fun and purpose) blend and balance with each other in the final game artefact. In order to better understand this challenge, a framework inspired by Marcus *Vitruvius* Pollio a Roman author, architect, and engineer from the 1st century known for his multi-volume work entitled "De Architectura" was developed and resulting in a framework, which outlines a new approach to designing applied games. The results were then presented in a co-authored paper at Games for Health Europe (Hrehovcsik and Roessel 2013). The framework is used to reflect upon the design before, during and after the development of an applied game. At the beginning of a design process, the framework is used to communicate design challenges to *co-designers*. During the design process, it is used to support design decisions. After development, the applied game can be evaluated along the three key Vitruvian factors for impact. Using a Vitruvian perspective these factors are identified as *utilitas* (the usefulness), *firmitas* (the sustainability) and *venustas* (the experiential) (Hrehovcsik and Roessel 2013). Utilitas or purpose is when the game fulfils its purpose; Firmitas or sustainability is when the game is properly embedded in the context, obtainable or available to users, has a service or syllabus designed around it, and aims to create a perceivable impact in the chosen domain; Venustas or game-play experience is when the game provides a meaningful holistic experience by providing the player with consistent game-play, audio-visuals, and interaction. Figure 2 visualizes the relationships between venustas, utilitas and firmitas, and the tensions that develop between the factors when designing an applied game.

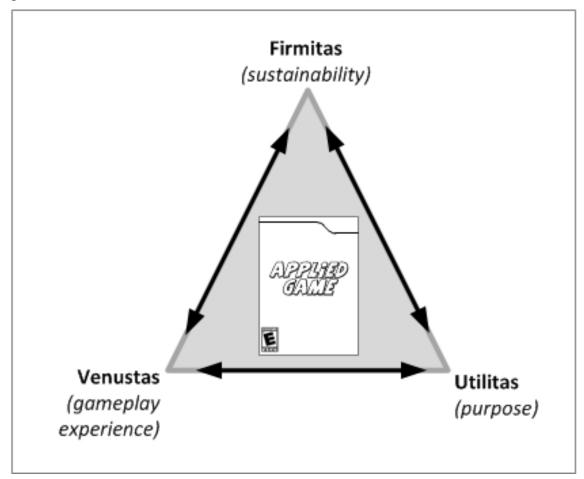


Figure 2: the Vitruvian triad (Hrehovcsik and Roessel 2013).

The Vitruvian traits are especially useful for critiquing the potential impact of applied games. The traits are found returning in applied games used for different purposes, in different domains, using different tactical approaches. In contrast to the current taxonomy, which categorises applied games by domain or market (i.e. military, government, healthcare, etc.) or purpose (i.e. advergames, exergaming, health games, etc.), make it

difficult to critique and make comparisons. For example, two seemingly different games like *Foldit* (University of Washington Center for Game Science 2008) and *America's Army* (United States Army 2002), which both have notoriety in their respective domains, would never be compared to each other. However, a critique with the Vitruvian traits would show why these two games have made comparable impacts on their respective domains. What do these two games have in common? And what makes them 'good' applied games? Both games provide their players with meaningful game-play. Both games have proven the design of their purpose, one as a research tool and the other as public relations tool. Both games have demonstrated their sustainability by making it easy and free for players to access the game coupled with the games' publicity.

#### **2.2. APPLIED GAME DESIGN RESEARCH**

To have a better understanding of practice-led research methods and theory pertaining to applied game design, an exploration of relevant literature was undertaken. The assumption was that practice-led research that resulted in game artefacts would aim to contribute to a body of knowledge about applied games, their design and development, and the role of the game designer. In particular, Spek (2011), Harteveld (2011), and Keetels (2012) provided examples of practice-led research and selected because of their relevance to applied game design in the Netherlands.

According to Järvinen and Holopainen (2005), as the applications of games grow, the process of constructing its own design theory, practices, and discourse will also grow. Harteveld et al. (2010) assert that most applied games are developed without a proper comprehensive design theory. Keetels (2012) supports this with the assertion that the available theory that supports the design and development of applied games is still underdeveloped. Lacking a comprehensive design theory, additional research was conducted to develop a number of theories around applied game processes, frameworks, taxonomies, and design tools which now form the foundation for this practice-led research (Hrehovc-sik 2014). One area of applied game design theory that has comparable attention from researchers is where there is tension found between game-play experiences versus the applied purpose (Hrehovcsik and Roessel 2013; Harteveld et al. 2010; Keetels 2012). In the previously mentioned research conducted together with Roessel (2013), these tensions are described in terms of a perspective borrowed from Vitruvius, which identify the tension found in applied game design as being use, sustainability, and meaningful experience. Harteveld (2011) also identifies tensions in applied game design using his triadic design philosophy, which describes them as reality, meaning, and play. His philosophy goes further by connecting the tensions with different people, disciplines, aspects, and criteria. Other similarities include topics concerning handling content that the designer has no expertise (e.g. acquired brain injury, *triage*, levee inspection), and must rely on co-designers and research. Furthermore, familiar practices (e.g. *play-testing*, prototyping, etc.) were also used to support the designer/researcher's design efforts. According to Spek (2011), applied game design research can result in a series of guidelines or theoretical constructs, which could lead to more successful results. Practice-led research can be seen as being fundamental to developing a practice-based theory on the subject of applied game design. Spek (2011) argues that this kind of research allowed him to, "empirically and systematically test different game design principles on learning and engagement".

While some similarities can be found in the aforementioned applied game design research, there is some contrast as well. For example, the domains that the research is conducted are very different. Harteveld (2011) designed the game *Levee Patroller*, which trains the knowledge and skills for inspecting levees or the barriers created to protect land from flooding. Spek (2011) designed the game *Code Red Triage*, a game for the use of triage training. Triage is the process of determining the priority of patients' treatments based on the severity of their condition. Keetels (2012) designed the game *Dream* as a rehabilitation tool for children with *acquired brain injury* (ABI). ABI is brain damage caused by events after birth and can result in cognitive, physical, emotional, or behavioural impairments. Considering the different domains, the designer-researchers demonstrate similarities in the approach the game design as mention previously.

My research objective intentionally distances itself from research outcomes meant to measure the effectiveness of the game. For example, Keetels (2012) and Spek (2011) use practice-led research as a vehicle or experiment towards the validation of outcomes. Spek's research aim was to identify outcomes related to improved learning and efficacy. Keetels' research aim was to identify outcomes related to therapeutic behavioural change. Both research-designers intended to provide evidence of how these connect to specific game design principles. It is acknowledged that validating the impact of an applied game is an important aspect of applied game research, but the value of validation is more relevant to the specific domain than it is for game design theory. For example, Harteveld et al. (2010) prescribed a design philosophy that identifies design tensions, which is more

relevant to the practicing applied game designer than the impact created by the game. Thus, the argument used against focusing on outcomes is that this research aims to develop design knowledge about process, co-design, and design strategies.

The literature review included a look at the aforementioned designer/researchers' experiences and qualifications, which becomes a topic when exploring a professional's design decision-making. It was discovered that applied game research was conducted by researchers with no actual design experience or training. Harteveld (2011) and Spek (2011) both admit that their qualification for taking the role of the game designer was something they took upon themselves out of a personal interest in video games and technology. Code Red Triage is the applied game designed by Spek (2011), which trains triage or the process of determining the priority of patients' treatments based on the severity of their condition. The game places the player in the role of a first responder who must perform the triage procedure on the victims of a mass casualty event in a subway station. Harteveld (2011), who designed the game Levee Patroller, aimed to enhance levee patrollers' levee knowledge and inspection skills. The game places the player in the role of a levee inspector who must search and look for signs of levee failure. The result is that Code Red Triage and Levee Patroller have strong simulation elements, which attempt to model the real world. Keetels (2012), in contrast to the other design-researchers, had a formal game design and development education and game industry experience. Keetels, who designed the game Dream, focused on rehabilitation activities for children with an acquired brain injury (ABI). The game requires individual players to work as a team to defeat monsters and to solve puzzles. To progress, a boss (game enemy) must be defeated during the game. Players accomplish this by walking forward and backward, which respectively enables attack and defence actions. Far from being simulative, Dream offers a rich fantasy game that when played does not associate the game activity with therapeutic activities.

#### 2.3. APPLIED GAMES IN PSYCHIATRY

The state of affairs of the psychiatric domain made this research possible as well as relevant. Understanding the domain's urgent need to innovate provides the background for the reasoning for experimentation in the development of an applied game. About ten per cent (1.68 million) of the Dutch population report psychological symptoms (Schoemaker 2011). Psychiatric disorders (i.e. depression, phobias, dementia, schizophrenia etc.) are the most expensive group of diseases because many mental disorders are chronic and often require prolonged periods of inpatient care (Slobbe et al. 2011; Polder and Achterberg 2004). Due to the current socio-political and economic climate in the Netherlands where budget cuts are not uncommon (Hrehovcsik et al. 2014) psychiatric healthcare is under pressure to innovate and become more efficient (Deen et al. 2014).

One-way innovation is occurring is the focus on *e-Health* (electronic health), which is an umbrella term that encompasses the use of information and communication technology in the sector. For example, the use of face-to-face interviews combined with interventions such as online chat, video calls, online treatment modules, online access to patient health files and applied games. *E-Health* solutions are interesting to mental health institutions because society is increasingly more digitalized, but hopes to provide better and more affordable care. The expectation is that patients can become less dependent on a therapist; patients and therapists together have more control; increased transparency; more help at home; and more cooperation from support systems and partners (van der Meer 2014).

To understand the state-of-the-art of applied game design in the psychiatric domain it is valuable to identify applied games already developed, explain how they are used for research, identify underlining opportunities within the domain, and summarize the challenges of designing applied games in this domain. Board games and digital entertainment games are already used in many situations during therapy (Haring and Warmelink, 2016). Publications with a focus on digital games designed for aiding or offering therapy for a range of disorders or conditions were selected and used for explaining the state-of-theart. However, research into the application of applied games in psychiatry is limited (Eichenberg et al., 2016) and publications with sufficient detail about the design of these games are even more scarce (Haring and Warmelink, 2016). There are few examples of applied games used in psychiatry when compared to those being applied to other healthcare sectors. It has been suggested that video games have gained negative publicity due to studies and reports that focus on their negative consequences causing their innovative potentials to be overlooked (Brezinka 2008; Stasiak and Merry 2012). Currently, applied games that aid or offer therapy are used in the treatment of depression, anxiety, phobias, autistic disorders, etc. (Eichenberg et al., 2016). Other reasons for using games in psychiatry align with the more general reasoning for their use in mental healthcare, e.g. self-management, education, diagnosis, facing fears, social skills, and self-discovery (Michael and Chen 2006).

The way applied games in psychiatry are researched is markedly different from those previous examples associated with applied game design research. The aims of the research focus on the impact created on patients, which adds little to our design knowledge. For example, SPARX (Smart, Positive, Active, Realistic, X-factor thoughts), which was a game developed for psychotherapy and meant as an intervention for treatment of adolescents with mild to moderate depression, focuses on the outcomes concerned with changes in data on patient depression (Shepherd 2011; Merry et al. 2012; Stasiak and Merry 2012). From the design perspective, we are left with knowing that SPARX is a third-person fantasy game, which allows the player to choose an avatar and undertake a series of challenges to restore the balance in a fantasy world dominated by GNATs (Gloomy Negative Automatic Thoughts). The game consists of seven sequential levels. While some design knowledge concerning the game's system can be pieced together from the description of the game, information about the applied game design process, the game designer and relevant design decisions are not included. Research in this domain is only beginning to consider the application of applied games and investigating their mechanisms (Eichenberg et al., 2016).

More and more positive evidence from research supports the potential of applied games (Eichenberg et al., 2016) (Eichenberg and Schott, 2017). Research from the psychiatric domain has identified several opportunities for the use of applied games in the domain of psychiatry. One perceived opportunity is to use applied games to engage and motivate children and adolescents (Coyle et al., 2005) (Deen et al., 2014) (Eichenberg and Schott, 2017). The reasoning is based on the argument that the current generation of children and adolescents are growing up as digital natives (Stasiak and Merry 2012) and are thus more familiar with games and technology. According to Eichenberg and Schott (2017), there are opportunities for applied games to be applied to older patients, which they indicate as an important point for future application of games. The general potential of applied games is appealing to the domain because of their ability to offer to enhance learning, creativity, curiosity, imagination, and motivation. Motivation and engagement are desirable for patient adherence to therapy. An applied game can also strengthen the patient's active role in treatment by minimizing resistance and limiting reactions during therapy. Patient autonomy is increased by control over the time, place and therapy pace, which could be translated to electronic homework assignments and help rehearse basic psychoeducational parts of treatment. Patient empowerment during treatment is also supported by

experiencing challenge, curiosity, control, choice, and teamwork during game-play. Even when learning requires the possibility of negative consequences, games naturally assist players to progress when presented with repeated failure. Theories such as flow theory provide explanations as to how applied games motivate and engage. Applied games also help with setting clear goals and rules, while recognizing progress and providing feedback, which also corresponds to psychotherapies. Furthermore, this provides structure to therapy sessions and helps explain important theoretical concepts in a user-friendly way. Eichenberg and Schott (2017) point to additional opportunities for applied games, such as within the context of relationship building, where understanding patient's central needs, motivation, and personality structure plays a central role. As an example, they suggest that an applied game could fulfil a dependent patient's need for an inner connection to the therapist even outside therapy. Eichenberg and Schott (2017) also indicated concerns about the limitations of applied games when providing key therapeutic ingredients, such as non-verbal behaviours, interpersonal relationships, and a therapeutic alliance. And the limited ability of an applied game to detect and adequately deal with a crisis.

Applied games offer many opportunities to the domain of psychiatry as well as a growing desire to see more widespread use. Besides their therapeutic properties applied game are perceived to allow patients unrestricted availability and easier access to treatment. However, there are significant challenges when concerned with the practical implementation of applied games (Eichenberg et al., 2016). One of these challenges is dealing with the potential cost and training implications that arise from new technology. Further challenges lie with the many legal, ethical, and procedural considerations. For example, the lack of guidelines, standards, and policies related to e-health in general (Eichenberg et al., 2016). Currently, application of applied games is limited, with a very few patients and therapists being aware of their existence. There are also concerns from therapists that applied games could distract from or substitute therapy, such as neglecting relationships and communication components. Eichenberg et al. (2016) recommend that collaboration between game developers and users would be essential in facilitating this process.

Research originating from the domain of psychiatry and including an applied game in the study primarily focused on the impact of the game on users. The method of research is usually designed to collect data to justify the use of applied games in the domain. These

studies have yet to analyse the underlining *game systems*, design and development process, or implementation strategies. In terms of design knowledge, it is difficult to extrapolate general guidelines or strategies for the design or development of a successful applied game in this domain from the limited descriptions on the games provided. However, the review of applied games in psychiatry does provide correlations from the domain to support the initial design criteria for the Moodbot research project.

#### **2.4. SERVICE DESIGN**

"Service design" is a practice aimed at designing systems and processes that provide users holistic services. The design of a service entails the organisation of personnel, infrastructure, communication, and resources of a service to improve the quality and interaction between the service provider and its customers. Service design may be used to inform changes to an existing system or create a new service. Examples of service design are airline check-ins, comprehensive branding systems, shipping processes, customer-service systems, concierge programs, back-office software, and services patient-care systems.

Service design like other design disciplines (e.g. interaction design, UX design, etc.) is an exploratory process, but different in its aims to create meaningful configurations that involve people, processes, technologies and many different kinds of objects (Kimbell and Seidel 2008; Kimbell 2011). User-centred, co-creative, sequenced interrelated action, evidence of intangible services, and a holistic consideration of the entire service environment are trademarks of the practice of service design (Stickdorn and Schneider 2012). According to Klapztein and Cipolla (2016), game designers have been applying their research into strategies, which stimulate engagement, pleasure and a variety of sensations through game-play experience to areas beyond games, which has led to the recognition of game elements used in non-game settings. Service designers looking to improve user experience and engagement in services have started to notice these non-game applications of game design thinking.

## **3. RESEARCH METHOD**

At the centre of this practice-led research is the design and development of Moodbot, an online multiplayer video game developed for psychiatric patients. Moodbot (a.k.a. e-buddy project) was a collaboration between HKU University of the Arts Utrecht, the mental healthcare organisation Altrecht, and backend developers Ippo. Moodbot as research offers ample opportunities in terms of focus, e.g. the research could focus on design paradigms or process or design in the domain of mental health.

The aim of the research is an investigation of a practising applied game designer's decision-making and how those decisions relate to the design of Moodbot. In order to create a method for investigating design decision-making, an exploration of research methods that included the design and development of an applied game were conducted. The result of this exploration found a contrast in research aims, such as seeking to provide evidence that links game design mechanics to learning (Spek 2011) or rehabilitation (Keetels 2012) or present a theory for applied game design (Hartveld et al. 2010; Hartveld 2011). Spek (2011), Keetels (2012) and Hartveld (2011) share a straightforward approach that uses a narrative throughout their dissertations that explain the design and development in phases from start to finish. My original effort to sharpen my design investigation was inspired by Gänshirt (2007), that in turn led to a focus on 'design tools' or design activities (e.g. documentation, paper prototyping, play-testing, etc.) taken during the design process. This approach is based on an *epistemic framework* derived from my experience, beliefs, and knowledge about games design and is inspired by Schaffer's (2006) and Schön's (1983) ideas about professionals operating within epistemic frames of experience and tacit understanding. The process eventually led to the idea of a 'snapshot' in which it might be possible to capture key points in formulating design decisions.

Using a set of cards (see figure 3), the snapshot approach aims to capture critical design moments by connecting these moments to a personal epistemic framework consisting of values, practice, identity, interests, understanding, and knowledge. Critical design moments occur when decisions change the current design state scorrect issues with the design state to achieve design goals. For example, a critical moment during this research occurred after a play-test revealed competitive game-play elements did not motivate players in the correct way, which resulted in these elements being removed and replaced with cooperative game-play. The cards (see Appendix AN) are separated into categories that look the game's applied design, *stakeholders*, project constraints, game design, game artefact, and design process. The cards help the reader and future designers to structure the reconstruction of the design decision-making narrative. The final form of the 'snapshot' is where the designer makes an analysis of a design-decision aided with epistemic playing cards.

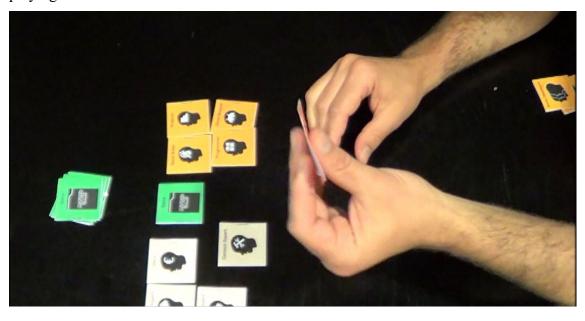


Figure 3: An example of the cards in use to structure the narrative of a critical design moment.

### **3.1. DESIGN INVESTIGATION**

Design investigation aims at gathering knowledge about a range of design disciplines, such as architecture, engineering, industrial design, product design, etc., which share creative, technical and commercial characteristics. The purpose of design investigation is to collect, organise and improve thought and information about design, and should be used to investigate areas of design that are relevant to designers and design organisations. Relevant areas include studies of artefacts, the behaviour of individuals engaged in design, groups engaged in design, and the effects and fate of the resulting products (Gregory 1966). Furthermore, relationships between thought and actions of design, the future, the uncertainty, and reflection on what has been designed should be included (Gänshirt 2007). It should be noted that while design may be coupled with scientific and technical insights, it should not be confused with scientific research, which seeks to isolate and analyse existing objects or identify repeatable phenomena (Gänshirt 2007).

Gänshirt (2007) in *Tools for Ideas*, tells us that one of the difficulties of designing is having in advance the knowledge of the final outcome. A designer must, therefore, rely

on personal knowledge from actions and experience, which goes beyond facts, craft and technical knowledge. Investigation of an individual designer is an exploration into the characteristics that cannot be found in models that generalise design. According to Gregory (1966), a designer is inherently complex, who operates in parallel processes while also demonstrating the flexibility to accommodate different approaches or even invent new ones. An investigation of an individual designer should examine creativity or the designer's ability to provide new solutions, decision-making made under uncertainty and the risks that this incurs, personal vulnerabilities that are exposed by the context of designing, and attitude needed to function as a designer. The goal of this kind of investigation is to make the designer's implicit knowledge from actions and experience "communicable, verifiable and discussable" (Gänshirt 2007).

According to Lawson (2005) in *Design Thinking*, "thinking about thinking", the decisionmaking process in design is difficult to investigate, due to the challenge of finding a method for disseminating the really interesting things that happen in design, which is often hidden in the designer's head. It is well known that designers are known for making internalised design decisions. This becomes a point of investigation when one considers that a single design decision can have a considerable impact on the design of an artefact and the difficult task of match design and needs while staying with the scope of a project (Gregory 1966). A design decision is a final choice that occurs after many ideas and possible choices have contended with each other. While a critical design decision is a feature or needs determined at an executive level (e.g. client or co-designer). Gregory (1966) emphasises that design decisions are made by the designer or the person responsible for the outcomes, which is not to be compared to decisions made by calculation or tests.

#### **3.1.1. METHODS OF INVESTIGATION**

Lawson (2005) goes on to describe several design investigation methods, such as the designer sitting down and reflecting on their own practice and what they think must have happened. Another is by interviewing and reading a designer's writings about their process, where the best approach is not to focus on a single project but on the designer's process as a whole. Lawson (2006) indicates there are several pitfalls in design investigation, such as designers not being naturally communicative as writers. They are also more likely to write to impress while avoiding to reveal their doubts and weaknesses. Designers are accustomed to 'selling' their designs to teams or clients and tend to develop what Lawson calls "post-hoc rationalisation" which shows an ordered inflexible progress to the result of their design.

Schön (1983) uses interviews combined with reflective writing in his investigation of reflection-in-action. In his analysis of his subjects, he hints to how the experienced designer is able to show "no hint of detecting and correcting errors" and the ability to "zero in on fundamental schemes and decisions". Interestingly Schön contemplates the meaning of the practitioner who has become aware of his epistemic frame which allows alternative ways of framing the reality of his practice, which connects to an approach using an epistemic framework as a tool that could support the way a designer communicates design-decisions.

Gänshirt (2007) places emphasis on the actions of design around the theme of design tools. Using 'design tool' as a metaphor to encourage the idea of hand tools being used on complex design problems. Design tools offer the ability to make the internal external and explicit by allowing the designer the ability to create objects for possible reflection. Design tools include actions for design like language, modelling, sketching, gestures, calculation, etc. The concept of design tools (e.g. prototyping, play-testing, design documentation, etc.) is used as design evidence throughout the design narrative of Moodbot in order to provide insight into the practical activities of the designer.

Gänshirt (2007) also suggests that design tools be "systematically controlled" during a design process. In terms of process Gänshirt (2007) discuss several possibilities; one of these being the *iterative* process, which is a circular and recurring sequence of stages used to deal with unknown complexities. Another process is a *linear* process, which indicates prior knowledge of what is to be done by steps. Gänshirt (2007) indicates that the ideal process is a combination of the two previously mentioned processes. Gänshirt's perspective on the process is further supported by game designers (Bateman and Boon 2005; Adams and Rollings 2007) and forms the basis of my visualisation and understanding of the game design process.

Another process, called "test and scan", encourages the designer to use the first solution until proven to be the incorrect one, at which point the designer returns to the beginning where another route will be explored. The last process mentioned is the *systematic*  *production of several alternatives*, which uses an evaluation filter used to help decide the design route. During the concept phase, which is reported in the research narrative of Moodbot, the concept *production of several alternatives* inspired an experimental approach to developing multiple concepts by replacing concept descriptions with playable paper-prototypes.

#### **3.1.2. AN EPISTEMIC APPROACH**

Schön (1983) criticises the academic approach to studying professionals and their knowledge of excluding the 'intuitive' or 'art' of the competent practitioner. Schön connects his design research to epistemology, which is the theory of knowledge. The discourse around epistemic studies centres on knowledge, belief, and justification. It is argued in this dissertation that applied game design research lacks or avoids the 'intuitive' or 'art' of applied game design. There is even evidence that could call into the 'competence' of the design practitioners conducting the research.

Since it is the goal to investigate what Schön (1983) refers to as reflection-in-practice or knowledge-in-practice, the idea of an epistemic framework has been adopted, which is used to frame the authors design practice. An epistemic frame for this purpose represents a collection of skills, identities, interests, understanding, and knowledge that professionals use to think in innovative ways (Shaffer 2006). Different communities of practice have different epistemic frames, which frame the role of the practitioner. These frames help increase the scope of reflection and knowledge-in-practice (Schön 1983). The purpose of modelling an epistemic frame is to lay bare the knowledge, processes, beliefs, and the context that shapes my practice as a professional (Schön 1983; Shaffer 2006).

### **3.1.3. EPISTEMIC FRAMEWORK**

The frame presented in this section comes from self-analysis. In theory, no two applied game designers would share the exact epistemic frame. For example, an applied game designer with a background in interaction design may use more theory from user-experience design, while a designer with a background in the entertainment games industry relies on theory from popular game design sources (e.g. Gamasutra1). An epistemic frame can also be applied to a field of practice with the purpose of defining correlations between all professionals in a particular field. For example, some obvious similarities would exist for all applied game designers, e.g. the composition of a development team, a target audience (players) and work with co-designers.

<sup>&</sup>lt;sup>1</sup> http://www.gamasutra.com/

The topics that make up the author's epistemic frame may seem broad, but without knowing the source of the author's perspective it would be difficult to understand the complexity of applied game design and the simplicity in which design decision-making is explained through the research method.

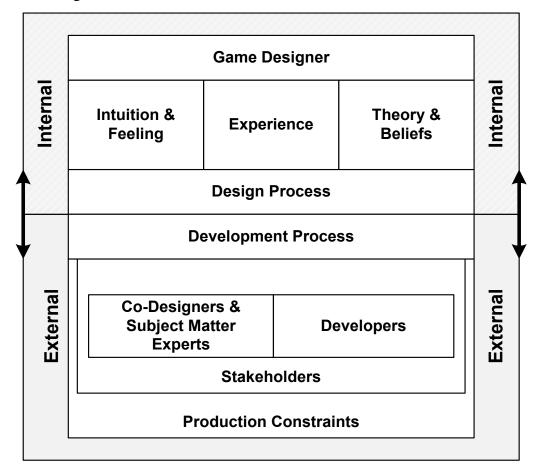


Figure 4: A visualization of the structure used to approach the epistemic framework and its categories.

Figure 4 represents an effort to create a general outline of the author's epistemic framework where the factors that influence design decisions are considered. The goal was to make the analysis visual; personal; and useful for highlighting 'blind alleys'. To visualise the analysis a visual overview was created (see figure 4) to order the author's thinking process. The analysis process started by taking into the consideration the internal and external factors that could influence the design decision-making. The results defined within the areas of internal and external factors in the following categories: Intuitions & Feelings, Theories & Beliefs, Experience, Design Process, Stakeholders and Game Development. The next step was to consider how to turn the map of the epistemic frame into a tool for design decision analysis. In an effort to find ways to create an appropriate format for an epistemic tool, such things as a canvas (placemat) and conceptual model were considered. Eventually, it was chosen to make the epistemic frame into a set of cards, which are quick and easy to arrange and rearrange. Another advantage of cards is that they allowed visual and symbolic cues, thus enabling accessible narratives to be constructed. From this point on, more than fifty cards were created and categorised into five main categories, and their sub-categories. Together with the author's HKU supervisor Willem Jan Renger, the cards were tested by using them to narrate various situations we had encountered during the Moodbot project. The last step in developing the epistemic tool required design decision moment to be selected, which required reflection upon Moodbot's design and development. The goal was to find a moment that resulted in significant changes in the design, interaction between co-designers or the use of specific game design tools. In the end, one design decision was chosen for dissemination as a snapshot.

*Intuitions & Feelings* (see figure 4) represent my vulnerabilities and creative intuitive-gut feelings as a game designer. Will you be able to connect the dots of creativity? And will the creativity still be there when you need it? Even in consideration of my years of game design experience, one can still be susceptible to insecurities about one's design decisions. For example, a lot of pressure is added from the responsibility associated with designing the outcomes of an applied game. Additionally, there is an intimidation factor that comes from working in a domain, e.g. in psychiatry working alongside doctors and patients. Will the game you create, function for the selected purpose? Will it motivate the target audience? There is also the ambition to make a positive impact in the domain you are working. Experience, theories & beliefs and design processes balance these vulnerabilities out. If they did not, then design would be an impossible task.

*Theories & Beliefs* refers to knowledge learned (e.g. from literature or discourse) and provides all the theoretical structures towards games and game design. A part of this knowledge is about being able to analyse a game's structure (rule set), the interaction between player and game, and game-play experience. Another part includes the ability to look critically at game artefacts. Additionally, there are also a number of conceptual tools that have been adopted over the years (some that were developed by the author), which support design activities. It can be argued that these are best classified as beliefs because game design theory is frequently not based on a scientific research model of evidential or

empirical fact. It is instead a heuristic approach to knowledge based on what has been seen or heard and adopted as a guideline (e.g. beliefs about what is 'fun').

*Experience* is knowledge or insight gained from design and development of games. Experience is pervasive as it modifies how theories are used and interpreted. It also tames many feelings of uncertainty and helps forms decisions intuitively. Experience also relates to how the design process and development process is perceived and extends even to the ability to work with stakeholders.

*Design Process* is the roadmap that provides an overview of the phases of design and the cyclic iterative process. The kinds of design tools that are optimal to use at different moments during the design journey are dictated by the awareness of these two processes. The design process is also used as a functional connection to the development process.

*Game Development* is about how the game design process relates to processes of other disciplines involved in a game's development. Multidisciplinary development creates a number of interdependencies that have ramifications for the entire production process. For example, synergy within the project, co-designer confidence in the project and amount of project time available all impact design decisions.

*Stakeholders* are extremely influential upon one's design decisions. A distinction can be made between two types of stakeholders: 1) Co-designers & Subject-Matter Experts; 2) Developers. There are several types of subject-matter experts that are relevant to applied game design and development. Sometimes a single person is able to fill one or more expert roles. Player-contact experts have direct contact with the target audience and hands-on experience working with them (e.g. a teacher, nurse, etc.). Domain experts have knowledge of the domain in terms of business and organisational practices. Content experts understand what kinds of objectives the game needs to achieve and how this relates to the domain. Transfer experts understand the methods (i.e. didactics, therapies, treatments, etc.) used in the domain. Additionally, the experts are usually considered co-designers if they are regularly involved in providing feedback during design and development. Stakeholders typically have a difficult time measuring their player's meaningful game-play experience, which leads to tensions between game design and domain expertise. Developers represent a group of professionals from different disciplines that have

skills relevant to video game development. Influence from a team of developers can range from ideas for gameplay; to the manner of implementation; to a particular developer's preferences; to a developer's abilities and level of skill.

## **3.1.4. EPISTEMIC SNAPSHOTS**

In an effort to make the self-analysis into a tool the following set of cards (see Appendix AN and Appendix AL) was created. The cards consist of five main categories, which are defined in the following section. As previously mentioned the cards are used to create a snapshot of a game design decision.

2CaT (Context, Content, and Transfer) Analysis: Is concerned with an analysis of the purpose, goals and validation of the intended design. The analysis consists of gathering information about the content, context, and transfer for design parameters to be defined.

*Stakeholders:* Are concerned with the multidisciplinary environment that an applied game designer operates, which includes contact with co-designers and the development team.

*Design:* Is concerned with a theoretical model that defines game design, which is used to frame thinking about the game mechanics, play mechanics or gameplay experience.

*Artefact:* Is concerned with the critical analysis of a game as an artefact, which takes into consideration the game-play, visual and thematic representation, sociocultural impact, usability, and technology of a game.

*Process:* Is concerned with the process of designing the game. Progress can be measured within the linear and iterative processes, which connects to the use of specific design tools.

*Project:* Is concerned with the way the design affects and is affected by business and development issues. From a designer's perspective, this accounts for factors not directly controlled or influenced by design, such as time and confidence.

The research results include a snapshot of a decision-making moment that occurred during practice-led research. Eventually choose the strongest snapshot to use in this final dissertation. The snapshot includes three essential elements:

- A visual reference (e.g. video) of the cards as they illustrate aspects of the design decision;
- 2) An audio narrative to vocalise the design issues and the considerations;
- Lastly a written summary of the snapshot found in this dissertation in section
   4.5 Snapshot: Design Crisis.

Snapshots follow a grammatical process that structures how design moments are examined and communicated. The process consists of the game design researcher formulating questions that examine the origin of the current state of affairs, the action taken that changed the design state, and the results from the changes. It is up to the game design researcher to formulate the correct questions to create a snapshot. For example, questions concerning how the design was influenced are often related to stakeholders. And questions related to design problems are likely to come from the current state of the artefact or failure to consider all the aspects of design. Using the epistemic cards requires the game design researcher to select relevant cards from the five categories. For example, the game design researcher may begin by selecting a card from the process category to provide context for the snapshot. While adding the *player* card provides the game design researcher with a topic or source of an issue. Indicating relationships by grouping cards together provide the ability to speak of several elements that integrated and cannot be separated or perhaps describes a more complex topic. Drawing lines to create connection and describe flow between topics also adds to creating the snapshot grammar.

#### **3.2. RESEARCH PROJECT**

This research is based on the author's role working as a senior game designer developing Moodbot on behalf of HKU University of the Arts Utrecht's innovation studio. HKU University of the Arts Utrecht agreed beforehand to allow this design-work on Moodbot to become the focus of the practice-led research. The role of a senior game designer entails taking responsibility and management for the final design decisions and their implementation during the development of Moodbot. In some cases, during the project, design tasks were handed over to a team of junior designers. The development of Moodbot was a collaborative effort, and during the course of development involved three programmers and four game artists. The project itself originates from the efforts of Willem-Jan Renger to establish the use of games in psychiatry in collaboration with Altrecht GGZ. Altrecht GGZ, a large mental healthcare institute in the province of Utrecht in the Netherlands, acted as the primary co-designer and project commissioner (a.k.a. client). Patients were selected from two different departments within Altrecht and designated the game's target audience. The Roosenburg department is a closed ward and specialises in psychiatric illnesses and addiction-related behaviour. Patients in this department have had encounters with the legal system due to their complex problems and aggressive behaviour leading to incidents of violence. The ABC department is a clinic for young people diagnosed with a nonaffective psychosis and schizophrenia. It offers an open facility and ambulatory care. Besides the individual medical and psychosocial treatment, patients can take part in various treatment groups such as psychoeducation, coping with addiction or multi-family groups. These two diverse target groups were selected with consideration to the future scalability of the game. The aims of the commissioner and co-designers were to create a game that would: Lower the rates of aggression and incidents in the forensic and closed psychiatric wards; reduce the healthcare worker's caseloads; reduce patient relapses; and empower patients by giving them more control over their treatment. While the psychiatric aims determined by the co-designers would represent the design expectations placed on Moodbot, they should not be confused with the aims of my research.

#### **3.2.1. ETHICS**

In terms of ethical considerations for this project, two different codes of conduct were used as guidelines. *Code of Conduct: Applied Research for Higher Professional Education* (Andriessen et al. 2010) sets the standard for approaching ethical considerations in the domain of applied research at HKU University of the Arts, which consists of five rules regarding the responsibilities and behaviour of an applied researcher. A researcher is expected to serve professional and societal interests, be respectful, be careful, demonstrate integrity, and justify choices and behaviour.

Our co-designers from Altrecht Mental Healthcare Institute operate under their own set of ethics (Altrecht Geestelijke Gezondheidszorg 2015a; Altrecht Geestelijke Gezondheidszorg 2015b) which requires them to: submit the research plan to a METC (Medical Ethical Committee) or sufficiently explain why it is not necessary, clearly define what is required of participants (i.e. time, effort, and behaviour), inform participants about the advantages and disadvantages, meet the requirements for patient information and informed consent documents, handle data and storage in accordance with relevant laws and regulations to protect the privacy and integrity of the participants according to WMO (Social Support Act), WBP (Data Protection Act), WGBO (Law on Medical Treatment Agreement), Declaration of Helsinki, and Good Clinical Practice; and finally be endorsed by Altrecht VSNU (Association of Universities) Academic Code of Conduct.

The research identifies three types of research participants: first, the role of the professional game designer; secondly the co-designers (healthcare); and thirdly, the target audience (players). The most vulnerable of these, the target audience, were mental health patients from Altrecht who volunteered to participate under the ethical guidelines used by Altrecht. The purpose of contact with the target audience was to gather ideas and feedback for the game's design and to discover if the game was engaging enough to accomplish the applied purpose of the co-designers. During these contact moments, patients were informed about the game's design and specifically about how the game would allow healthcare workers to monitor their moods and some game activities. Patients were also informed that they had the right to withdraw during these sessions. For example, during one play-test a patient was no longer interested in the activity and withdrew from the playtest with no questions asked. Furthermore, images and audio were not allowed during these contact moments with the target audience as a part of the co-designers' protocols set for the project. The digital version of the game collected mood data from the players, which was handled by making participants anonymous and data transfer used required security protocols set by Altrecht and their technology partner Ippo<sup>2</sup>. The collected data was used for informing the game design about the game-play experience and to determine if the co-designers found data useful.

## **3.2.2. PROJECT- MOODBOT**

At the core of this research is the process of designing the applied game Moodbot, with an emphasis in investigating how decisions were made throughout the process. The research project is a kind of documentation of an ongoing dialogue between the designer, the design and the healthcare professionals and patients.

The project was funded half by the HKU University of the Arts Utrecht and Altrecht Psychiatric Hospital. The funds used were meant for *eHealth* innovations. The project was a collaborative effort that included co-designers and a multi-disciplinary development team. In the acknowledgements is a list of developers and co-designers that participated in the Moodbot project. The key collaborators included: W.J. Renger and I. van

<sup>&</sup>lt;sup>2</sup> http://www.ippo.nl/

der Brug tasked with planning and finances; A. Oostdijk and S. Alkemade tasked with programming the first Moodbot version 1.0; S. Pokorny tasked with programming the first Moodbot version 2.0; M. Ekkelenkamp tasked with the game art; W. Giebels tasked with the animation; R. van Tol and Y. Song tasked with the sound design and music composition. During the project, there were also multiple student interns that contributed part-time to the project by game art, programming, animation, and game design.

At different moments during the project, the game design was handled by a team of junior game designers managed by the author. D. Ibanez (freelancer) and T. Bosje (game design lecturer) were tasked with game design during a period of time that the author was incapacitated due to health issues. At other times during the project, the author was assisted by game design interns. L. van Roessel also assisted the author's design research by gathering feedback during play-tests and co-authoring papers.

During the project, the key co-designers included T. van Wel, Mieke van Boxtel, and Jeanette Schermers from Altrecht. And supported by Altrecht department managers F. Marquenie and J. van Nesselrooij. While R. Visscher and M. van Woudenberg managed the Moodbot project for Altrecht.

Patients from Altrecht contributed to the project by participating in play-tests. Patients were selected based on their willingness to participate and a diagnosis, i.e. depression, schizophrenia, psychosis, etc. Play-tests were always supervised and coordinated with key co-designers. In most cases, patients participated in controlled group play-test sessions, with the exception of one remote play-test session the occurred over the course of two weeks. Results in the form of player feedback and observations from game designers during play-tests helped to shape the game and interaction design. Furthermore, these results also provided feedback that was used to choose the visual and sound design. Co-designers also used the results to test the design assumptions and keeping the game as a useful tool for psychiatry.

The design of Moodbot used an iterative design process; defined by repeated cycles of *ideation, creation,* and *evaluation*. A typical cycle of iteration ended with feedback gathered during the process included observations and interviews with the target audience after play-testing the game. Healthcare professionals and patients from Altrecht's

Roosenburg and ABC provided the valuable feedback and suggestions used to inform design decisions. Prototypes and versions of the game were also tested frequently with the internal HKU design and development team, making much quicker sub-iterative cycles. The tests roughly took place once every two weeks and were less formal than the tests with the target audience. Through internal and external play-testing the behavioural effects of specific game mechanics could be tested, i.e. do the mechanics encourage the right gameplay in terms of player social communication and interaction? And does it stimulate them to report their moods?

The practice-led research method has many similarities to 'constructive design research' (Koskinen et al. 2011), which refers to design research in which a product, system, space, or media takes centre place and becomes the key means in constructing knowledge. According to Koskinen, et al., the method includes the designer's attitude towards the role of a designer responsible for producing visions of better futures and makes those futures happen. The design/researcher, therefore, does not try to analyse the material world, nor do they see design as an exercise in rational problem-solving. Rather, they imagine new realities and build them to see whether they work. The main criterion for successful work is whether it is imaginative in design terms. The designer must also support his imagination and research with methodical work rather than a mental activity. For example, 'methodical work' can consist of paper-based prototypes, play-tests, user-tests, *mock-ups*, storyboards, collages, *flowcharts*, etc.

The method concludes that the designer is responsible for creating a hypothetical design supported by an act such as creating a prototype. Prototypes are in themselves generators of knowledge in substantiating hypotheses from contributing disciplines, and communicating principles, facts, and considerations between disciplines. A prototype of this method represents the design practice embodied and goes beyond theory. For this reason, design prototypes are tests of design, and not just theory. There must also be a consideration of multidisciplinary working and how designers interact with collaborating co-designers. As in the case of Moodbot, collaboration included working with psychiatrists, nurses, clinic managers, and patients. The further collaboration included working with an internal game development team consisting of a researcher, junior game designers, game programmers, game graphics artists, game animators, a sound designer, and music composers. The process must also be considered, for example, the iterative design method of research, which is better described by Zimmerman (2003) who describes it as a cyclic process of prototyping, testing, analysing and refining a work in progress.

## **3.2.3. ARTEFACT- MOODBOT**

The aim of the game design was to invent a game that offered players a meaningful gameplay experience and allowed healthcare workers and patients to monitor data from the game. To this end, the game Moodbot (see figure 5) was conceived. In the final version of Moodbot, every player owns one room in a large ship. Players progress in the game by collaboratively making the ship move towards the end goal. Players move the ship by collecting action points by performing actions, which they can earn in their own rooms (see figure 5) and in other players' rooms. Within his/her own room, a player expresses their feelings by customising their moodbot's (a small robot) features to express mood and feeling and setting their mood-journal (alert schema) by adjusting five sliders connected to a patient's personal signs. The mood-journal is set up with the help of a healthcare worker so that a patient is able to indicate per slider his/her current level of tiredness, fear or aggression.



Figure 5: Screenshot of a player's personal room, which acts as the main hub for player activities.

Players are encouraged to visit each other's rooms. When they see a moodbot customised in such a way as to suggest negative feelings they are able to leave behind advice or tips. The points that players earn go towards moving the communities' ship toward the end location on a map. Upon reaching the end of the map the community can expect a reward, which is a predetermined real-world reward. For example, the community may agree upon sharing a cake during a group therapy session. The gameplay experience of the game depends on the community and depends on the contact and interactions with fellow players and healthcare workers.

Communication between a patient and his/her supervising healthcare worker or therapist about a patient's mental state is important for the patient's path towards recovery. A patient's condition deteriorates gradually and does not change from one moment to the next. Various signs appear beforehand and indicate whether someone is likely to have a relapse. However, these signs differ from person to person. The signs can range from someone being easily irritated, to drinking a lot of coffee, to vacuum cleaning. Patients create and use 'alert schemes' to keep track of these signs, and when kept track of carefully they can prevent incidents. Currently healthcare organisations like Altrecht store these alert schemes as electronic medical records. A therapist can then access these during weekly talks with the patient. The main aim of Moodbot is to change the alert schemes from passive documents tucked away in electronic medical records to a more user-friendly interactive tool that enables clients to have a greater say in their treatment and to allow them to monitor their own mood. While the patients share their current mood and status in a cooperative game with their peers, the healthcare professionals can monitor them at a glance by using a backend patient management system for an overview. The intended impact on patients is to improve the quality of care by allowing patients to gain greater control of their lives and recovery process. While healthcare workers experience a decrease in workload and increase job satisfaction.

#### 3.2.4. DESIGN PROCESS - MOODBOT

There can be some ambiguity when discussing game design and development processes. The approach to this practice-led research makes a distinction between 'game development process' and 'game design process'. The purpose of creating this distinction is to isolate game design practice from the other game development disciplines (e.g. programmer, game artist, sound designer, etc.). Game development is a collaborative process of game art, animation, programming, management, audio design, and game design, with the overall aim of creating a video game (Bethke 2003). A typical entertainment development team includes a project manager, game designers, programmers, game artists, and developers of specialised media such as audio and quality assurance (Fullerton et al. 2004). The applied game development process makes use of additional co-designers, such as subject-matter experts, a patron (or client), transfer (e.g. pedagogic or didactic) expert

(Roessel and Mastrigt 2011; Keetels 2012), player-contact experts and deployment experts. These additional collaborators make more challenging (Roessel and Mastrigt 2011) for the game designer.

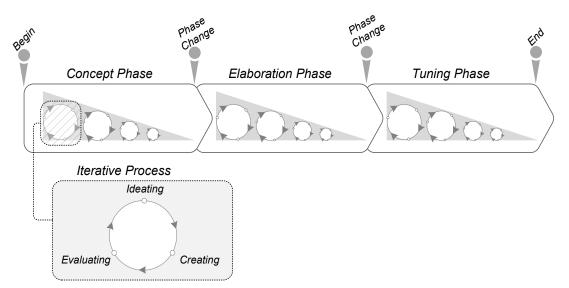


Figure 6: The game design process including three phases and the iterative cycle.

The game design process consists of coordinating and evolving the design of a game (Bateman and Boon 2006; Salen and Zimmerman 2003) by the act of making decisions that shape the game-play experience through rules and systems (Schell 2008; Hunicke et al. 2004). The process of designing games is comparable to processes found in other design fields (e.g. graphic design, architecture, interaction design, user experience design, product design, etc.), which are typically broken down into phases or described as cycles of iteration. From previously conducted research and a relative publication (Hrehovcsik 2011) cited by Roessel and Mastrigt (Roessel and Mastrigt 2011, pg. 4) two simultaneous processes are described in my general model of the game creation process. In figure 6 a visual summary amended and updated from Hrehovcsik (2011) demonstrates a process with design phases and the goal of that phase (e.g. concept phase) and the process of cycles related to the designer's activities during a design phase.



Figure 7: The game design process is defined by three phases (Roessel and Mastrigt 2011).

The process defined by 'phases' (see figure 7) represents a roadmap to design milestones. It resembles the game development process, also defined by a number of phases or stages, but the difference being the relationship to the game designer. The game design process is defined as having a: *Concept Phase*, where the basic elements of the game are determined and finally selected; *Elaboration Phase*, where the game design expands as more elements of the game are described; *Tuning Phase*, where the game design begins to contract as the tuning of the design takes place (Bateman and Boon 2005; Adams and Rollings 2007).

While the typical game design process begins with the concept phase. The applied game design process begins with an additional exploratory research phase (Keetels, 2012; *Micah Hrehovcsik CDP lecture 6-12-2012*, 2012) used to help define the needs of the applied game design, which includes determining the game's purpose, delivery method, entertainment factor, target audience, and audience environmental factors. At this point, the game designer must begin his interaction with the additional co-designers (i.e. subject matter expert, patron, etc.).

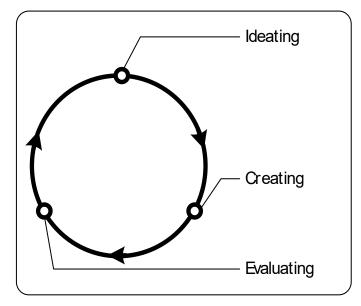


Figure 8: The iterative game design process defined by ideating, creating and evaluating.

The process defined by 'iterative cycles' (see figure 8) represents the designer's activities to refine and continuously adjust the design during the previously described 'phase' process. Iterative design allows the designer to circumvent the complexity of designing a game, which is too difficult to define perfectly from the beginning (Costikyan 1994). Even if design is observed as an interwoven process of thought and action, the iterative

nature of design is well-known to other design disciplines (Lawson 2006; Gänshirt 2007), i.e. architecture, user-experience design, product design, engineering, etc. For example, Gänshirt (2007) explains this cycle as a metaphor for the designer's activities of reflecting, perception and expression through seeing, doing and thinking. While there are many iterative cycle models (Zimmerman 2003; Fullerton et al. 2004; Gänshirt 2007), each name the activities in the cycle differently. Figure 8 summarises these for the purpose of this research, resulting in the iterative design process defined as a cycle of *ideating*, *creating* and *evaluating*.

Ideating would include design activities concerned with creating new ideas, solving design problems, and contemplating possible design iterations based on test results. Creating would include design activities concerned with implementing results from generation into a working, tangible, experiential or communicable form. Evaluating would include design activities concerned with critiquing, analysing or testing the results from formalisation.

Both entertainment and applied game design use feedback from play-tests with players to ensure the game's success, which forms a key component of the iterative process. However, applied game design can include more than one target audience, i.e. players, subject matter experts, player-contact experts, etc. A game designer must then include in his game design process new forms of play-testing, such as design reviews with co-designers (Keetels 2012; Hrehovcsik, 2012). The game designer must also be prepared to play-test with different audiences, where one audience is the player and the other is an operator or trainer. Furthermore, there is also the possibility that the game designer will need to playtest during moments that also require the need to collect data towards validating the game's effectiveness.

## 3.2.5. DESIGN EVIDENCE- MOODBOT

What is meant by *design evidence* is any kind of record of activity done by the game designer related to the state of a game's design. The output of a game designer is not the final game, because that is the result of collaboration with the development team. A game designer's output is often limited to different forms of documentation or a set of activities that collect information. Not all game designers approach game design the same, but there is usually a trail of activities which provide the practicing researcher evidence of design.

In the following section, several game design tools are described and their use during the design of Moodbot.

# Scope Model

The *AGD* (Applied Game Design) *Scope Model* is a design activity that has proven effective in previous projects and used to create the design parameters for Moodbot. The AGD Scope Model is typically created at the beginning of a project when the game designer undergoes a process to analyse the design parameters. The framework asks the game designer simple questions of who, where, when, how, why and what; these, in turn, provide clues to the kind of needs expected from the design. Using these questions helps to create a quick-scan analysis of the context, content, and transfer of expectations placed on the game. The scope model automatically implies that domain experts are involved from the beginning of the design process since they are needed to answer the questions in the analysis. Using the scope model to become familiar with the domain provides guidelines that help the designer from becoming distracted from designing the game as the expectations and applied objectives add up. The AGD framework provides the creative space to explore possible alternative directions for the game's design, instead of preselecting a game genre or fulfilling a list of requirements (Stubbé et al. 2014) (Hrehovcsik 2014) (Hrehovcsik 2014).

The following was the original Scope Model for Moodbot (see Appendix C) with the design parameters decided upon with co-designers during several meetings. During the course of the project, it was necessary to change the design parameters as expectations changed. The first part of the quick analysis examines the co-designers' purpose and goals for players:

- Positive feedback and empowerment
- Insight into previous states of being
- Lifestyle choices
- Avoid fast movements, actions, and audio
- Conscious about sociability and conflicts

And then additional purpose and goals for healthcare workers:

- Updated on patients (e.g. social behaviours, activities, fear, aggression, perceptions)
- Patients critical signals

The second part of the analysis considers the game's target audience or players to determine their target audience's preferences or limitations:

- Player: Altrecht Patients
- Ages: 15-25
- Abilities: varied (e.g. possible impaired fine motor skills "shaking", impaired perception, impaired motivation)

The analysis of the target audience also considers peripheral audiences or users that either supports the player or use the game as a tool for the primary purpose.

- User: Altrecht Healthcare Worker
- Optional User: Patient's Friends or Family
- Ages: 25-60

The analysis of the target audience includes the location or environment that the game will be played. Taking this parameter into consideration helps anticipate issues concerning access to the game.

- Technology: iPad or iPhone
- Location: Clinic, Home, In Transit (e.g. bus, train, etc.)

Also, included in the target audience analysis is the estimation of the amount of time a player has and needs to reach the applied purpose of the game.

- Duration: 1 month-1 year
- Session Time: 15-20 min.

The final part of the analysis lists features that are required in order to achieve the applied purpose of the game. These features often represent aspects of the game related to real-world activities for the players:

- Avoid fast movements, actions, and audio
- Positive feedback and empowerment
- Lifestyle choices
- Insight into previous states of being
- Conscious about sociability and conflicts

And tools that directly relate to the user:

- Client update (e.g. social behaviours, activities, fear, aggression, perceptions, etc.)
- Critical Signals

## **Paper-Based Prototypes**

In game design, *paper-based prototyping* means creating a rough working version of the game system. The goal of a prototype is to a have a crude model to allow the designer to wrap his/her brain around the game mechanics and sees how they function (Fullerton et al. 2004). Using paper-based prototyping to design applied games offers advantages such as quicker cycles of iterations, play-testing earlier in the development process, and co-designer accessibility to the game system (Stubbé et al. 2014).

During this research paper-based prototyping was used to explore different aspects of the design. For example, a prototype (see Appendix V) was used to test the design assumption of the game's ability to actively engage players for a month. Another, use (see Appendix W) explored game mechanics that focused on the players' progression through the game.

Paper-based prototyping was also used during the concept phase to replace the practice of creating rough outlines and high-level documentation to communicate a game idea. Approaching the concept phase in this manner was an experiment in managing the junior game designers who were then expected to deliver paper-based prototypes in place of high-level documentation. The results from this approach encouraged the junior game designers to produce working game systems (see Appendix F, Appendix G, and Appendix H).

Additionally, *hybrid prototypes* that combine digital elements and physical elements were used to take advantage of simple digital tools to emulate aspects of the social mechanics into the system game system. For example, a hybrid prototype used to test the social mechanics combined Google Sites<sup>3</sup> blogging functions and embedded Google Doc<sup>4</sup>, Google Sheets<sup>5</sup>, and Google Forms<sup>6</sup>.

# **Design Documentation**

The designer uses a *game design document* to make the design tangible. A game design document is more than written text; it also includes *flowcharts* (see figure 9), *mock-ups* (see figure 10), *wireframes* (see figure 11), design analyses and payoff matrices. In this way, the development team or even the co-designers have the means to evaluate the

<sup>&</sup>lt;sup>3</sup> https://www.google.com/work/apps/business/products/sites/

<sup>&</sup>lt;sup>4</sup> https://www.google.com/work/apps/business/products/docs/

<sup>&</sup>lt;sup>5</sup> https://www.google.com/work/apps/business/products/sheets/

<sup>&</sup>lt;sup>6</sup> https://www.google.com/work/apps/business/products/forms/

design intentions. The game design documentation follows the structure provided by the Game Concept and Design Document Template (Hrehovcsik, 2004). The template structures the information and determines the appropriate locations for flowcharts, mockups, wireframes, design analyses and payoff matrices. Flowcharts are diagrams used to demonstrate process and relationships and used to document the game system and game architecture. Figure 9 demonstrates the flowchart created to document the game system for Moodbot and documents the player's relationship to game activities as well as to other player and healthcare workers. Wireframes (see figure 10) are primarily used to position interactive elements on the screen. Figure 10 not only shows interactive elements and their position but some visual experimentation for the game artists. Some of these elements can still be found in the final version of the game, e.g. the hotwire that allows players to skip their reports. Figure 11 (right) also demonstrates wireframes used to communicate ideas about the backend tool meant for healthcare workers to monitor patients playing the game. Mock-ups are used as game design documentation to explain complex issues that concern the game design, game art, and programmed behaviours. Figure 11 (left) visualizes the competitive race element from the early paper-based prototype (see Appendix M), which was eventually removed.

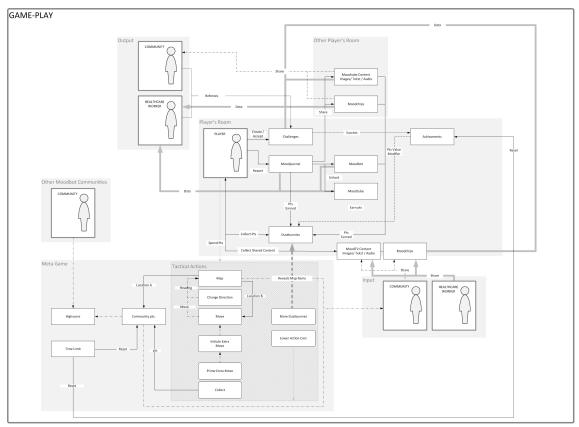


Figure 9: Flowchart that documents the game system taken from game design document version 2.

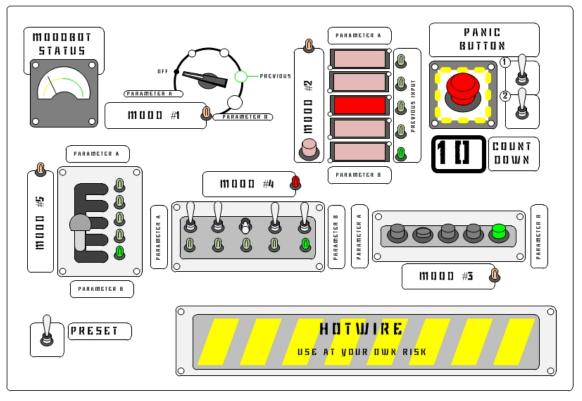


Figure 10: Wireframe concept of the mood-journal.

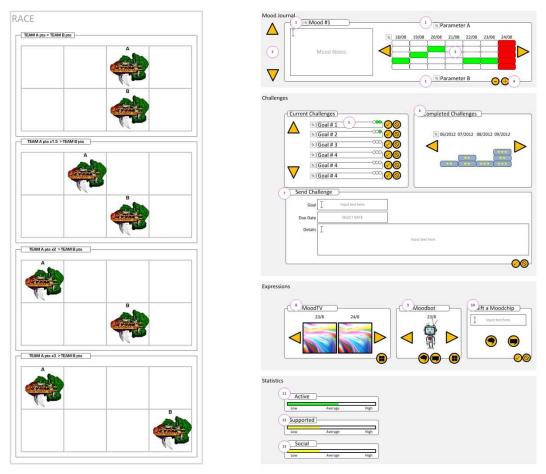


Figure 11: (right) race progress indicator (left) wireframe of backend information.

During the design process, the design documentation (Appendix N and Appendix O) was created at the end of the elaboration phase when fewer changes to the design would be needed and the design had already been play-tested. After play-tests, the game design documentation would be updated. The game design documentation for Moodbot version 1.0 (see Appendix N and Appendix O) was created and kept online as a shared document, while game design documentation for Moodbot version 2.0 (see Appendix AM) was kept as an unshared document.

## Play-Testing

Play-testing is an extremely important design activity, which involves selection, recruiting, preparation, controls, and analysis. A play-test may range from informal and qualitative to structured and quantitative (Fullerton et al. 2004). Play-testing is something the game designer performs throughout the entire design process to gain an insight into how players experience the game. The primary objective of entertainment play-testing, however, is to gain useful feedback from players to improve the game-play experience (Fullerton et al. 2004), while play-tests for applied games must additionally test a games ability to fit the context, content, and transfer.

During the project, play-testing was usually a team effort, where the role of the game designer was to facilitate and guide the play-test process. A game researcher also attended play-tests in order to make notes based on observations. Video recordings, audio recording, and photos would have been preferable than handwritten notes, but it was agreed beforehand that these were not to be used in order to protect patient's privacy. However, during the later phases of development questionnaires (see Appendix P) were used.

A typical play-test during this project started with planning (see Appendix Z), which determined the play-test objectives, test-group, and agenda. Setting the objectives include looking specifically at a certain aspect of a game system, the game-play experience, or usability. During the project three test-groups were used: one test-group was internal, i.e. consisted of game developers (game designers, game artists, programmers, and game researchers) from the HKU Innovation Studio; another test-group consisted of co-designers (healthcare workers from Altrecht); the last test-group consisted of the target audience (patients from different Altrecht faculties). A typical play-test agenda started with an introduction to the project including a reminder that participants could stop their participation at any time. Then an introduction of the game would be provided. The level of detail depended on the current game state and playtest objectives. Players were then allowed play, during which a game designer and game researcher would be observing player actions. Lastly, the game researchers would conduct group and individual interviews.

# 4. MOODBOT

In the Moodbot section of this exegesis, the focus is on the applied game designer's process, the design activities during the process and the design thinking behind the artefact. This is not the same as a focus on the development process, which would describe the realities of building a game with computer technology, the visual design, or the research to determine the game's impact on the game commissioner's organisation and patients. The aim is to examine the thinking behind the different design results of Moodbot as it evolved through the phases. The design journey (see figure 12) of Moodbot is given structure by first determining the phase (e.g. concept, elaboration, tuning). The phases are divided into *design results* which report cycles of ideating, creating, and evaluating. These results also include *design evidence*, or specific game design tools used to aid or inform the designer.

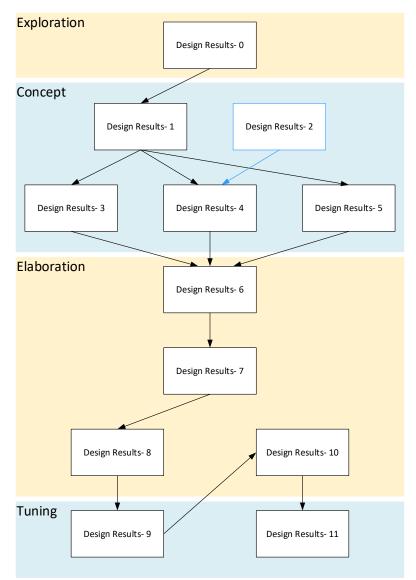


Figure 12: Map of design results through the phases.

The design process began with an exploratory research phase. During this phase, collaboration with subject-matter experts (e.g. psychiatrists) helped determine the design parameters, i.e. the game's purpose, delivery method, entertainment factor, target audience, and environmental factors. During this exploratory phase of three months, *Moodbot* began as a playful non-verbal intervention, which was play-tested by young adults with psychosis from Altrecht's ABC clinic. After the exploratory research, *Moodbot* entered a concept phase for 3 months characterised by the creation of several paper-based prototypes. The first digital version of the game was built after six cycles of iteration (see figure 12) the design of the game was determined promising enough when it was playable and had been play-tested by healthcare workers and target audience.

However, after several unstable digital versions of Moodbot complete with game breaking bugs, the design of Moodbot came under critique for missing deadlines and negative feedback from the playtests. After twelve months Moodbot was then redesigned and developed from scratch during a phase that should have been focusing on tuning the design. The new design, which focused on the core elements, was built within two months. This overhaul would become the final design for the game known as Moodbot (see Appendix AR).

#### **4.1. EXPLORATORY PHASE**

The exploratory phase is unique to applied games since entertainment games do not require an extensive period of analysing a domain's issues and convincing commissioners the value of using games in their domain. One aspect of the exploratory phase is about understanding the potential of applying a game to a problem in the domain, with the final objective to articulate a question answered by a game. The other aspect of the exploratory phase is about educating the game's commissioner about co-design, which requires them to become familiar with games and game development jargon. Also, during this phase, the objective is to build up confidence about the potential benefits of games applied to a relevant problem and the success of completing such a project.

#### **DESIGN RESULTS-0**

Before the first design cycle could begin it was necessary to demonstrate the usefulness of games in creating behaviour that could be compared to the desired behaviour observed during therapy. To demonstrate the possibilities, commercial games are used and adjusted to create enthusiasm with potential commissioners and co-designers. Initially, W.J. Renger (HKU innovation studio director) and T. van Wel (Altrecht psychologist and researcher) used games like *Werewolves*<sup>7</sup> with psychiatric patients as a therapeutic intervention. From this initial play-test, Renger and Van Wal found that games helped to facilitate communication during group therapy where it cost patients more effort to communicate their emotional state. Additionally, the game engaged the patients and created higher motivation for the therapy session. Based on the enthusiasm from patients and healthcare workers from the play-test.

The aim of the first design cycle was to create a tool that could re-create aspects of the behaviour from the initial play-test with the game Werewolves. While commercial games have the ability to create certain desirable effects besides entertainment, they are often not effective tools when considered for everyday use. For example, it may cost more time than a healthcare worker may have for a single therapy session. Renger, along with the game company Monkeybizniz<sup>8</sup>, created a playful paper-based intervention (see Appendix A). Figure 13 is part of the paper-based intervention that could be printed out and used to have a patient to discuss their mood. In the middle is the player's *moodbot*, while the elements on the left and right are used by patients to customize their Moodbot based on their current emotional well-being. Results from playtests with patients and healthcare workers showed enough potential for Altrecht and HKU University of the Arts Utrecht to start a formal research project.

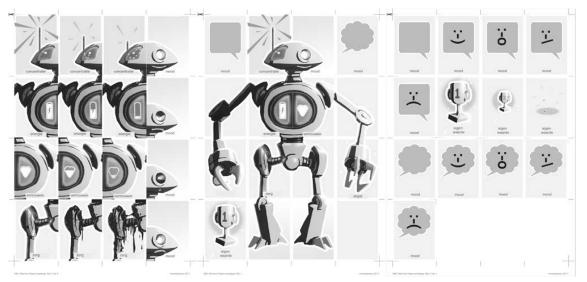


Figure 13: Playful intervention with a moodbot sheet and cards for customization.

<sup>&</sup>lt;sup>7</sup> http://lesloupsgarous.free.fr/

<sup>&</sup>lt;sup>8</sup> http://www.monkeybizniz.com/

#### **4.2. CONCEPT PHASE**

The concept phase is the time allowed to determine the elements that form the foundation of the entire game design (Bateman and Boon 2005; Adams and Rollings 2007). During this phase, it is ideal to explore several possible concepts while keeping in mind that the objective is to finally select a single concept, which shows the potential of being the basis for the design intentions for a meaningful game-play experience.

Based on previous experiences, a typical concept phase would include sessions of ideation (e.g. brainstorming) for developing a multitude of preliminary high-level concepts through brainstorming activities. These would be briefly written or presented ideas for a game's core game-play, progressive game-play, and game-play experience. Inspired by Gänshirt's (2007) "systematic production of several alternatives" an experimental approach to use paper-based prototypes as the primary way of expressing game concepts instead of high-level concepts. The results from the exploratory phase supported the chosen experimental approach by hinting at possible interesting features for the game's design.

## **DESIGN RESULTS-1**

In this design cycle, the aim was to iterate on the previous results. The intention of the paper prototype (see Appendix B) was the first attempt to iterate on the ideas from the exploration phase. The main design objective was to explore how the ideas from the previous design cycle could be transformed into a game, which meant designing a game system around the customization mechanic that patients used to express their emotional state. The design was developed into something between a mock-up and paper-based prototype. The design did not go through an evaluation (e.g. play-test). Figure 14 demonstrates the elements from the mock-up and paper-based prototype. The moodbot is found centre-left, while the elements on the right can be cut out, providing the players with a way to customize their moodbot. The customization cards include numbers that range -1 to +1 representing the first efforts to give the game formal structure of rules.

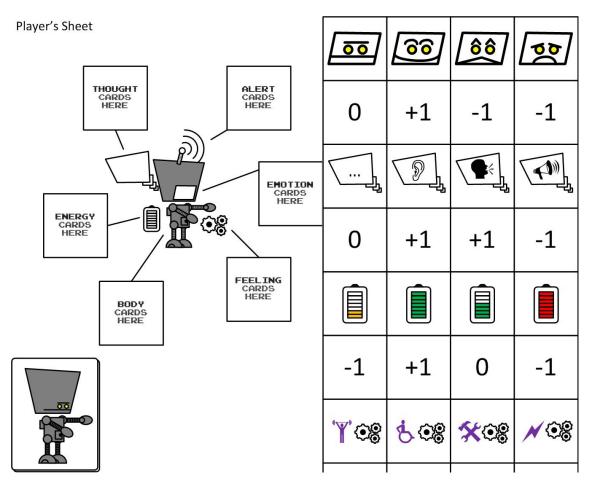


Figure 14: Elements from the first paper prototype attempt.

#### **DESIGN RESULTS-2**

The paper prototype (see Appendix D) is the result of meeting with subject matter experts (a nurse and a psychiatrist) from Altrecht. A freelancer, an intern, and an HKU game design teacher formed a team of junior designers (see acknowledgements) were assigned the task of developing game design concepts that focused on connecting players by having them play together and allowing them to communicate their state-of-mind as part of the game-play.

The task of a senior game designer is to direct the design team and keep an overview of the features implemented in the game prototypes. Working with a small team of game designers can be challenging, especially in the applied game context. In this case, the junior game designers placed emphasis on creating the game-play experience without considering the applied purpose. Design decisions made in a team is often a series of discussions, in which designers present ideas and build argumentation for one possibility or the other. It is difficult, without the proper frame of reference, to foresee how a design decision will be accepted by co-designers.

As a game design researcher, this period provided a chance for reflection and gathering information. As the senior game designer, this period provided the time needed to work in close cooperation with the design team and manage the design decisions. Through this process, the game was developed as a paper-based game and internally play-tested by the design team. When the design was deemed playable it was eventually play-tested during a co-design session with subject matter experts. The results (see Appendix E) from the play-test indicated that the game allowed for too much opportunistic behaviour from players, missed the connection to their current work methods, and identified an issue with using words that could have multiple interpretations.

#### **DESIGN RESULTS-3**

The following paper prototype (see Appendix F) is one of the results from working together with a team of junior game designers. Unlike the approach to the previous prototype (see Appendix D) which allowed the junior game designers complete autonomy to propose a game system. They were now directed to develop ideas within the design space set by the Scope Model (see Appendic C). The paper prototype (see Appendix F) aimed to add a game system around the core feature of the player reporting his/her current state of mind (i.e. happiness, concentration, energy, etc.). Based on the player sharing their current state of mind, the player earned resources that allowed them to explore hidden areas and/or build on areas already explored. The object of this game was to reach the end of the level by finding a route to the end position. The game was developed into a paper prototype which was play-tested internally at HKU Innovation Studio by four members of the development team over the course of a week. The documentation in Appendix F describes the rules for playing the game and how the game was placed a wall for the purpose of being visible to the play-testers that walked by the game each day.

#### **DESIGN RESULTS-4**

A concept document (see Appendix G) records the result of collaborating with HKU game designer and lecturer T. Bosje. The designer was encouraged to pursue his own ideas within the guidance of the previously described *Scope Model*. From this design, ideas about how players could set goals and progress through the game were explored.

The concept document (see Appendix G) explored roles, such as the possibility of a patient's role reversal with the healthcare worker and the role of the healthcare worker as supervisor-player. The game was developed into a paper prototype which was first playtested internally by the design team, which included three game designers, a game artist, and a game researcher. Eventually, the paper-based prototype was play-tested by two codesigners from Altrecht, which resulted in several points of critical feedback on the game's design. One issue concerned the relationship between behaviour signals and goals was not correctly interpreted. Another issue was the way healthcare workers would need to communicate through the game with the clients, which was seen as being difficult and would add to their "already busy workload".

#### **DESIGN RESULTS-5**

This concept documentation (see Appendix H) is the second result of collaborating with T. Bosje, game designer and HKU lecturer. The direction of the second prototype was to explore a set of game mechanics that focused on allowing player expression and puzzle-like game mechanics. The concept documentation (see Appendix H) contains a quick explanation of the game rules and a printout of the rooms that could be arranged to create a puzzle. The prototype explored the supervising healthcare worker's control over patient-player therapeutic goals and the feedback concerned with treatment progression. The design also explored different forms of communication (see figure 15) that would allow the patient-player to report their current state of mind. Figure 15 demonstrates the first design decisions, which included the idea of expression through a moodbot's posture (right) and expression through images (left). Like the previous prototype, it was first play-tested internally by the design team, which included three game designers, a game artist, and a game researcher. The co-designers from Altrecht saw the visuals as an improvement over the use of words used in the last paper prototype (see Appendix B) and were positive about the separate puzzle pieces that allowed the player to customize it on a daily basis.

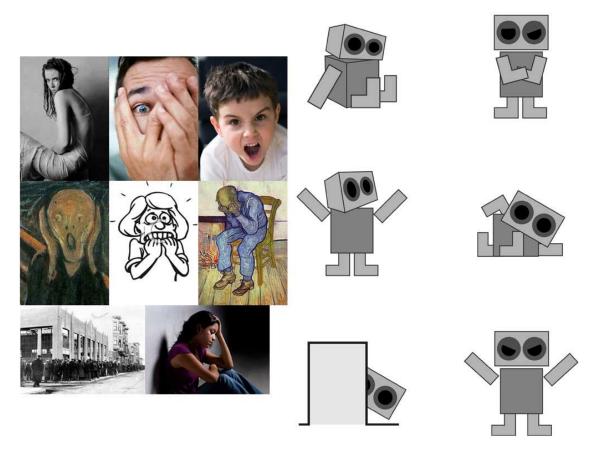


Figure 15: (right) Random images for expressing feelings and (left) the moodbot images used to express posture.

## **DESIGN RESULTS-6**

The paper prototype (see Appendix I) in this section represents the efforts of the author as lead game designer with a team of game designers composed of T. Bosje, W. Verboven, and D. Ibanez. The aim of the following prototype was to salvage and assemble the best features from the previous prototypes into a single paper-based prototype (see figure 16). Based on previous feedback from play-testing earlier prototypes (see Appendix F, Appendix G, and Appendix H) and using the AGD Scope Model for guidance, a single new prototype was created.

The prototype's design (see Appendix I) can be characterized by players first needing to report their behaviour by signal meters. After this, players are allowed to move to a room where the player can customize their room with images for expressing feeling and moodbots that expressed their current mood. To move to other rooms the player can rotate their room to connect openings, which is an additional puzzle mechanic that gave players a goal within the game. When the player completed opening all the rooms their ship could move forward. The ship's movement represented the player moving towards a personal goal set by the player. For example, a personal goal could be waking up at a certain time

each morning. Additionally, *moodchips* or small positive messages were added to the design to allow players to support each other. Furthermore, the aspects the game were highlighted to provide co-designers with a rough idea of the information that would be available to them through an eventual back-end tool. The resulting prototype had many features that can be found in the final Moodbot version 2.12 (see Appendix AR).

Once the paper prototype (see Appendix I) was considered playable it was play-tested during three separate sessions (see Appendix J, Appendix K and Appendix L) by four codesigners and four players from the target audience to determine if the content, context and player experts recognised a therapeutic value in the game. Figure 16 shows the paperbased prototype laid on several tables, where each grid of papers represents a single player's perspective. Three of these perspectives were set up to allow a multi-player experience during the play-test. Results from the play-tests indicated difficulty with the placement of the signals and their meanings, which would need to be addressed in the following design iteration. A point of contention developed around the mood-chips when players indicated they would prefer a chat function. However, based on literature and familiarity with online social games the possibility of a chat function was blocked after a discussion about this with co-designers. From the play-test players expressed their feelings about healthcare workers having access to their game sessions. According to one player, "I may not actually raise the alarm myself and I think it's fine if a healthcare worker looks in my room and sees that I feel bad, and then comes to me."<sup>9</sup>

<sup>&</sup>lt;sup>9</sup> Quote was taken from DesignState\_6\_Playtest.pdf and has translated from Dutch the original language.



Figure 16: Photo taken during co-design play-test of a paper-based prototype.

## **4.3. ELABORATION PHASE**

The elaboration phase is the time allowed for the design to expand on the basic ideas of the game, which means the concept of the game must become concrete enough to develop into a digital game. During this phase, the designer will add to the design, make it more detailed and refine design decisions through play-testing and prototyping (Adams and Rollings 2007). The main objective of the elaboration phase is to have a design worked out as a paper-based prototype and create the game design documentation.

The elaboration phase was unique in my experience, because of the previously mentioned experimentation that used multiple paper-based prototypes to explore possible game concepts. The advantages of this experiment provided playable game systems play-tested internally or with our co-designers. Allowing the next iteration to select features based on working mechanics with the most promising game-play experience and with the strong links to the applied content, context and transfer.

#### **DESIGN RESULTS-7**

The design state in this section is the result of changes made to: fix the core player activity by making it less complex; make the game sessions shorter; offer players incentives for returning to game sessions for longer periods of time; establish the social dynamics. The design was developed into a paper prototype (see Appendix M), three digital prototypes (see Appendix Q, Appendix R, and Appendix S), and a hybrid digital prototype (see Appendix T). Furthermore, a prototype was developed by the game artist and game programmers to explore the game's art style and the technology base.

The prototype that was created during this iteration aimed to address issues and feedback from the previous design state. Changes to the design included the removal of the rotating rooms and the puzzle game element. The removal also meant that the player wouldn't need to move from room to room. The reason for this was to decrease the complexity of the game. It was also decided that the meaning and signal label would be customizable with an agreed upon label decided by the patient and their healthcare worker. A competitive game mechanic was added that would take two teams of players and have them race by collecting points which were earned after reporting and customizing their rooms. The additional competitive elements were suggested by co-designers that felt competition would motivate patients. Another element of the prototype allowed players to challenge other players with therapeutic challenges.

The prototype for this design state had two playtests (see Appendix U and Appendix V). One was internal the other was with the target audience. The goal of the two playtests was to determine the level of playability of the game and to determine if the target audience could relate to the content. The internal play-test consisted of five HKU co-workers divided into two teams to play against each other over three days. The co-design play-test included four healthcare workers and three patients in a session that lasted about two hours. Feedback from the play-test eventually questioned how players would be assigned a team and the duration of the assigned teams. It was also requested that players be able to create their own personal goals. Lastly, players agreed that a more cooperative element could be added to the game. For example, one tester mentioned that they would feel bad for the other team losing.

#### **DESIGN RESULTS-8**

The design state in this section represented a feature freeze on the core game design and the design for new progression mechanics to replace the competitive elements found in the previous design state. A paper prototype (see Appendix W) and a playable digital prototype (see Appendix Y and Appendix AA) were developed. The paper-based prototype was created to communicate the design for the new cooperative progressive mechanics. The digital prototype was developed through the efforts of the development team with the aim to have the game's features working in the most simple and functional way possible. These kinds of digital prototypes lack interaction design and visual design and offer only a digital proof of concept.

The design state at this point now consisted of player's having a personal room within a 'ship' with other players. In the player's room, a player is able to report their mood by adjusting the signal meters, customize their moodbot's facial expression and posture, and customize the *moodtube* with an expressive image. Players could also visit each other's rooms where they could leave moodchips. All the action (e.g. signal meters, moodchips, moodtube and moodbot customization) players could take were rewarded with points referred to in-game as dust bunnies. Points collected could be spent to take actions on the players' ship, e.g. to move it forward and change its direction. The player's goal was to cooperate with their fellow players to move their ship around the Moodbot world collecting objects that indicate their progress in the game. In terms of the design state, it had not yet been determined how players would be allowed to define their personal goals and how these would tie into the game system. Figure 17 demonstrates how several features were already in place at this early stage despite the quality of the game graphics.

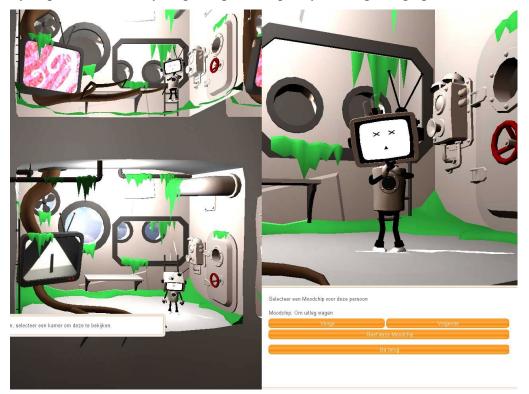


Figure 17: (top left) screenshot of a moodtube (bottom left) screenshot of visiting another player's room (right) screenshot of the moodbot customization.

The play-test (see Appendix X) included two healthcare workers and two patients from Altrecht's forensic ward. Introducing Moodbot as a 'game' created the wrong expectations from play-testers. One patient commented, "I don't see my therapy as a game." However, after playing the game, the same patient later had positive comments about the therapeutic feature of feeling being expressed through the moodbot and moodchips.

#### **4.4. TUNING PHASE**

The tuning phase begins when the design is 'frozen', or when it has been decided that no new features are to be added (Adams and Rollings 2007). The game design decisions during the tuning phase focus on the user-interaction, and on how to make the game system accessible to the player. The primary objective of this phase is to refine and polish the game into the final game artefact. The game development process eventually produced thirty versions of the game. During this phase, design play-testing focused on game-play issues, usability issues, and problem-solving game design mechanics, which resulted in many *micro-iterations*. The development team evaluated each version for coding issues (i.e. bugs), audio issues, and graphical issues. The iterations reported here only include those that ended with play-tests with the target audience.

## **DESIGN RESULTS-9**

Fewer design decisions were made to the game system after the digital Moodbot version 1.1.3. (see Appendix AC). The aim was to create an intuitive usability experience and test for a meaningful game-play experience that could be independently tested over long periods of time by the target audience. The game development cycle of planning, building, and testing started with Moodbot version 1.1.2. (see Appendix AA) and ended with version 1.30 (see Appendix AJ). During the development process many small changes and improvements were made to the interaction and game design states. For example, in the digital version 1.12 (see Appendix AD) the progressive mechanic of working together with other players to explore the Moodbot world was not yet implemented. In the digital version 1.24 (see Appendix AG) attention was given to the interface elements and interaction, such as steering the ship and creating a stable connection to the online database. The digital version 1.27 (see Appendix AH) had many issues like the ship navigation (movement and steering) no longer functioned and the game was plagued by several bugs that affected the user experience and playability of the game. In digital version 1.30 (see Appendix AJ) issues from the previous version were solved and the game's features were not fully functional.

The design state from version 1.12 (see Appendix AD) to version 1.30 (see Appendix AJ) maintained the features already previously determined during the elaboration phase. Additional changes to the design included how players selected their personal goals and how these goals were refereed by other players. The changes also included the dust bunny mini-game that started after players earned points from an action, e.g. reporting their mood or customizing their moodbot. Points were represented by the fictional creature the *dust bunny*, and could only be collected by tapping (or clicking) on a dust bunny. Dust bunnies could also hide, so players needed to scare them from their hiding places in the tree foliage to collect them. Lastly, additional features also included new ways for players to express themselves, e.g. by setting the music score and writing text into a thought cloud and a speech balloon.

From the state of design in this section (see Appendix AC) to the play-test found in Appendix 10, thirty development iterations occurred to the digital Moodbot version 1.30 (see Appendix AJ). The game was repeatedly play-tested internally during its development and play-tested three times externally with the target audience. The first play-test was conducted at Altrecht's ABC department with two patients and two healthcare workers (see Appendix AF). The second play-test was conducted at Altrecht's Roosenburg department with four patients and four healthcare workers over the course of a few hours at the clinic (see Appendix AF). The last play-test included six patients and four healthcare workers from Altrecht's ABC department and conducted remotely over the course of two weeks (see Appendix AI), which made Moodbot version 1.27 (see Appendix AH) the last version of the game to be play-tested. The results from the play-test were disastrous for the project as a whole. Players were unable to see each other's customized moodbots, leave each other moodchips, log in to the game, buttons did not function, catch dust bunnies or use dust bunnies to move the ship. Players reported they were "frustrated" and "bored" with the game. The feedback from the play-tests was enough to have co-designers questioning the value of continuing the project during following project evaluation. Ultimately, the blame for the results was placed on the design of the game. However, Version 1.30 (see Appendix AJ) which had been developed to correct the failing issues of the version used during the last play-test was never tested by the target audience or co-designers.

# **4.5. SNAPSHOT: DESIGN CRISIS**

The design crisis snapshot (see Appendix AK) is an auto-graphical interview using the epistemic cards to formulate the design decisions behind solving the crisis. An interview begins by arranging the cards to show the starting circumstances behind the critical design moment (see figure 18). The cards are then used to examine two cycles of thought and reflection.

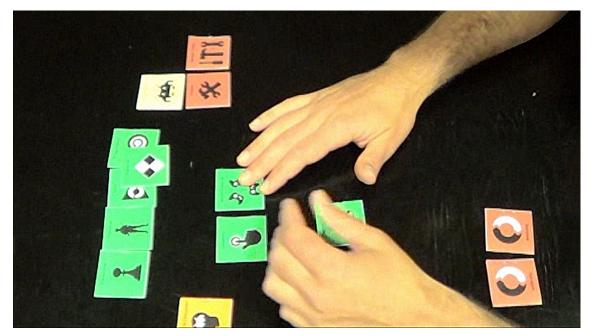


Figure 18: An example of the cards being arranged in order to report the design decision.

For the snapshot, the most challenging moment in the design of Moodbot was chosen, which represents a moment of design frustration as a game designer. A lot of effort had been made in terms of design to avoid exactly this kind of situation. However, from the perspective of a researcher, it was a moment of interest since it allowed for a chance to investigate how the designer would react to the situation and witness the eventual direction the design would take. The snapshot given here represents a game's design in relation to technology, co-designers and game design.

After the previous playtest, it was obvious from an experienced game designer's perspective that a critical moment had been reached. The play-test which included patients and four healthcare workers revealed that many features of the game did not function and the game session was disrupted by a broken connection with the game's database. From the player's point of view, the game was not engaging and did not work. Figure 19 provides an example of how the epistemic cards would be arranged to report how confidence in the project had been undermined. The development card was selected to represent that issues in game development were a primary issue, which had cost too much time. The trust card is used to highlight the result of the first two cards.



Figure 19: The epistemic cards arranged to show a lack of confidence in the project.

The following meeting with the client included the entire development team in order to bring home the urgency of the situation to the team. The other reason was to take advantage of the team's design and development experience since the lead game designer was not available (due to internationalisation work for the HKU). Normally, the lead applied game designer would be there to explain all the details and issues that the game design and development of Moodbot faced. It was confirmed during the meeting that confidence in the project had been undermined to the point of suggesting it be discontinued. A co-designer (a nurse) sitting in for the first time during the meeting continued to see the potential of Moodbot. Through a dialogue with him, he revealed how the elements of the game worked as a tool for the healthcare worker. From this point on the meeting became a brainstorm aimed at redesigning the game.

The new co-designer with player-contact expertise was unexpected, since the assumption that player-contact experts had already been involved. From the perspective of the game designer, this was experienced as an unpleasant surprise, due to the efforts to avoid missing co-design roles that contribute important information about the target audience and the professionals on the work floor. As it turned out, that original co-designer was far less involved in the daily treatment of our target audience. Realising this meant that a part of the AGD Scope Model analysis was inaccurate. Another issue was the manner in which Moodbot's design was evaluated at this critical meeting, which raised a number of concerns. Firstly, the current state of game design as represented by the game's build was not evaluated by co-designers. As mentioned in the previous chapter the Moodbot version 1.30 (see Appendix AJ) was never play-tested nor was it shown during this meeting. Secondly, the results from the play-test and user-test were not discussed or analysed during the meeting.

Once established that the project would continue, the meeting developed into a co-ideation session. Based on the ideas and requests from the meeting the AGD Scope Model was adjusted to focus on the forensic psychiatric patients within a closed ward. The changes to the model included the following design process parameters:

- Group meetings
- Individual goals as a part of a group activity
- Healthcare workers guide a group process
- While the verbs were being changed to:
  - Real-world rewards
  - o Merit comparison
- A tool usable with current methods

Many ideas from the ideation session required changes to the game's mechanics. For example, changes were made to make the player's progress more transparent and allowing healthcare workers to guide a group process through the game. Another result of the coideation session was the unintentional switch from tuning phase to the elaboration phase, which was the result of changing the design intentions. The switch to a different design phase is noteworthy because the elaboration phase opens the design to new features. From experience, this meant the design needed to be properly managed to avoid feature creep caused by adding features trying to fix broken ones.

Upon returning to the design of Moodbot, an evaluation was conducted by first examining the newly proposed game design document created by a recently added junior game designer J. LaCoste, then an examination of feedback from the previous meeting, then informal interviews with the development team's programmers and game artists, then a play-through of the last version (see Appendix AJ) of Moodbot to have a proper sense of the last state of the design. Furthermore, the information gathered during the previous playtest was also reviewed, which detailed the issues they had while playing the game. The review of the playtest would also highlight the missing feedback from co-designers. From the evaluation, various issues that were not previously addressed during the last iteration of the game's design were now addressed. These included instabilities of the code, software architecture that lacked structure and a lack of updates required to refactor these issues. The result of this meant it cost the design and development team too much time to implement the smallest features, iterate the interface, or fixing game breaking bugs. The repercussions of this instability reverberated throughout all other aspects of the game and its design. Previous iterations, in which there was no real change or in which minor interaction design was overlooked due to time and the fact they were passable during a playtest, resulted in legacy issues. When it was eventually compared to the amount of progress made implementing design decisions thus far, to the design changes required by the new design, it was clear these exceeded our ability to deliver in terms of development. It became obvious that if attempted to continue with the same technology base it would endanger the success of the project.

The decision was made to start rebuilding Moodbot from the ground up. This seemingly radical decision was supported by having a new programmer on board and the switch to the latest version of the Unity game engine with supporting plugins. Another advantage of a rebuild would allow the user-interface and navigation structure to be redesigned, instead of repurposing the old structure to fit the new features (see figure 20), which would allow for a uniform game-play experience. A significant change was also made to progression mechanics, which allowed players to explore the Moodbot world by making choices together. This was replaced by progressive mechanics of players moving their collective ship forward by gathering points towards an end position that represented a real-world reward. The unfortunate side of this was the need to remove much of the visual and sound content, which gave the older design an entertainment video game-like experience.

Game development began after the new design intentions were documented in a game design document. Several quick micro-iterations occurred before the design was fully elaborated upon. During these sessions, the navigation and interaction of the user-interface were discussed and planned out. The eventual result of this was Moodbot 2.0.

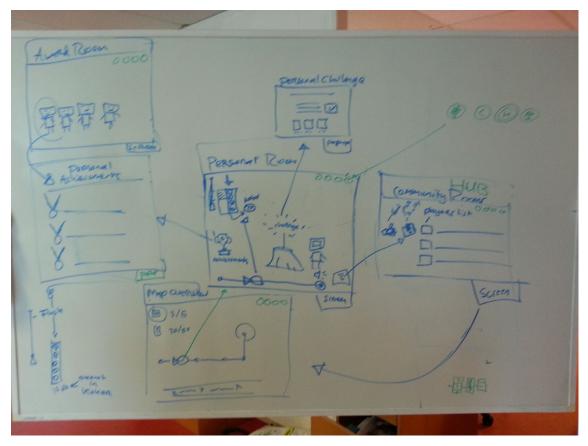


Figure 20: Moodbot 2.0 wireframe communicates the design of the player's room in relation to other game elements.

## 4.6. ELABORATION PHASE 2.0

Iteration is primarily associated with the iterative cycle of ideating, elaborating and evaluating. Phases too can become iterative especially when a phase fails to meet expectations. When this occurs, it becomes necessary to revisit the previous phase. Returning to the elaboration phase was a second chance for the Moodbot design. The object of this second elaboration phase was to redesign Moodbot in such a way that the game could be redeveloped in a short amount of time and show its functionality through the backend management system.

#### **DESIGN RESULTS- 11**

During this phase, the design refinements and changes were documented in a game design document (see Appendix AM). In this first iteration, the design objective was to freeze the new design features. The design challenge was to have a design that could be built from scratch and that was not an iteration on the previous technology base. For this reason, it was imperative to select elements from the previous design essential in achieving the design goals.

The resulting design state focused on the player's room and elements of the player being able to visit different sections of their ship was removed. The main activities in the player's room still included filling in signal meters, assign themselves personal goals, and customize the moodbot. A new menu allowed the player to have an overview of the player community and facilitating visitation of the rooms of other players. The moodtube which previously allowed players to display a series of expressive images was removed from the room and replaced with the player's personal scoreboard. Dust bunnies were repurposed as points and awarded to the player directly after filling their signal meter, achieving a personal goal or customizing their moodbot. No longer did the player need to capture dust bunnies or spend the dust bunnies to influence actions on their ship.



Figure 21: A screenshot that demonstrates the track indicating the players' ship progressing towards the real-world goal.

The progression structure (see figure 21) was changed from allowing players to cooperatively explore the moodbot world of floating islands to a progression bar using the players' ship to indicate their progress in collecting points. The newly conceived aim of the game was to collect a predetermined amount of points within a certain amount of time. For example, a healthcare worker could challenge the players as a group to collect one hundred points in two weeks. At the end of the track, the healthcare worker was now able to add two real-world rewards. For example, this could be a simple reward like the group sharing a cake. One reward was for completing the goal set by the healthcare worker and the second reward was for when the players exceed expectations of the original goal. The game design document created for version 2.0 (see Appendix AM) represents the results of the design freeze and the new design direction. The feedback on the design was limited to co-designers and development team. Moodbot version 2.1 is one of the first stable digital versions of the game that demonstrates a halfway point towards implementing the new design direction. For example, version 2.1 (see Appendix AO) demonstrates the new progressive structure and explains the challenges of adding the player's signal history as a graph. A point of contention between the designer and co-designers with the new design state concerned the decision of having real-world rewards. The design argumentation against the real-world reward considered the possible consequences on the player's motivation. Game rewards within the game system motivate the player through intrinsic motivation while real-world rewards create extrinsic motivation. Gambling, lotteries and professional sports are examples of combining game systems with real-world rewards, which increases the risk of unwanted behaviour. Furthermore, the real-world reward would be a possible barrier to healthcare works using the game, because eventually, they would need to conceive a new reward each time a game session starts. Regardless of the design arguments, the co-designers from Altrecht and HKU Innovation Studio management saw this design decision as a fundamentally new design feature. From a research perspective, it demonstrates how the designer's input is often placed in a dubious position when dealing with the judgement of co-designers and the pressures from the realities (e.g. keeping the client happy) of project management.

### 4.7. TUNING PHASE 2.0

As mentioned previously about the tuning phase, a tuning phase begins when the game design has been frozen. As in the previous tuning phase much of the design activity is about the user-interaction, and how to make the game system become accessible to the player. The primary objective of this phase is to refine and polish the game into the final game artefact. During this phase, play-testing focuses on usability issues and many ideation activities on problem-solving. The advantage of returning to a tuning phase a second time is that many assets have already been developed and many lessons learned from the last version could be applied to the interface design, but the biggest advantage was the ability to upgrade the technology base, which allowed for greater ease of development.

### **DESIGN RESULTS- 12**

Building a digital version, the game that could function on an iPad was the priority at this stage. The first version of Moodbot 2.0 was built quickly and visually resembled Moodbot 1.0 versions (see Appendix AO). It required several digital builds before the final build

resulted in Moodbot version 2.12 (see Appendix AP), which was playable on the iPad (see figure 22) and had a fully functional player management backend (see figure 23). The backend was developed and designed by Ippo, an internet bureau and partner in the Moodbot project. Ippo was specifically selected for their experience with developing eHealth solutions for Altrecht and their expertise in protecting patient data.



Figure 22: A demonstration of the final version of Moodbot functioning on the iPad.

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Figure 23: An example of information and view available to the healthcare worker from the backend.

The design state did not require design changes from the documentation (see Appendix AM) to the digital Moodbot version 2.12 (see Appendix AR). Instead of making decisions that would affect the game structure. The design activities focused on the implementation of the user interaction elements. For example, the community screen, which replaced the player's ability to visit other players by moving around the ship needed to be simplified and allow players a means to manage their contact with other players.

To arrive at version 2.12 (see Appendix AR) there were several builds for testing purposes. The majority of testing was done by the development team and aimed to test functionality. During this time a play-test with three patients was conducted to gather insight into interaction design. The first play-test (see Appendix AP) highlights the difficulties with the user interface under development. A final deadline decided that version 2.12 (see Appendix AR) would be the version to be used in the final testing with the target audience. The first play-test (see Appendix AQ) was conducted with three patients and four healthcare workers from Altrecht's the ABC department. The results from this play-test indicated Moodbot no longer fit the patient's ambulatory context, since the social game mechanics relied too much on players meeting in a clinical environment. Patients offered ideas for solving this by having an in-game chat function or have small games that could be played together. Ultimately, the patients from Altrecht's ABC department who are young adults found the game to lack meaningful game-play experience, i.e. it wasn't fun. The following play-test (see Appendix AS) was conducted with ten patients and J. Schermers, a healthcare worker from Altrecht's Roosenburg department. Initially more healthcare workers were supposed to participate in the play-test. According to the J. Schermers, her colleagues did not want to break from the current system, because adopting a new system meant increased workloads, even if temporary. Ultimately, J. Schermers controlled the game, including player guidance, setting up rounds, entering player information, and tracking player goals. Eventually, she reported that she had more information about the patients than their original healthcare worker leading to those healthcare workers approaching her insights into the patients they supervised. As a result, she made the following comments (see Appendix AS). "That's the nice thing about Moodbot. You can fill in all the variables yourself. It is a very beautiful instrument" and "What Moodbot does is it allows you to work efficiently". Besides the positive reaction from J. Schermers and several more anecdotes concerning interventions facilitated by using Moodbot, there were also positive reactions from six patients and several examples of positive changes in patient conditions. For example, a patient with serious depression had set his personal goal to play badminton once a week with the personal reward indicator set as a McDonald's hamburger. According to the play-test report one healthcare worker described how the patient "almost immediately" left the couch and became active. While the patient's eventual visit to the McDonalds with the attending healthcare worker led to a "very valuable conversation". There was also a situation where two patients supported and encouraging each other in obtaining their personal goals. Yet another patient who transferred to another department and was no longer able to continue with Moodbot set up his own signal meter on paper. In terms of game-play experience, the players experienced the dust bunny 'flush' (see Appendix AR) satisfying, having their name in headline and accomplishing as group the final real-world reward. The result according to feedback was that they, "found it fun and appreciated it as a tool". Finally, the lead co-designer, R. Visser described Moodbot's added value was the way it changed the traditional balance between

healthcare worker and patient, which is normally a one-to-one relationship with communication one directional. However, she believes that Moodbot changes that paradigm, because, "Moodbot creates a triangle of responsibility in treatment".

### **5. CONCLUSIONS**

In summary, this dissertation has covered the context, method, practice-led research and presented a theoretical approach to investigating design decisions in the process of making an applied game. The method of this research was a practice-led approach that centred on the design of the applied game Moodbot. The chosen approach connects to the methods of research from the field of design research and research into epistemic frames. The context draws knowledge from the fields of applied game design, applied games and applied games in psychiatry. The heart of the practice-led research is the applied game Moodbot, while this dissertation acts as a complement to the artefact by providing a research narrative. The design and development of Moodbot was not a typical design journey. The project was almost a failure due to the co-designers' lack of confidence in the results of an ill-conceived play-test, which demonstrated to us how fragile our technology base had become. A snapshot aided by the epistemic framework tool was used to reflect upon this critical design moment. The result was the decision to re-design a greater part of Moodbot. While the results of the game artefact have yet to undergo validation, the preliminary responses are promising. Adding to these are two awards<sup>1011</sup> that Moodbot earned during its development, and the game has since been appropriated by a consortium that aims to upscale the game with commercial companies.

Used throughout this dissertation was the term applied game, which was argued as a term that better described the different forms of games designed with a purpose other than entertainment. The definition is an important catalyst for the realisation design is a key concept to games that aim to create real-world impact. From the design perspective, it infers that a game designer needs to actively apply his/her design skills and knowledge to meet the real-world purpose of the applied game, which is different from a typical entertainment game designer that can borrow from pre-existing design paradigms to create entertainment. To be able to apply design, the designer must understand the design tensions and how these need balance. For this reason, a framework like the one based on Vitruvius, which identifies use, engagement (i.e. meaningful game-play experience), and sustainability (i.e. a model of service), becomes an aid for game designers in shaping their design.

<sup>&</sup>lt;sup>10</sup> Growing Games Showcase

<sup>&</sup>lt;sup>11</sup> iZovator Award

In the Netherlands, practice-led research which uses an artefact as the primary research vehicle, is not universally accepted as a form of research. Those game designers that use this approach may face insecurities, which may prevent design research for the sake of developing design knowledge and insight. Currently, many designers validate the outcomes of their research based on their game artefact's usefulness using qualitative and quantitative studies. While validation in this manner is important, the approach proves most interesting to the corresponding domain and demonstrating the effectiveness of games. However, it comes at the cost of game design knowledge, and consequently misleading co-designers to believe that game artefacts simply spring into existence with little or no design effort. The pressure for validation comes from a belief that applied games will be more widely accepted by domains such as health. However, observations made during this research would indicate that process of adoption of applied games should be likened to the process required from a professional in a domain to adopt any new tool or method. For this reason, attention should be given to how applied games connect to service design and organisational change. Validation through qualitative and quantitative studies is better accomplished after a game artefact is adopted into the practice of professionals. Design informed by theory, process and good practices should already give the designer confidence that the design will function as intended, such as engaging the target audience. Perhaps applied game design validation could be simply having an artefact codesigner trust enough to introduce to their target audience, and willing to conduct experiments to determine its usefulness?

In terms of knowledge value, this research demonstrates an approach to investigating design. Investigations into design processes and activities are always relevant to game designers, and even more so for game designers in the field of applied games. Using the epistemic framework as an approach to investigating design decisions has become more interesting than first imagined. What remains a challenge is how to take this method of investigation and make it applicable for other game design researchers. The framework potentially represents a step forward towards creating an approach towards investigating game design, because the framework allows flexible relationships but remains structured enough that the narrative told within it remains coherent. As a tool for investigation, its purpose was to guide self-reflection, but as the tool becomes more familiar, it seems to have the potential to aid the designer to find problems within game development, make critical decisions that take the project in the right direction, and awareness of the codesigner's relationship to the design.

Additional knowledge value comes from design activities reported during the research narrative to mark the progress and steps taken by the designer. For the most part, these design activities, such as game design document, prototyping, play-testing, and brainstorming, are familiar to most game designers, which should offer a basic means and confidence to approach applied game design. However, some design activities presented in this research, such as the ScoMo (Scope Model), are known only to a handful of game designers. The ScoMo is a unique instance in which a game designer finds the need to create design activities to compensate for design complexities. As a result, the tool has proven itself indispensable by being used in more than one applied game project. As a researcher of game design, a certain amount of freedom to experiment exists, from this experimentation there is a chance to discover or invent design activities or new processes. For example, during the concept phase, several paper-based prototypes were simultaneously developed. This experiment, so-called because it did not follow the previous approaches, supported a hypothesis the designer could choose concepts from working game models instead of choosing from intangible ideas proposed in brainstorms. It demonstrates there are still possibilities to gather knowledge about how we approach the game design process.

The research questions essential to my research all aim to understand design decisionmaking. The questions struggle to create a line of questioning that would somehow shed light on design decisions. At the beginning of this dissertation these three questions were asked:

### Q1) How does a design decision change affect a game artefact?

Game design decisions are fundamental to shaping game artefacts. The more critical the decision; the bigger the effect. For example, the snapshot describes a critical decision to re-design Moodbot, which resulted in giving healthcare workers a game master role allowing them to decide with and for the player's real-world rewards. To understand how a single design decision can affect a game artefact, we must revisit the Vitruvius triad described in this dissertation. Decisions can be seen as steering the design to support an

artefacts game-play experience, sustainability or usability. A game designer will make choices that take these aspects into consideration trying to find a design balance.

### Q2) At what point in the process do design decisions occur?

It is no surprise that design decisions occur throughout the design process. A point of this dissertation is to show exactly how often the designer makes decisions both major to minute through the iterative process. Identifying the decisions that create the greatest impact are the most interesting and most difficult to detect. The epistemic framework provides insight to the complexity of design decisions and provides the evidence for linking these to decisions that will have the greatest impact. During this research the use of the framework was employed to organize the reasoning for a particular design decision. While the framework cannot predict the kinds of decisions that will be made or their impact, the framework did demonstrate the ability to aid the designer in identifying the root of a design problem. The ability to analyse the design situation before making a design decision is a giant leap forward for understanding impact and timing of design decisions.

Q3) What influences game design decisions? As an applied game designer, there is no escape from the design tensions described in the Vitruvius framework. Co-designers and target audience are the most influential on a designer's decisions. However, it requires the ability to manage the expectations and the expertise from co-designers, while managing the target audiences' preconceived ideas about games. Even an experienced designer will continuously have to analyse the input from both groups while demarcating the expertise that will most likely influence the design decisions. What was learned from using the epistemic framework is it allows a designer to make out the design influencers by identifying the kinds of co-designers involved in a project. The framework also helps to identify influences that are situations (e.g. time or confidence) rather than people that would influence the way a game designer would decide. A designer can learn from an epistemic analysis in retrospect or conduct an analysis to help guide design decision-making.

An analysis of the limitations of this research would reveal an issue that is always associated with this kind of design reflection; that the researcher and the designer are the same person. On one side this allows for a perspective from the practitioner, with the weakness being subjective. However, this is also the strength of the research, since it allows us to explore the normally invisible world of the designer. As a researcher, the challenge comes from the thoroughness of one's research practice (e.g. standardised play-test documentation and at the same time being in English, etc.) and still manage the design, and in my case the game production. In the end, there is an interesting question of establishing a balance between the roles of researcher and practitioner.

Designing an applied game is a considerable challenge, and as the research narrative explained; is full of complexity and pitfalls. It is not the purpose of this narrative to frighten game designers or co-designers away from applied games. It is understandable that many game designers would find applied game design undesirable, especially considering their reputation for low production value and poor game-play experiences. Motivated by personal and professional reasons, this research means to encourage game designers to become applied game designers. By means of this dissertation, it has been partly demonstrated that the field of applied game design allows for a certain amount of freedom in making design decisions. For example, there is a chance to flex one's creativity, craft innovative game-play experiences, and create games with high production values. One does not have to become a professional or expert in a specific domain to function effectively as an applied game designer. However, the designer does need to have a foundation based on game design theory that provides clues to the right kinds of tools and activities that will aid them in the design process. While a takeaway for co-designers is to work with a game designer that can demonstrate knowledge of relevant game design theory.

Applied game design is the biggest challenge a game designer can undertake. The same respect that a game designer would give to an entertainment game should go into an applied game. Additionally, the designer may benefit from knowing that he/she could contribute to making a positive societal impact by playing a pivotal role in achieving the goals of co-designers. Research and dissemination of design practices provide game designers with the possibility to become more competent in occupying that role.

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## **APPENDIX** A

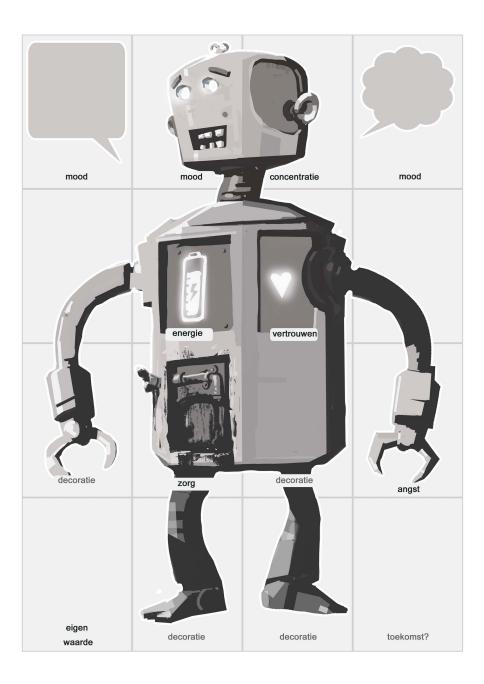


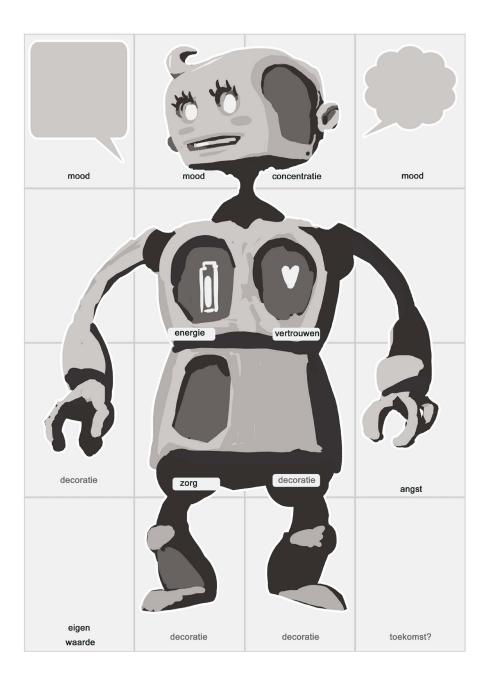
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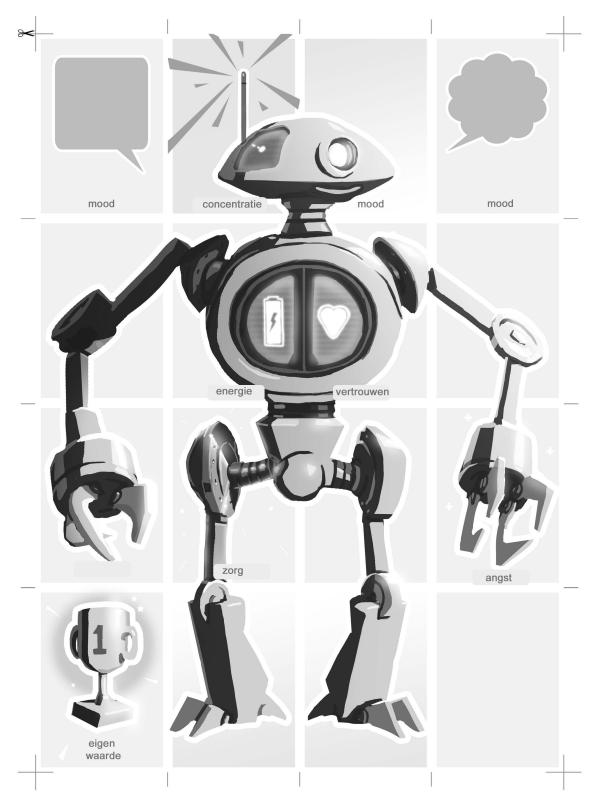
**Content:** 7 pages, Paper Prototype

Language: English

**Description:** The results from Iteration 0 (see figure 8 pg. 43) were character sheets with the first "Moodbots" and the elements that patients could visually adjust to reflect their moods and feelings. Patients could choose from different character sheets that could be printed out and used by the patients.

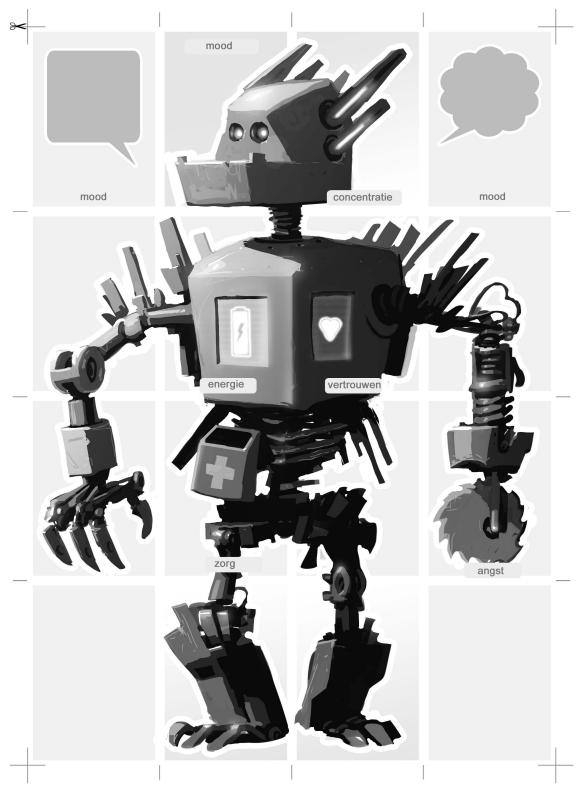






ABC Warriors Paper-prototype: Bot 1

monkeybizniz 2011

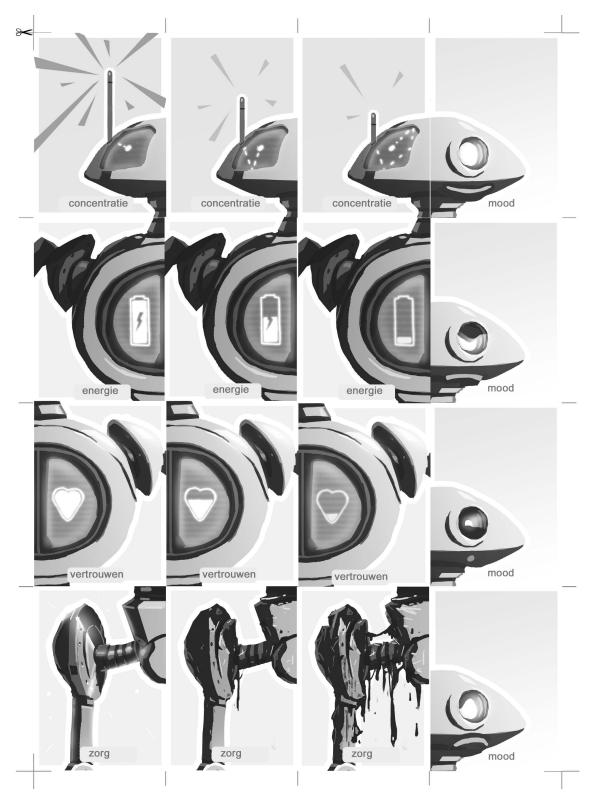


ABC Warriors Paper-prototype: Bot 2

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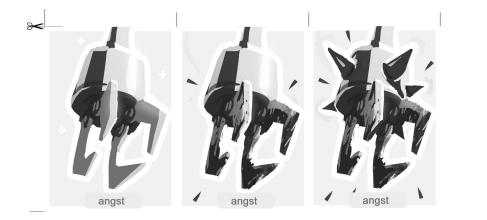


ABC Warriors Paper-prototype: Bot 1 var 1



ABC Warriors Paper-prototype: Bot 1 var 2

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## **APPENDIX B**



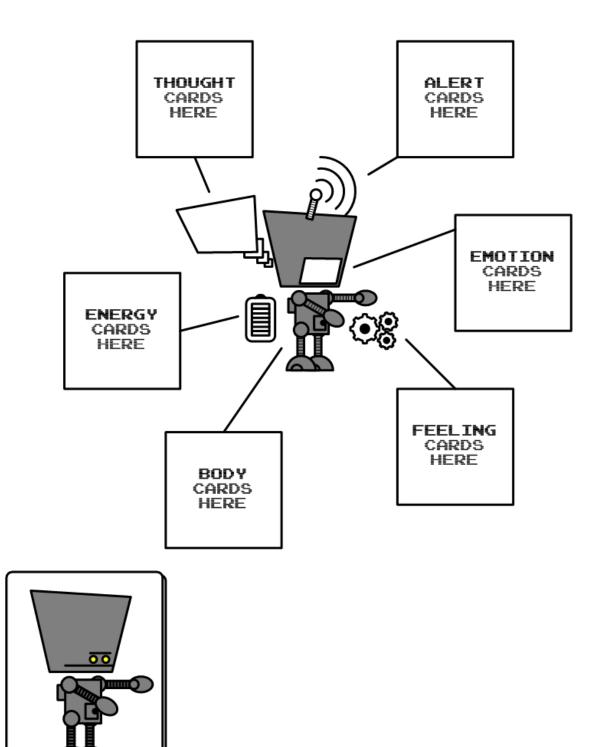
DesignState\_1

Content: 5 pages, paper prototype, notes

Language: English

**Description:** The results from Iteration 1 (see figure 8 pg. 43) was meant to add game system to Iteration 0. A new character sheet was eventually created. Additionally, this document contains design notes and descriptions of game elements.

# Player's Sheet



| 00   | ିତ୍ର            | ôô  | ত্ত    |
|------|-----------------|-----|--------|
| 0    | +1              | -1  | -1     |
| \    | (D)             |     |        |
| 0    | +1              | +1  | -1     |
|      |                 |     |        |
| -1   | +1              | 0   | -1     |
| ¥ •8 | <del>6</del> 08 | *08 | ×<br>© |
| +1   | -1              | 0   | +1     |
|      |                 |     |        |
| +1   | -1              | 0   | +1     |

This will describe a play through of the prototype.

The prototype will have a big enough field for 3 days. Left of the field will situate the moodbot prototype.

Play through version 3, Making the bridge/road...

Pre Day 1

Therapist:

Sets Main goal and sub goal.

Fills in medication

What is the care of the patient

Day 1. End of the day.

#### Client:

Start with seeing a character that has 2 questions for you.

You answering the following questions:

- What is your mood today?
- How much sleep did you had last night?

Then customize your character. Your character can be customized with different colors, outfits, and statements of the day.

After customizing the character the user will go to the bridge and meet up with the overseer. The overseer will give "quests", explain the task (building the bridge). You get to see the overview map of the world to the end of the main goal. All sub goals are present as well and can be seen from this spot as well. After this he will explain how you can build a bridge. You build a bridge between this day and the next day. You do this by making lines between points and overcoming different obstacles. You use the NPC in the city to help you.

Every day there are 6 NPC that can help you(based on the sheet);

- Concentration: this will be the chief of the workers and you will have to say a speech to
  motivate them. This will be a question about how your concentration was this day. This will
  influence the time it takes to show the bridge for testing. (low concentration- slow build see
  where tension; high concentration fast build and fast test. Don't see where tension is)
- Energy: this NPC will command the energy box near the construction. He will ask you what your energy was today and give you an amount of retries. You can come back for more tries after doing something??
- Fear: these are cracks in the bridge. cosmetics
- Irritation: This NPC will ask about your irritation today. Afterwards he will grant you explosions
  or tunnels to clear the road ahead for your bridge/road
- Self-esteem: What kind of building blocks you get to build your bridge/road
- Trust: people to patch the cracks in the bridge. Or to hold where there is too much tension.

After all the questions you try to fix the bridge as good as possible.

The pillars where the bridge on leans are in the shape of the users robot and they portray the answers given that day and will help express how the user was doing that day.

The user is then presented with another view that allows the player to customize the upper section of the bridge. They can customize, until the end of the day(00:00). They can switch between looking at the bridge (maybe even 3D around the bridge, camera movement) and customization view of the upper section. They can change;

- Color,
- Objects,
- Bridge railing,
- Upper pillars,
- This could extend the further they progress in the game to some extent, or potential updates. But the user should be able to customize a lot.

The user can always talk to the overseer to change the tag/icon, which will be broadcasted to therapist and clients that have been invited by the therapist, maybe even a post to a yammer like environment. Potentially they could make snapshots of bridge sections or map view of their bridge and upload them, to share how far they have progressed. Social Media integration passes through the overseer, or maybe a billboard or other object that could represent those kind of interaction. Users can set multiplayer mode on / off at the overseer. For now all social media goes through the overseer.

Day 2 (starts at 00:00, dd-mm-yyyy)

Therapist:

- Review progress, adjust Main goal and sub goal or not.
- Enable / Force, multiplayer mode (for group sessions in institutions).
- Fill in medication
- Fill in the care of the patient.

Client:

Start with seeing a character that has 2 questions for you.

You answering the following questions:

- What is your mood today?
- How much sleep did you had last night?

Then customize your character. Your character can be customized with different colors, outfits, and statements of the day.

After this you see the bridge of yesterday and see your character walking over it. You will end at a new section of the bridge for you to build.

You will get all the materials again by the 6 NPC.

When a sub goal is reach you see all the days before again in a flashback been built again. And at the end get a badge where you see your first sub goal completed. (think about battlefield dog tags or call of duty titles.)

When a main goal is reached you get extra customization for your char as for your bridge and there will be a great statue arisen in your name at that day.

## **APPENDIX C**

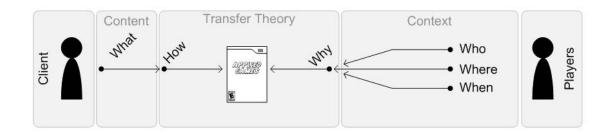


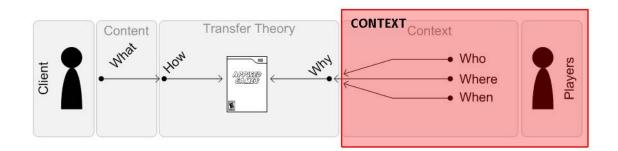
Moodbot\_ScoMo

Content: Portable Document Format, 9 pages

Language: English

**Description:** Provides documentation concerning the Scope Model that was used to direct the design for Moodbot.





## CONTEXT

#### Who:

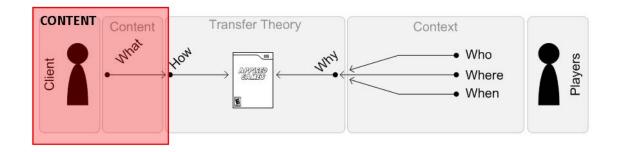
- Player: Altrecht Clients
  - Ages: 15-25
    - Abilities: varied (e.g. possible impaired fine motor skills "shaking", impaired perception,
  - impaired motivation)
- User: Altrecht Healthcare Worker
  - Ages: 25-60
- Optional User: Client's Family
- Optional User: Client's Friends

#### Where:

- On an iPad or iPhone
- Closed clinical environment
- Home environment
- In transit (e.g. bus, train, etc.)

#### When:

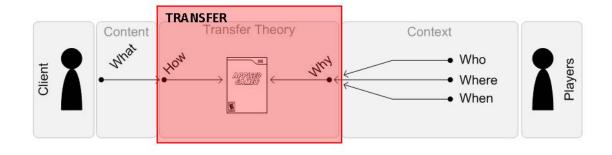
- Post-clinic visit
- During clinic controlled moments
- Max. 1- 2 hours a day
- 5-15 min. game sessions



## CONTENT

#### What:

- Player: Avoid fast movements, actions and audio
- Player: Positive feedback and empowerment
- Player: Lifestyle choices
- Player: Insight into previous states of beingPlayer: conscious about sociability and conflicts
- User: Client update (e.g. social behaviors, activities, fear, aggression, perceptions)
- User: Critical Signals



# TRANSFER

## How:

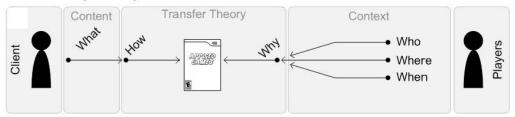
- Player: Game-play (e.g. cooperation, daily activities, participation, quizzing) -
- -Player: Play Forms (e.g. 1-on-1, multiplayer, general social contact)

# Why:

- Player: Obligated to play Player: Particpation -
- -
- Player: Social status -
- Player: Competition -

## <u>Moodbot</u> >

# Guidelines (ScoMo)



# CONTEXT

#### Who:

Player: Altrecht Clients

Age Groups: 20-70

Abilities: varied (e.g. possible impaired fine motor skills "shaking", impaired perception, impaired motivation)

Main User:

Altrecht Healthcare Worker

Other User:

Client's Family, Client's Friends

## Where:

<u>Plaver</u> Cloud computing (via smartphone, tablet, and PC) Closed clinical environment Home environment Free time Post-clinic visit

<u>Player & Healthcare Worker</u> During consultations

<u>Healthcare Worker:</u> During working hours

#### When:

<u>Player</u> During clinic controlled moments Max. 1 hour a day 5-15 min. game sessions

Player & Healthcare Worker

20-30 min. game setup & creating game goals

<u>Healthcare Worker</u> 5-15 min. per client a week

## CONTENT

#### What:

<u>Plaver</u> Avoid fast movements, actions and audio Positive feedback and empowerment Lifestyle choices Insight into previous states of being Conscious about sociability and conflicts Reduction of incidents of aggression Lessen Relapse symptoms Can eventually be used for different patient groups

<u>User.</u> Client update (e.g. social behaviors, activities, fear, aggression, perceptions) Critical Signals Lessen the time it takes to handle cases

## TRANSFER

### How:

Player: Game-play (e.g. cooperation, daily activities, participation, quizzing) Play Forms (e.g. 1-on-1, multiplayer, general social contact)

### Why:

<u>Player:</u> Obligated to play Particpation Social status Competition

# **APPENDIX D**



DesignState\_2

**Content:** 10 pages, paper prototype

Language: English

**Description:** The results from Iteration 2 (see figure 8 pg. 43) contains cards with words describing feelings and moods.

| 1               | 1                   | 1          |
|-----------------|---------------------|------------|
| Uitgeput        | Afgeleid            | Overmoedig |
| 2               | 2                   | 2          |
| Мое             | Alert               | Moed       |
| 3               | 3                   | 3          |
| Uitgerust       | Geconcen-<br>treerd | Lef        |
| 4               | 4                   | 4          |
| Actief          | Obsessief           | Angst      |
| 5               | 5                   | 5          |
| Hyper<br>actief | Kwelling            | Terror     |

| 1                       | 1                  | 1                    | 1           |
|-------------------------|--------------------|----------------------|-------------|
| Ernstige<br>depressieve | Paranoia           | Slons                | Kalm        |
| 2                       | 2                  | 2                    | 2           |
| Depressief              | Wantrouwe          | Onverzorgd           | Gestrest    |
| 3                       | 3                  | 3                    | 3           |
|                         |                    |                      |             |
| Normaal                 | Vertrouwe          | Verzorgd             | Geïrriteerd |
| 4                       | 4                  | 4                    | 4           |
| Verheven                | Blind<br>vertrouwe | Hygienisch<br>bewust | Woedend     |
| 5                       | 5                  | 5                    | 5           |
| Ernstig                 | Blind<br>vertrouwe |                      |             |
| verheven                | in vreemden        | Smetvrees            | Agressief   |

| Kwaad       | Batterij  | Doorzetting    |
|-------------|-----------|----------------|
| Kist        | Valkuil   | Afwezig zijn   |
| Verdediging | Vrolijk   | Geconcentreerd |
| Vertrouwen  | Energiek  | Мое            |
| Ontploffen  | Gezichten | Demon          |
| Opladen     | Moedig    | Verstoppen     |

| Afgeleid   | Wolken  | Bed        |
|------------|---------|------------|
| Irritatie  | Anst    | Dromen     |
| Kalm       | Opstand | Flirt      |
| Open staan | Doel    | Speels     |
| Kwaad      | Egel    | Focus      |
| Sexy       | Onweer  | Verstoppen |

| Help        | Aanmoediging | Pimp         |
|-------------|--------------|--------------|
| Doorzetting | Egel         | Hoogspanning |
| Voorval     | Onweer       | Regenboog    |
| Drugs       | Uitslapen    | Vrienden     |
| Begeleiding | Rode kruis   | Comotie      |
| Bewakers    | Schommelen   | Ziekenhuis   |

# **APPENDIX E**



DesignState\_2\_Playtest

Content: Portable Document Format, 6 pagesLanguage: Dutch w/ English TranslationDescription: A collection of notes taken during a play-test with the target audience. Highlighted text indicates issues that were to be addressed in the game's design.

#### (ENGLISH TRANSLATION)

Play-test:

Whether playing opportunistic advance.

This was discussed. While playing the current prototype is very easy to opportunistic play instead of playing as the player feels real, and will do so to win and gain maximum points. Opportunistic play find they do not mind, but there must advance or accurate data can be played through to the backend. The dialogue that emerges from opportunistic play was priced as positive. Playing with emotion.

#### When can I gamble?

This question was asked several times.

Clearly indicate which "color" gambling is and what "color" freeloading and the difference between the two must be clearly brought to the player.

#### When picking up the board?

The question was often asked. It costs an action point? Was also asked regularly, especially at the beginning, play after 10 minutes which was less.

A comment was made about the change of mood in the player, on two levels, to play and opportunistic snapshot of the feeling of the player changed several times during the game, will be happier if anything achieves less upbeat as losses in sight comes.

Prototype was a problem for people who are color blind. One of the players was color blind and had great difficulty in matching the right colors.

While playing the prototype showed that people constantly forget which side of the board have to play to. This is because it is not clearly indicated is explained on the plate but only in rules. Even to the end of the game came this for 20 minutes playing time.

Game is fairly complex with simple rules, similar to Go. It was noted that there must be care on cognitive abilities and concentration.

A player had taken two of the same color on the board, which only fell many turns later on, what then?

A few times it was said by several people that she found it still quite a difficult game with many rules. And if this is not too difficult for clients.

#### Words can differently, for example with symbols. Other words are maybe needed.

#### Signalling, what about the game?

Competitiveness can ensure that information about the customer is inaccurate, choose something else to score more points, then choose what they feel. Not good enough to be used in place of the schema.

#### Gambling and freeloading is often confused.

Game is good to start dialogue.

Voting is not a manipulation to win the game. It is no longer about the feelings of the person but to the game.

Perhaps indicate in advance is important moment of bringing information.

New emotion to the list of emotions?

There is no logic to the words chosen for the game. This should be done differently.

Starting with the basic emotions.

Maybe start with 3 emotions and then expand to a 5-point scale?

Altrecht want to think about the words.

Fun Challenge game / Los signaling for backend. They want to fill the schedule is done daily, and that made it fun being with elements and it gives something extra to the game, but not every day that you need to play the game itself, but if you fill the schedule your reward is still there for you later if that game does play, at least not punish.

Symbols / emoticons in place of the words easily understood by audience than words.

The game can be played by client and PBer. PBer may have difficulty to make his or her feelings through the game to show the client. Loss of professionalism.

Is a robot good for the clients? Perhaps a doll or any other avatar in place of a robot. Robot have no sense of association Angry brids vs WoW avatars is discussed. Altrecht would like to check this out among the clients

Powerful stimulus that emerges, he's really that or he manipulates the board? A question which needs to be carefully considered.

#### There should be more clarity about what the game does / shows about as I feel or how I want to feel.

Which direction do we go on with the game? Which direction we want it to go? The prototype spoke to in terms of game play, with some extra information they could only imagine what it could represent in the digital version. They understood that it was still on all sides and that there should be just talked about.

The tactical elements of the game made it interesting.

Watching the other is good, this was from Altrecht important to incorporate into the game.

Hints can give with pictures or symbols from one player to another player (s).

Chat feature in the game? Can this or not?

From another experiment with Facebook emerged that were made interesting discovery here that otherwise normally would not come forward.

Signaling loose game. Ability to play with emotions would make data inaccurate and that is inconvenient for treatment.

This game is a snapshot.

### Signs must feed of the game, giving a positive effect for the player in the game, as a reward.

Completing schedule (accurate information) must be able to play it loose.

Ultimately produce less work and less control, not more work and more control.

Properly filling the schedule should provide an extra reward. Well completion is, fill every day, and more than that.

Schedules not loose but encourage them to fill in order to better play the game.

Some people find nothing but the game should still be encouraged to fill in the schedule.

A game can muster resistance, walking around in a digital world less. Think of other activities in the digital world than playing a game.

Reflecting on behalf of the "game". Or job title that everyone retention

There also needs to be thought through the categories and words that are used in there, which all have relationships with each other and can get an incorrect charge.

Nuances in snapshots.

Extra appointment to brainstorm categories and words. May 31-Jan Willem must be there !!!

#### (ORGINAL DUTCH)

Play-test:

Van te voren aangeven of opportunistisch spelen.

Dit kwam ter sprake. Tijdens het spelen van de huidige prototype is het heel makkelijk om opportunistisch te spelen in plaats van spelen zoals de speler daadwerkelijk voelt, en zal dit doen om te winnen en maximale punten te behalen. Opportunistisch spelen vinden ze niet erg, maar dan moet er van te voren wel accurate data door gespeeld kunnen worden naar de backend. De dialoog die naar voren komt van opportunistisch spelen werd als positief aan geprijsd. Spelen met de emotie.

#### Wanneer mag ik gokken?

Deze vraag werd meerdere malen gesteld.

Duidelijk aangeven welke "kleur" gokken is en welke "kleur" mee liften is en het verschil tussen de twee moet duidelijker over gebracht worden naar de speler.

#### Wanneer afhalen van het bord?

De vraag werd vaak gesteld. Kost dit een actie punt? Werd ook regelmatig gevraagd, vooral in het begin, na 10 minuten spelen werd dat minder.

Er werd een opmerking gemaakt over het veranderen van stemming bij de speler, op twee vlakken, om opportunistisch te spelen en moment opname van het gevoel van de speler veranderd meerdere malen tijdens de game, vrolijker als iets behaalt wordt, minder vrolijk als verliezen in zicht komt.

Prototype was een probleem voor mensen die kleuren blind zijn. Een van de spelers was kleuren blind en had veel moeite om de juiste kleuren te matchen.

Tijdens het spelen van het prototype kwam naar voren dat mensen constant vergeten welke kant van het bord naar toe moeten spelen. Dit omdat het niet duidelijk is aangegeven op het bord maar alleen in regels wordt uitgelegd. Zelfs tot het einde van het spel kwam dit nog voor, 20 minuten speeltijd.

Spel is **edelijk complex met simpele regels**, vergelijkbaar met Go. Er werd opgemerkt dat er goed opgelet moet worden op cognitieve vaardigheden en concentratie. Een speler had twee van de zelfde kleur van het bord gehaald, dat viel pas vele beurten later op, wat

Len speler had twee van de zelfde kleur van het bord gehaald, dat viel pas vele beurten later op, wat dan?

Er werd een paar keer gezegd door verschillende mensen dat ze het toch nog best een lastig spel vonden met veel spelregels. En of dit niet te lastig is voor cliënten.

Woorden kunnen anders, bijvoorbeeld met symbolen. Andere woorden zijn misschien nodig.

Signalering, hoe zit dat in de game?

Competitiviteit kan er voor zorgen dat informatie over de cliënt inaccuraat wordt, iets anders kiezen om meer punten te scoren, dan kiezen wat ze voelen. Niet goed genoeg om gebruikt te worden in plaats van de schema.

Gokken en mee liften wordt vaak door elkaar gehaald.

Game is goed om dialoog te starten.

Stemming niet over een, manipulatie om spel te winnen. Het gaat dan niet meer over de gevoelens van de persoon maar om het spel.

Misschien van te voren aangeven, is belangrijk moment van informatie binnen halen.

Nieuwe emotie toevoegen aan de lijst van emoties?

Er zit geen logica in de woorden die gekozen zijn voor het spel. Deze moeten anders.

Beginnen met de basis emoties.

Misschien beginnen met 3 emoties en dan uitbreiden naar een schaal van 5?

Altrecht wil graag mee denken over de woorden.

Leuk uitdaging spel / Los signalering voor backend. Ze willen graag dat het invullen van het <mark>schema</mark> <mark>dagelijks gedaan wordt</mark> en dat het <mark>leuk gemaakt wordt met elementen</mark> en dat het iets <mark>extra oplevert voor</mark> <mark>het spel</mark>, maar dat je <mark>niet elke dag het spel zelf hoeft te spelen</mark>, maar als je <mark>het schema invult</mark> dat je daar nog steeds voor beloont wordt als je later dat spel wel speelt, in ieder geval niet afstraffen.

Symbolen / emoticons in plaats of bij de woorden, makkelijker te begrijpen door doelgroep dan woorden.

Het spel kan ook gespeeld worden door client en PBer. PBer kan moeite mee hebben om zijn of haar gevoelens via het spel aan de cliënt te laten zien. Verlies van professionaliteit.

Is een robot goed voor de cliënten?

Misschien een poppetje of andere avatar in plaats van een robot. Robot heeft associatie van geen gevoel hebben

Angry brids vs WoW avatars is ter sprake gekomen. Altrecht wil dit graag onder de cliënten checken

Krachtige prikkeling dat naar voren komt, is hij echt zo of manipuleert hij het bord? Een vraag waar goed over nagedacht moet worden.

Er moet meer duidelijkheid komen over wat de game doet / laat zien, over zo voel ik of over zo wil ik voelen. Welke richting gaan we op met het spel? Welke richting willen we dat het op gaat? Het prototype sprak aan qua game-play, met wat extra uitleg konden ze wel voorstellen wat het in de digitale versie kon voorstellen. Ook begrepen ze dat het nog alle kanten op kon en dat daar juist over aesproken moet worden.

De tactische elementen uit het spel maakte het interessant.

Kijken naar de ander is goed, dit was vanuit Altrecht belangrijk om in de game te verwerken.

Hints kunnen geven met foto of symbolen, van de ene speler naar de andere speler(s).

Chat functie in de game? Kan dit of niet?

Uit ander experiment met Facebook kwam naar voren dat hier interessante ontdekking werden gedaan die anders normaal niet naar voren zouden komen.

Signalering los van spel. Mogelijkheid om met emoties te spelen zouden data inaccuraat maken en dat is onhandig voor behandeling.

Dit spel is een moment opname.

Signalering moet voeden van het spel, een positieve uitwerking geven voor de speler in het spel, als een beloning.

Invullen van schema (accurate informatie) moet los kunnen van het spelen.

Uiteindelijk moet het minder werk en minder controle opleveren, niet meer werk en meer controle.

Het goed invullen van het schema zou een extra beloning moeten opleveren. Goed invullen is ook, elke dag invullen, en meer dan dat. om in te vullen om beter het spel te spe na niet los maar stimulerer

Sommige mensen vinden de game niks maar moeten nog steeds gestimuleerd worden om het schema in te vullen.

Een game kan weerstand opbrengen, rond lopen in een digitale wereld minder. Denk aan andere activiteiten in de digitale wereld dan een spel spelen.

Nadenken over naam van het "spel". Of werk titel die iedereen aanhoud

Er moet ook goed nagedacht worden over de categorieën en de woorden die daar in gebruikt worden, die hebben allemaal relatie met elkaar en kunnen een verkeerde lading krijgen.

Nuances in moment opnamen.

Extra afspraak maken voor brainstorm categorieën en woorden. 31 mei moet Willem-Jan erbij zijn!!!

# **APPENDIX F**



DesignState\_3

**Content:** 23 pages, paper prototype, concept documentation **Language:** English

**Description:** The results from Iteration 3 (see figure 8 pg. 43) describes how to setup and play a paper prototype that explored the use of a Moodbot to explore and build a city.

# Moodbot

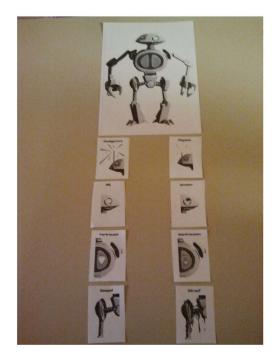
# Tutorial

# ENGLISH TRANSLATION

• Welcome to you Robot city. At this moment you see anything yet in the city. It's your goal to make the world more beautiful and better.



• But first we create a new robot. A new robot word created by the right parts to choose for you that day.





• We choose between the following components

Afoeleid

Gelukkig

Wanti







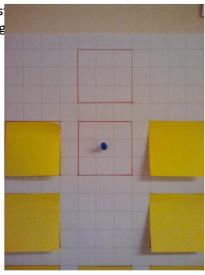


• Your first robot in your world. And the first piece of land has discovered. Because you from the factory rolls you get 1 Crystal there. So you now have 10 crystals your robot is also equipped with a battery of 4 energy.

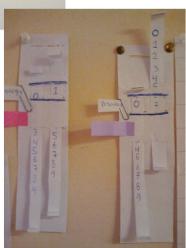


 You move yourself to an unknown piece, this will cos open you can get to this piece of run for only 1 energ energy over

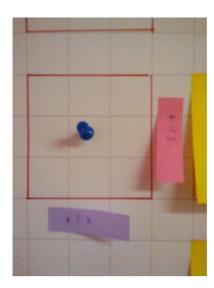






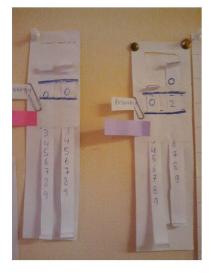


• You move yourself to an unknown piece, this will cost you 2 energy. But now it is open you can get to this piece of run for only 1 energy. You now have 2 more energy over



• You move yourself to an unknown piece, this will cost you 2 energy. But now it is open you can get to this piece of run for only 1 energy. You now have 2 more energy over





• Now that your robot without energy is stuck, he collected again by the factory and he put in the hall of fame. This was the tutorial. You can create a new robot for yourself. After the following robot can nothing more. Can there be a new robot created only after 3 hours

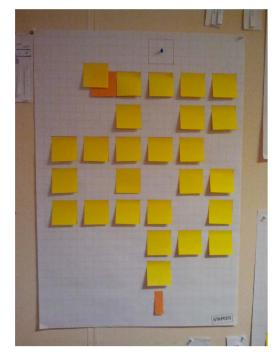


# Moodbot

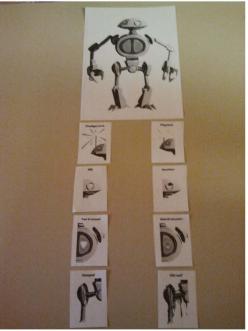
Tutorial

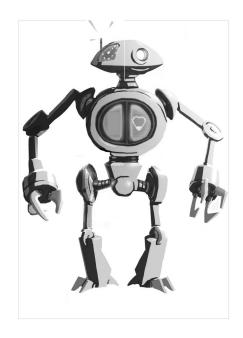
# **ORGINAL DUTCH**

• Welkom in jou Robotstad. Op dit moment zie je nog niets in de stad. Het is jouw doel om de wereld mooier en beter te maken.



- Maar eerst maken we een nieuwe robot.
- Een nieuwe robot word gemaakt door de juiste onderdelen te kiezen voor jou die dag.





• We kiezen tussen de volgende onderdelen



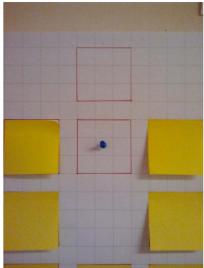


- Je eerste robot is in jouw wereld gekomen. En heeft het eerste stukje land ontdekt.
- Omdat je uit de fabriek rolt krijg je ook 1 kristal erbij. Zo heb je nu 10 kristallen
- Je robot word ook uitgerust met een batterij van 4 energie.

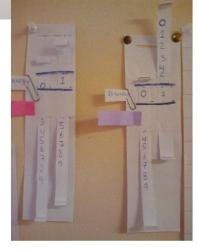


- Je beweegt jezelf naar een onbekend stukje, dit kost je 2 energie. Maar nu het open is kan je naar dit stukje lopen voor maar 1 energie.
- Je hebt nu nog 2 energie over

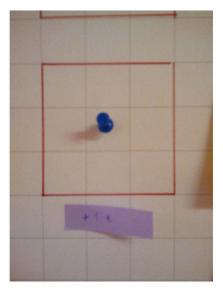






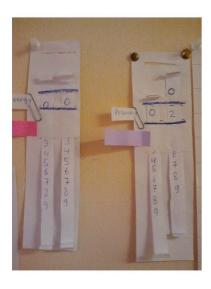


- Nu we een stukje opengemaakt hebben kunnen we gebouwen gaan plaatsen. Dit zijn de 3 verschillend gekleurde post-it's.
- Laten we eerst een gebouw maken dat bij elke robot kristallen aflevert. Deze kosten 3 Kristallen en 1 energie.



- Je kunt ook gebouwen maken die aan elke robot een extra energie geven. Deze kosten 5 Kristallen en 1 energie.
- Laten we ook zo een gebouw bouwen.



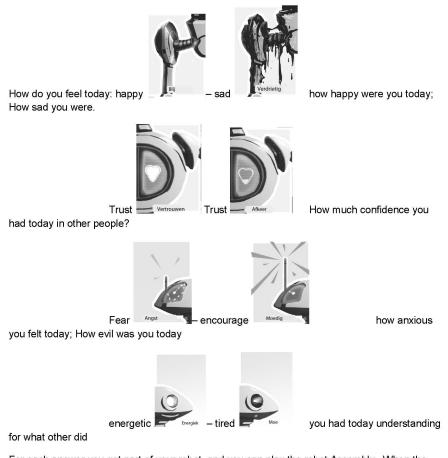


- Nu dat je robot zonder energie is komen te zitten, word hij terug opgehaald door het fabriek en word hij in de hall of fame gezet.
- Dit was de tutorial. Je kan meteen een nieuwe robot maken voor jezelf. Nadat de volgende robot niets meer kan. Kan er pas na 3 uur een nieuwe robot gemaakt worden



#### (ENGLISH TRANSLATION)

Tutorial:!!!! Goals!!!! Let us first set a goal. What do you want to reach these 2 weeks. What are smaller goals to your big goal. You start the game with 9 crystals. Start making a robot. The robot is broken and new pieces are built. You start with some questions.



For each answer you get part of your robot, and you can play the robot Assembly. When the robot is finished you go in a world. Since you have created the robot will get a Crystal there. Your robot has a start battery of 4 energy. When you take a step in the uncertain (fog) you have 2 energy needed to continue. Go 1 step forward (-2E). If you want to return to a previous visited area does it cost 1 e. you can build up to 4 houses next to the field where you stand up. You can build houses that give more crystals. (build a House for 1 extra crystal. 3 k + 1st). You can

also build houses that give you more energy. (build a House that gives you more energy. 5 k + 1 E). If you're a new robot builds the houses will give the resources. Houses give but 1 times their resources to your robot. If your robot has no more energy he stored in a database. When a robot created word every day there will be more crystals are given for making your robot. If you're a subd...

## (ORGINAL DUTCH)

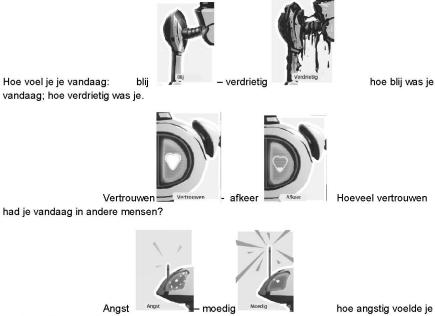
### Tutorial: IIII Doelen IIII

Laten we eerst een hoofdoel instellen. Wat wil je deze 2 weken bereiken. Wat zijn kleinere doelen om je grote doel te bereiken.

Je start het spel met 9 kristallen.

Start met het maken van een robot. De robot is stuk en er moeten nieuwe stukken gebouwd worden.

Je start met een aantal vragen.



vandaag; Hoe kwaad was je vandaag



Bij elk antwoord krijg je een deel van je robot, en kun je de robot afwerken.

Wanneer de robot af is kom je terecht in een wereld. Omdat je de robot hebt gemaakt krijg je een kristal erbij. Je robot heeft een startbatterij van 4 energie.

Wanneer je een stap neemt in het onzekere (fog) heb je 2 energie nodig om verder te gaan. Ga 1 stap vooruit(-2E). Als je wilt terugkeren naar een vorig bezocht gebied kost het 1 E. Je kan tot 4 huizen bouwen naast het vlak waar je opstaat. Je kan huizen bouwen die meer kristallen geven. (bouw een huis voor 1 extra kristal. 3K+1E). Je kan ook huizen bouwen die je meer energie geven.(bouw een huis dat je meer energie geeft. 5K+1 E). Als je een nieuwe robot bouwt zullen de huizen de resources geven. Huizen geven maar 1 maal hun resources aan je robot. Als je robot geen energie meer heeft word hij opgeslagen in een database. Wanneer er elke dag een robot gemaakt word zullen er meer kristallen gegeven worden voor het maken van je robot.

Als je een subdoel behaald krijg je een chip die een gebouw om de 5 robots dubbel aan resources geeft.

Een groot doel geeft je aan de start 2 extra energie.

Verschillende gebouwen

| +1K = 3K+1E / | +2K = 6K+2E /  | +3K = 9K+3E,  |
|---------------|----------------|---------------|
| +1E = 5K+1E / | +2E = 10K+2E / | +3E = 15k+3E. |

Groot gebouw die met meerdere kan gebouwd worden.

10k+6<sup>E</sup> = portal → rondlopen bij andere mensen. Rondlopen in een andere wereld kost geen energie. Je kan wel items en energie afgeven om je vriend te helpen.

50K+30<sup>E</sup> = 3K\*persons → je krijgt jouw deel toegewezen. Zoveel moet jij in het gebouw stoppen.

Brug =  $30K + 20^{E} + 1c$ 

NPC1 = 1C+3K+2<sup>E</sup> → portal

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NPC2 =  $1C+4K+1^{E} \rightarrow$  Groot gebouw NPC3 =  $2C+4K+4^{E} \rightarrow$  brug

# **APPENDIX G**



DesignState\_4

Content: 12 pages, concept documentation

Language: English

**Description:** The results from Iteration 4 (see figure 8 pg. 43) is high-level concept documentation. This describes ideas for game that tracks the player's process towards their therapeutic goal.

Voordat je het spel begint zul je moetn bedenken wat jouw doelen zijn in het leven. Verbeld je hoe jouw perfecte situatie eruit ziet en probeer dit in 1 zin te omschrijven. Als je dit hebt gedaan zal er een ster worden gemaakt waar jij met jouw moodbot naar toe moet reizen.

Om bij jouw ster te komen zul je door het heelal moeten reizen. Omdat de weg lang is zul je via tussenstations moeten reizen. Elk tussenstation staat weer in verbinding met bepaalde andere stations. Maar op elke tussenstation wacht jou een uitdaging die je moet zien te behalen.

#### Problemen op de tussenstations

Elk tussenstation is bemand met andere moodbots, maar vele functioneren niet goed omdat zij een gedragschip missen. Kun jij achterhalen wat de moodbots missen, dan kun je via een communicatiesysteem de gewenste gedragschip aanvragen. Na verloop van tijd zal het hoofdkwartier jou de chip sturen waarmee je de robots kunt repareren.

#### Reizen tussen de tussenstations

Via de tussenstations kun je jezelf lanceren via de tussenstations lanceren naar plekkendie je al hebt bezocht, en wanneer je de moodbots hebt gerepareerd zelfs naar compleet nieuwe tussenstations. Lanceren kost wel energie. Gelukkig zijn de tussenstations voorzien van zonnepanelen en zullen die zich kunnen opladen.

#### Tussenstations uitbouwen

Je kunt tussenstations verbeteren door kristallen uit te geven. Hiiermee kun je kiezen of je de zonnepanelen groter maakt, of de vangnetten groter maakt. Grotere vangnetten zorgen ervoor dat er meer kristallen zullen worden aangemaakt op een tussenstation.

#### Natuurelementen

Soms kan de natuur zich tegen jou keren (nb een begeleider kan aangeven dat jij je werkelijke doel uit het oog bent verloren). Er kan een sterrenstorm komen waardoor jij van je sateliet wordt geblazen, op een andere station uitkomt en je weg terug moet vinden. Of het kan erg bewolkt worden, waardoor jouw tussenstations zich niet goed opladen.

#### Tussenstations benoemen

Elk tussenstation heeft een code als naam (E@X7). Om het reizen makkelijker te maken kun je de tussenstations hernoemen.

#### (ENGLISH TRANSLATION)

Before you start the game you need consider what your goals are in life. Imagine how your perfect situation looks like and try to describe it in one sentence. If you do this there will be a star where you must travel there on your moodbot.

To get to your star, you must travel through the universe. Because the road is long, you must travel through between stations. Each intermediate station is again in connection with certain other stations. But at every intermediate station awaits you achieve a challenge that you must see.

#### Problems at the intermediate stations

Between each station is staffed with other mood bots, but many do not function properly because they lack a ship behavior. Can you figure out what to miss the mood bots, you can apply the desired behavior ship via a communication system. Over time, the headquarters will send you the chip that you can fix the robots.

#### Travel between the intermediate stations

Through the intermediate stations you launch yourself through the launch between stations to plekkendie you've already visited, and when you fix the mood collision even to completely new intermediate stations. Launch it costs energy. Fortunately, between stations equipped with solar panels and will that can recharge.

#### **Removing Between Stations**

You can improve intermediate stations by crystals to give out. With these you can choose whether you make the solar panels bigger, or safety nets enlarges. Larger nets ensure that more crystals will be created at an intermediate station.

#### Natural Elements

Sometimes nature can turn against you (nb a supervisor can indicate that you lost your true purpose in mind). A star storm can come which you blown your satellite, opens onto a different drive and have to find your way back. Or it can be very cloudy, so between your stations are not charging properly.

#### Appoint Between Stations

Each intermediate station has a code name like (E @ X7). To make traveling easier, you can rename the intermediate stations.

#### (PLAY-TEST RESULTS)

Ze hadden veel moeite met de relatie van signaal gedrag en de doelen lijn en de controle kamer.

Behandelaars hadden moeite met signalering naar de cliënt communiceren op de manier zoals deze nu in de game zit.

Behandelaren zien het niet zitten om het spel zelf te spelen. Ze hebben het al druk genoeg. Er moet gekeken worden naar de "big game".

Uitdrukken met foto's en plaatjes vonden ze een verbetering dan de woorden van vorige prototype.

We fell into one of the pitfalls, everyone in the room busy with the prototype, at the same time. (EGG)

De behandelaar in het grijze shirt, heeft een hele sceptische houding, hij zegt A maar straalt B uit.

De controle kamer brengt zoveel verwarring dat de focus niet meer op het spel lag maar hoe de controle kamer werkt.

Cliënten kunnen geneigd zijn om expres de schuiven anders te zetten om te kijken wat er gebeurd. Ze zullen vals alarm gaan geven om te kijken wat er gebeurt.

Stakeholders weten van elkaar niet wat de een wil en wat de ander wil en wat er echt nodig is qua informatie dat "gedocumenteerd" of "gepresenteerd" moet worden door het systeem.



# (ENGLISH TRANSLATION)

Small NPC Robots for Moodbot

Robot A: What does the robot? Glad (3x); Distracted, euphoric, open, enthusiastic, cheerful, naive, confused, bored, question mark above head, sad, expectant.

What "chip" as a solution? Make tired, Sports, Energy lost contact with someone, talk to someone, something delicious food, fun abound.

Multiple choice question:

...? 1 Sad 2 Confused 3 Sip 4 Pleased 5 Excited 6 Impatient 7 Evil 8 Pessimistic

Robot B: What does the robot? Bang (4x), shy (3x); Shy, imbalance, suspicious, cautious, pessimistic, anxious, curious, cautious

What "chip" as a solution? Social contacts, instigate, bring border, forced social interaction, sports, scouting, safe place, accompanied, helping hand.

Multiple choice question:

...?

1 Pleased

- 2 Angry
- 3 Curious
- 4 Insurgent
- 5 Bang

6 Aggressive

7 Shy 8 Chaotic

Robot C: What does the robot? Boos (3x), aggressive (2x), irritability (2x); Angry, frustrated, impatient, furious, rebellious, bee, flirtatious, shy, insecure

What "chip" as a solution? Anger management, proper environment, animal care, no group activities, isolate, count to ten, make contact, friendly approach

Multiple choice question:

...? 1 Confused 2 Unruly 3 Irritated 4 Manipulative 5 Aggressive 6 Euphoric 7 Angry 8 Passive

Robot D: What does the robot? Insurgent (2x); Suspicious, angry, squint, manipulative, stubborn, evil, expectant, introverted, disinterested, unruly, inaccessible, closed, uncomfortable

What "chip" as a solution?

From lure the tent, show another perspective, rules / structure, group activities, speak or competitive activities, do something fun, give space, draw ease, distracted.

Multiple choice question: ...?

1 Watchful waiting

- 2 Lonely
- 3 Depressed
- 4 Manipulative
- 5 Insurgent

6 Closed 7 Scheel 8 Listlessly

Robot E: What does the robot? Lonely (2x), SIP (2x); Lui, salt free, passive, absent, listless, waiting, sad, disappointed, sad, little energy.

What "chip" as a solution? Activities show business, sports, incentives, challenge, look incentives, pet, group activities, beautiful book, do something fun, get time, keep an eye on.

Multiple choice question:

...?

1 Energetic 2 Enthusiastic 3 Furious 4 Lonely 5 Bang 6 Shy 7 Sip 8 Impatient

Robot F: What does the robot? Confused (2x); Broken, yoga, broken, depressed, stroke, attack, enthusiasm, tangled, chaotic, messy, collapsed.

What "chip" as a solution? Building, positive approach, bring structure, good turn, repairs, to-do list, schedule, schedule, be lifted

Multiple choice question:

...?

1 Sad

2 Active

3 Suspicious

4 Careless

5 Confused 6 Depressed 7 Happy 8 Naive

How does the robot and what do you get in-game? A one-off bonus of: 1D4 (1t / m4) of energy 1D4 (1t / m4) to resources At the next turn.

# (ORGINAL DUTCH)

Small NPC Robots voor Moodbot

Robot A: Wat heeft de robot? Blij (3x); Afgeleid, euforisch, open, enthousiast, opgewekt, naïef, verward, verveeld, vraagteken boven hoofd, treurig, afwachtend.

# Welke "chip" als oplossing?

Moe maken, Sporten, Energie kwijt, contact opnemen met iemand, praten met iemand, iets lekkers eten, leuke activiteit ondernemen.

Meer keuze vraag:

| .? |         |  |
|----|---------|--|
| 1  | Treurig |  |
| 2  | Verward |  |
| 3  | Sip     |  |

- 4 Blij
- 5
- Opgewekt Ongeduldig 6
- Kwaad 7
- 8 Pessimistisch

# Robot B:

Wat heeft de robot? bang(4x), verlegen(3x); Schuw, disbalans, argwanend, afwachtend, pessimistisch, angstig, nieuwsgierig, voorzichtig

# Welke "chip" als oplossing?

Sociale contacten, uitlokken, grens over halen, gedwongen sociaal contact, sporten, scouting, veilige plek, begeleid worden, helpende hand nodig.

Meer keuze vraag:

...?

- 1 Blij
- 2 Boos
- 3 Nieuwsgierig
- 4 Opstandig
- 5 Bang
- 6 Agressief
- 7 Verlegen
- 8 Chaotisch

# Robot C:

Wat heeft de robot? Boos(3x), agressief(2x), geïrriteerd(2x); Kwaad, gefrustreerd, ongeduldig, furieus, opstandig, bij, flirterig, verlegen, onzeker

# Welke "chip" als oplossing?

Anger management, juiste omgeving, dier verzorgen, geen activiteiten in groepsverband, afzonderen, tot tien tellen, contact maken, vriendelijk benaderen

Meer keuze vraag:

...?

- 1 Verward
- 2 Weerbarstig
- 3 Geïrriteerd
- 4 Manipulatief
- 5 Agressief
- 6 Euforisch
- 7 Boos
- 8 Passief

# Robot D:

Wat heeft de robot? Opstandig(2x); Argwanend, boos, scheel, manipulatief, eigenwijs, kwaad, afwachtend, introvert, ongeïnteresseerd, weerbarstig, ontoegankelijk, gesloten, ongemakkelijk

# Welke "chip" als oplossing?

Uit de tent lokken, ander perspectief laten zien, regels / structuur, groepsverband activiteiten, praten, geen competitieve activiteiten, iets leuks doen, ruimte geven, op hun gemak stellen, afleiden.

Meer keuze vraag:

...?

- 1 Afwachtend
- 2 Eenzaam
- 3 Depressief
- 4 Manipulatief
- 5 Opstandig
- 6 Gesloten
- 7 Scheel
- 8 Lusteloos

# Robot E:

Wat heeft de robot?

Eenzaam(2x), sip(2x);

Lui, zoutloos, passief, afwezig, lusteloos, afwachtend, verdrietig, teleurgesteld, droevig, weinig energie.

# Welke "chip" als oplossing?

Activiteiten laten ondernemen, sport, prikkels, uitdaging, prikkels opzoeken, huis dier, groep activiteiten, mooi boek, iets leuks doen, tijd krijgen, in de gaten houden.

# Meer keuze vraag:

...?

- 1 Energiek
- 2 Enthousiast
- 3 Woedend
- 4 Eenzaam
- 5 Bang
- 6 Verlegen
- 7 Sip
- 8 Ongeduldig

Robot F:

# Wat heeft de robot? Verward(2x); Kapot, yoga, gebroken, depressief, hersenbloeding, aanval, enthousiast, in de knoop, chaotisch, warrig, ingestort.

# Welke "chip" als oplossing?

Opbouwen, positief benaderen, structuur brengen, goeie beurt, reparaties, to-do-list, schema, planning, opgetild worden

Meer keuze vraag:

...?

- 1 Verdrietig
- Actief 2
- 3 Argwanend
- Onvoorzichtig 4
- Verward 5
- 6 Depressief
- 7 Blij 8
- Naïef

Hoe werkt de robot en wat krijg je in-game? Eenmalig een bonus van: 1D4 (1t/m4) aan energie 1D4 (1t/m4) aan resources Bij de volgende beurt.

# **APPENDIX H**



DesignState\_5

Content: 3 pages, concept documentation

Language: English

**Description:** The results from Iteration 5 (see figure 8 pg. 43) is high-level concept documentation and paper prototype. This describes ideas for a game that uses a puzzle element.

# (TRANSLATED FROM DUTCH)

Moodbot / eBuddy The cube maze spaceship version

#### The card

Users can in the cockpit of their ship View a star map. In this map they see the galaxy. On the map they see their goals. This display are meteorites. Since these are moving objects, it is natural that they can be moved on the map. The therapists can move these objects. Here it can be indicated if the patient is well on the way to their goals, and if they deviated from their course. This can be visualized on the map (different from the idea of paths).

The patient will be notified of the system if the practitioner has made changes. The patient can indicate that he would like to update his card to see how his course upon state.

#### The cube spaceship

The space ship is always like starting a cockpit. This is the control room for the ship. The ship is a cube, with all rooms. This move (remember the movie "The Cube"). Players explore the ship by moving rooms and explore. At the end of the day / or early next day, the rooms of the ship to be moved ("random").

To end the day, a room should be decorated with objects. This room also gets a day number. In the cockpit there is a button, which when pressed, all rooms with a day in chronological order behind the cockpit placed where the user can walk around (diary), other people can do this. Special events and items are hidden somewhere in these rooms as they are on this line, to encourage them to go through regular diaries.

# (ORGINAL DUTCH)

Moodbot / eBuddy De kubus doolhof ruimteschip versie

#### De kaart

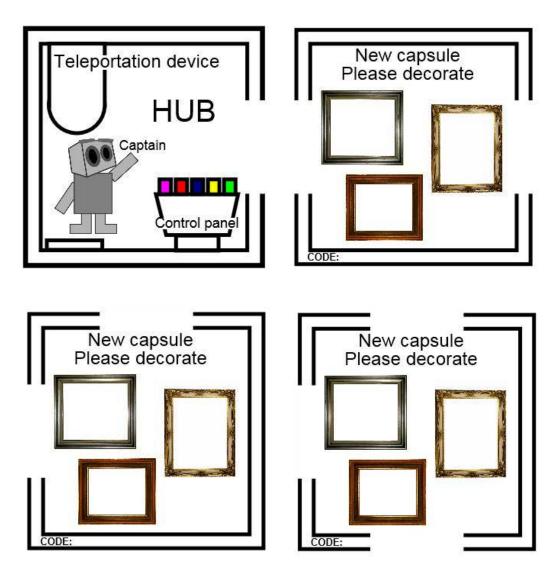
De gebruikers kunnen in de cockpit van hun schip een sterren-map bekijken. Op deze map zien ze het sterrenstelsel. Op de map zien ze hun doelen. Deze worden weergeven met meteorieten. Omdat dit bewegende objecten zijn, is het logisch dat ze verplaatst kunnen worden op de map. De behandelaren kunnen deze objecten verplaatsen. Hier mee kan worden aangegeven of de patiënt goed op weg is naar hun doelen, en of ze afgeweken zijn van hun koers. Dit kan gevisualiseerd worden op de kaart (het idee van afwijken van paden).

De patiënt ontvangt bericht van het systeem als de behandelaar wijzigingen heeft gemaakt. De patiënt kan aangeven dat hij graag een update van zijn kaart wil om te kijken hoe zijn koers er bij staat.

#### Het kubus ruimteschip

Het ruimte schip heeft altijd als beginpunt een cockpit. Dit is de controle kamer voor het schip. Het schip is een kubus, van allemaal kamers. Deze kunnen bewegen (denk aan de film " The Cube"). De spelers verkennen het schip door deze kamers te verplaatsen en ontdekken. Aan het eind van de dag / of begin volgende dag, worden de kamers van het schip verplaatst ("random").

Om de dag te kunnen beëindigen moet een kamer ingericht worden met objecten. Deze kamer krijgt ook een dag nummer. In de cockpit is er een knop, als je die indrukt worden alle kamers met een dag op chronologische volgorde achter de cockpit geplaatst waar de gebruiker door heen kan lopen (dagboek), anderen mensen kunnen dit ook doen. Speciale events en items worden ergens verstopt in deze kamers als ze op deze lijn staan, om te stimuleren dat ze regelmatig dagboeken doorlopen.



# **APPENDIX I**



# DesignState\_6

**Content:** 17 pages, paper prototype, concept documentation **Language:** English

**Description:** The results from Iteration 6 (see figure 8 pg. 43) is a paper prototype that integrates ideas from Iteration 4, Iteration 5 and Iteration 6. Additionally, documentation that describes the paper prototype's game elements are included.



## (ENGLISH TRANSLATION)

By a major disaster is your home planet and spaceship disintegrated. It is your goal to travel to a new planet. Along the way you'll pick up the new parts for your spaceship, so you have a new House when you arrive.

Your space ship consists of several parts, also called capsules called. These capsules are clicked together. During your journey you will pick up and that will be connected automatically new capsules to your ship. New capsules are only empty and dull and should be decorated by you.

Why? This game will help you more self understanding. To do this, you will feel yourself how careful every day and what you are going through. Capture by the day you get a better picture of your life, and how you can keep control.

Start of the game Your space ship in the beginning is very small and consists only of your captains cabin. In this cabin there are 3 important devices. You start each game starting from this room.

### Star map

On the star map you can see how far you still have to travel to reach your new planet. You will see that your long journey along astroides will go. This trip is symbolic of the subgoals and goals you want to achieve in real life. Together with your supervisor, you can assign a name to each astroid and your new planet. Together with your supervisor you will determine how far your trip already is.

## **Control Panel**

with this important control panel you can indicate how you feel when you start playing. On the basis of this feeling will change the color of the lights on your ship. In this way your supervisor but also other players see how they can help you. You have the choice of green (it goes well), Orange (it could be better) or red (it goes bad).

### Teleportatie machine

Met deze machine kun je voorwerpen van jezelf teleporteren naar andere de ruimteschepen van andere spelers. Op deze manier kun je altijd op bezoek bij anderen, hun ruimtecapsules bekijken en hun nieuwe plaatjes doorsturen. Capsules

Next to your headquarters will expand your ship with new capsules. Each capsule has a number of doors. Sometimes you will see that a door is not on the right side to be able to go to the next capsule. Fortunately, you can turn a quarter turn capsules.

If you want to run at another ships rooms you will first have to give away a Crystal to do so.

#### New capsules

every day you will get a new capsule that you have Setup. See this as a kind of diary keeps you from that day. You can dress up your new capsule with photos that you've collected. An important part of the game is to find the pictures that you want to use. Per capsule you can post pictures 3. When you're done, you asked for a name to give to the capsule. Also, today's date on your capsule posted.

#### Overview button

This button is on the control panel and gives in a chronological order which capsules all created. This is useful for knowing how the timeline of the treatment has been. Game-theory gives no advantage, since the view is only a virtual view. So you can just scroll through the days, but not with your bot walk through it.

Photos collection every day you will get 4 new photos. with it you can organize the room. You can get other photos from other people. or in the teleporter for 2 Crystal a new questions.

## Aanpassing verzamelen

In jouw ruimteschip zijn verschillende robots te vinden sterven gereedschap vasthouden. Deze robots hebben alleen een probleem nl couette hun gereedschap niet afgeven zolang ze dit probleem hebben. Als je weet wat voor probleem dit is kun je ze helpen. In jouw hoofdkwartier kun je verschillende moodchips laten maken die het probleem van de robot kan oplossen (nb. deze fiches kosten Crystals). Als je de robot de juiste chip geeft, zul je het gereedschap krijgen sterven zij vasthebben.

Crystal crystals are objects with which you can buy new chips. Crystals appear here and there by your spaceship. You can also get crystals by visiting to go with other players and to guess how their capsules are called to send pictures or good..

# Visiting others

teleport to another ship will cost you 1 Crystal. The name of other capsules recommended if you goes to visit other players you will be able to view their new capsules. As you guess how their room is called, get you and that player extra crystals. This works as follows: If you want to guess how the room is called, you get to see 4 options. 1 of these options is the name that player has given to the room. If you get both of you in one go good Council, 4 crystals. But each time you receive a wrong answer gives you 1 less crystal. These crystals will get the next day.

#### From here, photos

Per day you can save only one picture to take with you to the next day. The rest you'll have to give it away to other players, or they are automatically removes.

### View photos

You can have photos you want to use, do not give to other players. If they use those pictures to

decorate their new capsule, get your crystals. To see the photo that player needs you can look at the options they have turned in their control panel.

## Disasters

It can sometimes happen that hit your spaceship through a meteor or a space monster. If this happens, a number of capsules from your spaceship be shaken. You'll have to turn these rooms again to reach them.

#### Back end

For coaches, there are several ways to affect the game environment. In addition, the area on it arranged to receive information from the client. First, the control room provides a direct view of the state of mind of the client. The layout and naming of the rooms gives a view of the perception of the client.

The supervisor can affect the game world by letting disasters occur when a client has a setback in his / her treatment. On the star map of the player this event will be marked so that the client has a view of the timetable of his treatment. Additionally, the supervisor can reward positive developments by the star map the spacecraft to move forward and sub-goals to pass. Another way to send to influence the client is the one for a picture which he / she can then use to set up his / her new capsule. These are held by robots with a specific problem. This problem can be selected on the basis of problems experienced by the client itself.

## (ORIGINAL DUTCH)

Door een grote ramp <u>is</u> jouw thuis planeet en ruimteschip uit elkaar gevallen. Het is jouw doel om naar een nieuwe planeet te reizen. Onderweg zul je de nieuwe onderdelen voor jouw ruimteschip oppikken, zodat je een nieuwe huis hebt als je aankomt.

Jouw ruimteschip bestaat uit verschillende onderdelen, ook wel capsules genoemd. Deze capsules zijn aan elkaar geklikt. Je zult tijdens jouw reis nieuwe capsules oppikken en die zullen automatisch verbonden worden aan jouw schip. Nieuwe capsules zijn alleen leeg en saai en moeten door jou worden ingericht.

Waarom? Dit spel zal jou helpen om meer zelfinzicht te krijgen. Om dit te kunnen doen, zul je elke dag goed moeten opletten hoe je jezelf voelt en wat je meemaakt. Door de dag vast te leggen krijg je een beter beeld van jouw leven, en hoe je de controle kunt houden.

# Start van het spel

Jouw ruimteschip is in het begin erg klein en bestaat alleen uit jouw kapiteins cabine. In deze kabine staan 3 belangrijke apparaten. Je start elk spel vanaf deze kamer.

## Sterrenkaart

Op de sterrenkaart kun je zien hoe ver je nog moet reizen om jouw nieuwe planeet te bereiken. Je zult zien dat jouw lange reis langs astroides zal gaan. Deze reis staat symbool voor de doelen en subdoelen die je in het echte leven wilt bereiken. Samen met jouw begeleider kun je een naam geven aan elke astroide en jouw nieuwe planeet. Samen met jouw begeleider zul je bepalen hoe ver jouw reis al is.

## Controle paneel

Met dit belangrijke controle paneel kun je aangeven hoe je je voelt als je begint met spelen. Aan de hand van dit gevoel zullen de lampen op jouw schip een andere kleur geven. Op deze manier kunnen jouw begeleider maar ook andere spelers zien hoe zij jou kunnen helpen. Je hebt de keuze uit groen (het gaat goed), oranje (het kan beter) of rood (het gaat slecht).

### Teleportatie machine

Met deze machine kun je voorwerpen of jezelf teleporteren naar andere de ruimteschepen van andere spelers. Op deze manier kun je altijd op bezoek bij anderen, hun ruimtecapsules bekijken en hun nieuwe plaatjes doorsturen.

### Capsules

Naast jouw hoofdkwartier zal jouw schip zich uitbreiden met nieuwe capsules. Elke capsule heeft een aantal deuren. Soms zul je zien dat een deur niet aan de juiste kant staat om naar een volgende capsule te kunnen gaan. Gelukkig kun je capsules een kwartslag draaien.

Als je bij een ander schepen kamers wilt draaien zul je eerst een kristal moeten weggeven om dit te doen.

### Nieuwe capsules

Elke dag krijg je een nieuwe capsule die je moet inrichten. Zie dit als een soort dagboek die je van die dag bijhoudt. Je kunt jouw nieuwe capsule met foto's aankleden die je hebt verzameld. Een belangrijk onderdeel van het spel is het vinden van de foto's die jij wilt gebruiken. Per capsule kun je 3 foto's plaatsen. Als je klaar bent wordt jou gevraagd om een naam aan de capsule te geven. Ook wordt er de datum van vandaag op jouw capsule geplaatst.

#### Overzicht knop

Deze knop zit op het controle paneel en geeft in een chronologische volgorde weer welke capsules er allemaal aangemaakt zijn. Dit is handig om terug te kunnen zien hoe de tijdslijn van de behandeling is geweest. Speltechnisch geeft het geen voordeel, aangezien het aanzicht slechts een virtuele weergave is. Je kunt dus enkel scrollen door de dagen, maar niet met je bot erdoor lopen.

#### Foto's verzamelen

Elke dag krijg je 4 nieuwe foto's. hiermee kan je de kamer indelen. Je kan andere foto's krijgen van andere mensen. of in de teleporter voor 2 kristallen een nieuwe vragen.

### Customization verzamelen

In jouw ruimteschip zijn verschillende robots te vinden die gereedschap vasthouden. Deze robots hebben alleen een probleem en zullen hun gereedschap niet afgeven zolang ze dit probleem hebben. Als je weet wat voor probleem dit is kun je ze helpen. In jouw hoofdkwartier kun je verschillende moodchips laten maken die het probleem van de robot kan oplossen (nb. deze chips kosten kristallen). Als je de robot de juiste chip geeft, zul je het gereedschap krijgen die zij vasthebben.

### Kristallen

Kristallen zijn voorwerpen waarmee je nieuwe chips kunt kopen. Kristallen verschijnen her en der door jouw ruimteschip. Je kunt ook kristallen krijgen door op bezoek te gaan bij andere spelers en te raden hoe hun capsules heten of goede foto's te sturen..

#### Bezoeken van anderen

Het teleporteren naar een ander schip kost je 1 kristal.

# De naam van andere capsules raden

Als je op bezoek gaat bij andere spelers zul je hun nieuwe capsules kunnen bekijken. Als jij raadt hoe hun kamer heet, krijg jij en die speler extra kristallen. Dit werkt als volgt: Als je wilt raden hoe de kamer is genoemd, krijg je 4 opties te zien. 1 van deze opties is de naam die die speler heeft gegeven aan de kamer. Als je in 1 keer goed raad, krijgen jullie beiden 4 kristallen. Maar per keer dat je een fout antwoord geeft ontvangen jullie 1 minder kristal. Deze kristallen krijg je de volgende dag pas.

Foto's overhouden

Per dag kun je maar 1 foto bewaren om mee te nemen naar de volgende dag. De rest zul je moeten weggeven aan andere spelers, of ze worden automatisch verwijdert.

#### Foto's geven

Je kunt foto's die jij niet wilt gebruiken geven aan andere spelers. Als zij die foto gebruiken om hun nieuwe capsule in te richten, ontvang je kristallen. Om te kunnen zien welke foto die speler nodig heeft kun je kijken naar de opties die zij hebben aangezet op hun controle paneel.

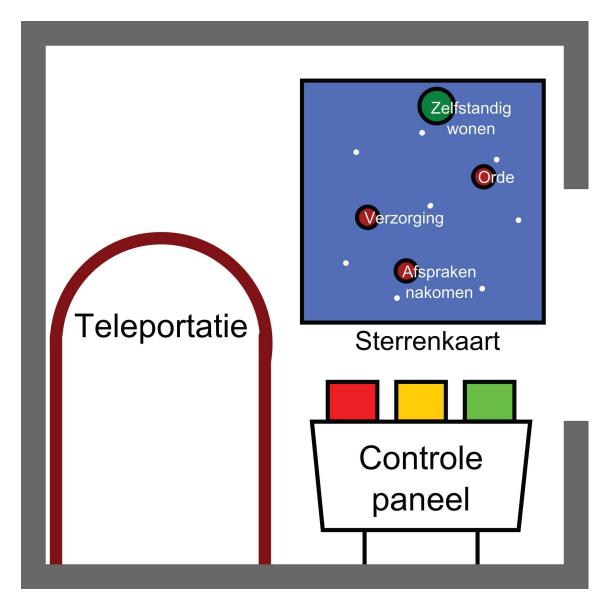
#### Rampen

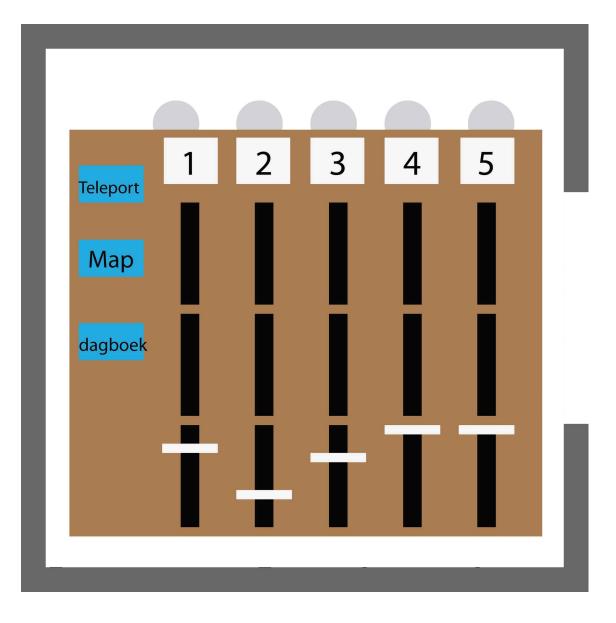
Het kan soms gebeuren dat jouw ruimteschip geraakt wordt door een meteoriet of door een ruimtemonster. Als dit gebeurd zullen een aantal capsules van jouw ruimteschip door elkaar geschud worden. Je zult deze kamers opnieuw moeten draaien om ze te kunnen bereiken.

#### Back end

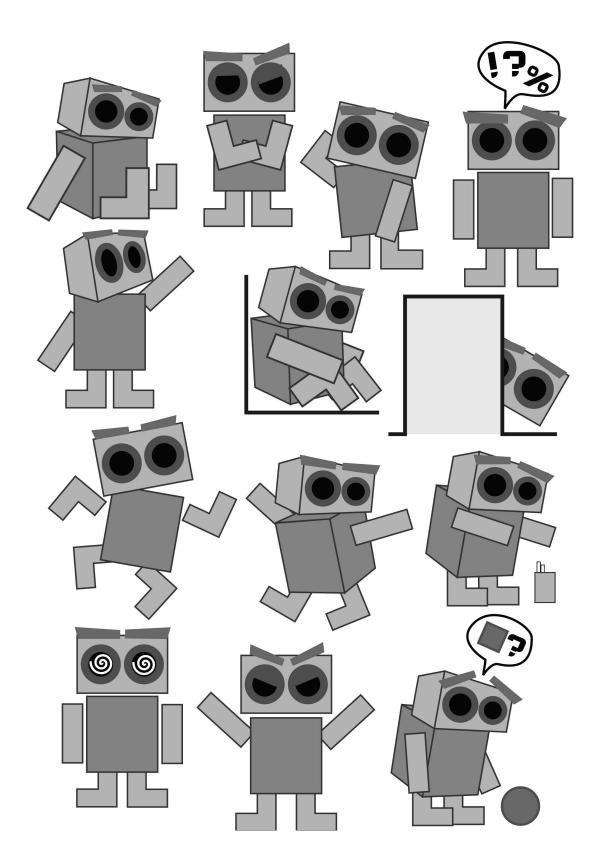
Voor de begeleiders zijn er verschillende mogelijkheden om invloed te hebben op de spelomgeving. Daarnaast is de omgeving erop ingericht om informatie van de client te ontvangen. Allereerst geeft de controlekamer een directe weergave van de gemoedstoestand van de client. Ook geeft de inrichting en naamgeving van de kamers een weergave van de belevingswereld van de client.

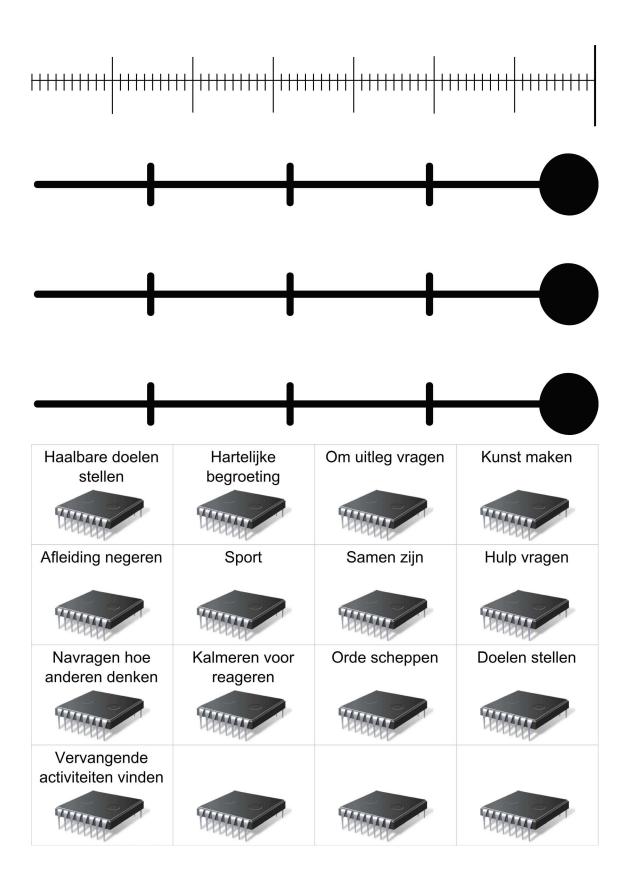
De begeleider kan invloed hebben op de spelwereld door rampen te laten plaatsvinden wanneer een client een terugval heeft in zijn/haar behandeling. Op de sterrenkaart van de speler zal deze gebeurtenis aangegeven worden, zodat de client een weergave heeft van het tijdspad van zijn behandeling. Daarnaast kan de begeleider positieve ontwikkelingen belonen door op de sterrenkaart het ruimteschip vooruit te bewegen en subdoelen te laten passeren. Een andere manier om de client te beinvloeden is om diegene een foto te sturen die hij/zij vervolgens kan gebruiken om zijn/haar nieuwe capsule in te richten. Deze worden vastgehouden door robots met een specifiek probleem. Dit probleem kan worden geselecteerd op basis van problemen die de client zelf ervaart.

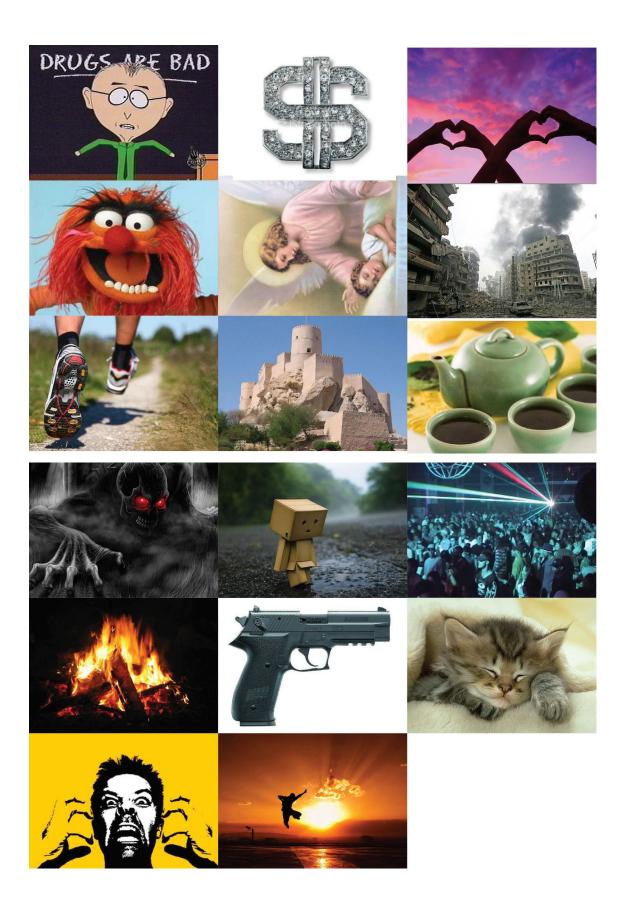














# **APPENDIX J**



DesignState\_6\_Playtest

Content: Portable Document Format, 14 pages Language: Dutch w/ English Translation Description: A collection of notes and images taken during a play-test with the subject matter experts.

# (ENGLISH TRANSLATION)

Report playtest 'Moodbot' at ABC, 13-6-12

LVR

#### Present:

ABC staff: Fred, Tom, Tonny, Sabine, Jolanda

Clients: Miriam, Chester, two boys

HKU / AGD: Micah Wesley, Lies

(Apologies if names are not entirely correct)

Miriam and Jolanda about 15 minutes in the game, with Micah gave tutorial and Wesley as "computer" functioned. After this, the participants talked about an hour on the possibilities and difficulties of the current prototype. Below I have detailed feedback / input by theme.

#### Rooms:

The daily tracking a room that speaks reflects the mood case managers really that. Ultimately, this may reflect on the time of development of the client without his / her need to write them each day in a notebook.

Chester indicates it to like in this indirect way to communicate his mood: "I'm not myself to sound the alarm, but think it's fine if the practitioner in my room looks that I feel bad, and then to me comes. "

# Suggestion:

It would also be nice if the rooms can have some fixed elements, favorites or similar So does every day reflect the mood, but also some images that would have permanently there the client, to make the room really own.

**Team Composition** 

How the teams will be made up? Option is to make teams of clients that are in the same phase of treatment. As a result they have similar goals, but it's also nice if the clients are on, the others can take it. So this would just ask for a more varied composition. The question is whether the long time teams remain the same or - eg weekly - exchange. This is yet to be determined at a later stage of development.

The game must be together in any case play with clients who are ambulatory. It should also invite Real Life interaction outside the game.

# Suggestion:

The nature of the goals that people set and the images could bring people with similar interests together. For example, it appears that two clients both want to play football, they could agree even to a game of football or to talk about it together.

## Signals

How to formulate the signals? This must be unambiguous. So if suspicion 'high', it means that the client is very suspicious or not? This must be worked out at a later stage of the design.

# Pictures

It must be clear to the therapist are the images that show a state of mind and which represent a desired state ("I feel very calm 'versus' I wish I had more rest).

It would be nice if you have many choices of images that you place in your room or can give to others. So not a limited set of pictures, but the client must also be able to draw or Googling for pictures.

#### Suggestion:

This could be something you have to earn a achievement you later unlocked.

Other forms of media were suggested as something that you can earn later, such as audio and film.

#### Goals:

How far the targets should be formulated in advance? Should the goals be categorized? This might be able to give suggestions for the goals that you can think of. (Miriam does not see why not just text, you give some suggestions, I personally agree with this.)

The targets are monitored? => Clinician can tick off.

A difficulty with the (sub) goals may be that they are very personal.

# Suggestion:

The team can challenge the other team and / or private teammate to achieve certain goals. The team can think together about what an achievable yet challenging goal could be for a teammate. The client itself can also negotiate on this. This feature would mean a communication function, such as chat, must come into play.

# Suggestion:

Also, real life goals inside handle. For example, one team can challenge the other team play basketball against each other and the winner gets points.

# Suggestion:

The client can own his / her ultimate goals indicate, the other players can then think of sub-goals for this client.

# Role practitioner

The practitioner will be able to do more than just play Big Brother, even giving the clients to have no trouble here. The practitioner would be able to take in an active (re) role in the game. Yet it is precisely the idea that it is not too much time for the practitioner should cost. The 'efficient' eavesdropping is one of the goals of the game, to get more insight into the daily state of the client than with the current system is the case.

### Notes:

They had a lot of trouble with the relationship of signal behavior and goals line and the control room.

Handlers had difficulty communicating with signals to the client in the manner that this is now in the game.

Treating physicians do not see it in order to play the game itself. They have already busy enough.

We must look at the "big game". Express it with pictures and images they found an improvement than the words of previous prototype.

We fell into one of the pitfalls, everyone in the room busy with the prototype, at the same time. (EGG)

The practitioner in the gray shirt, has a very skeptical attitude, he says A but radiates B from.

The control room brings so much confusion that the focus was no longer on the game but how the control room works.

Clients can tend to express the sliders else to put to see what happened.

They will give false alarms go to see what happens. Stakeholders know of each other not what one wants and what the other person wants ...

10:08 27-6-2012 Play-test Roosenberg Altrecht

-No recording allowed with patients

Intorduction goal and parnters of the project

Game Instruction signal plan is the filled in daily o signal plan dieftthal agressie stress relaties taaken

Issue with Goal (having issues w/ filling it in.

"It is difficult to play to play a game if you are cheerful."

question positive and reactive.

the treatment is not a game

The issue about goals keep coming back

if the therapist and the patient see things differently then it a moment to talk

the behandler can use his sliders to encourage or saying that things are going well in the fact that patient has recognize there is a problem

selected an image because it was nice

would change his images and robot based on the therapist's

can the behandeler change his sliders? would like to have sliders can change through the day.

client doesn't recognize the feelings of the AI player (difficulties)

would want to have contact when they see the room could hear from other patient

it is very chaotic

patient is very acts very interested in helping the other patient

10:59 27-6-2012 understood the general idea of the rooms

privacy issue about chips and images (blocking liking etc)

alarm button? can you find some one for this problem. positive

11:03 27-6-2012 New play-tester joined us (behandeler)

it isn't about the points

remarks as a facebook but only smaller it is nice

it is short game and i would want to come back the next day to see how a patient is

patient would look forward to placing new images

would like to be able to keep friends and track them

contected to age may not be appropriate for the age group?

scalable accoding to the number of patients 25 here at roosenberg

joris says patient wan't really encouraged by the competition

maybe tour d'france point and scoring system. competitive by achieving goals

signal plan

aggressie ingeblieden ontspanning trek middle prikellebaar

the behandler's feedback seems to be a confusing point..

privacy issue who sees who

the amount of images when do you get them and how many?

the signals will stay and only changed when the behandler and patient

can you the info? yes if everything well discuused yes it very well clear

here they are in first stages on the behandeling

rehabiltatie good can it be used for this if we change the

challnegs? yes postitive, but the signal plan can be differnt in this case

there are clients that are only focused on themselves and varnammening

anonomous? privcy?

veel-weinig (niet slecht good) fill in you own contridictions

little text in the game for maessages

issue with how the behandlaar reacts and provides feedback feedback woulod not be real time or during a talk with behandlelaar

a point from when the client gets a point for making sure that the client makes contact with behandelaar

hidden public sight for challenges

# (ORGINAL DUTCH)

Verslag playtest 'Moodbot' bij ABC, 13-6-12 LvR

Aanwezig: Medewerkers ABC: Fred, Tom, Tonny, Sabine, Jolanda Cliënten: Miriam, Chester, twee jongens HKU/AGD: Micah, Wesley, Lies (excuses als alle namen niet helemaal correct zijn)

Miriam en Jolanda hebben ongeveer 15 minuten het spel gespeeld, waarbij Micah speluitleg gaf en Wesley als 'computer' fungeerde. Hierna hebben de aanwezigen ongeveer een uur gepraat over de mogelijkheden en moeilijkheden van het huidige prototype. Hieronder heb ik per thema de feedback/input uitgewerkt.

## Kamers:

Het dagelijks een kamer bijhouden die de stemming weergeeft spreekt de case managers erg aan dat. Uiteindelijk kan dit een beeld over tijd geven van de ontwikkeling van de cliënt, zonder dat hij/zij daarvoor elke dag in een schriftje hoeft te schrijven.

Chester geeft aan het ook fijn te vinden op deze indirecte manier over zijn stemming te communiceren: "ik ga niet zelf aan de bel trekken, maar vind het wel fijn als de behandelaar in mijn kamer ziet dat ik me slecht voel en dan naar mij toe komt".

#### Suggestie:

Het zou ook leuk zijn als de kamers enkele vaste elementen kunnen hebben, favorieten o.i.d. Dus wel per dag een weergave van de stemming, maar ook enkele afbeeldingen die de cliënt er permanent in wil hebben, om de kamer echt eigen te maken.

## Teamsamenstelling

Hoe gaan de teams samengesteld worden? Optie is om teams te maken van cliënten die in dezelfde fase van behandeling zitten. Hierdoor hebben ze vergelijkbare doelen, maar het is ook mooi als de cliënten die verder zijn, de anderen mee kunnen trekken. Dit zou dus juist een meer gevarieerde samenstelling vragen. Ook de vraag is of de teams voor lange tijd hetzelfde blijven of – bijvoorbeeld wekelijks – wisselen. Dit is nog nader te bepalen in een later stadium van de ontwikkeling.

Het spel moet in elk geval ook samen te spelen zijn met cliënten die ambulant zijn. Ook moet het uitnodigen tot Real Life interactie buiten het spel.

#### Suggestie:

De aard van de doelen die mensen zich stellen en de afbeeldingen zouden mensen met dezelfde interesses bij elkaar kunnen brengen. Als bijvoorbeeld blijkt dat twee cliënten beide meer willen gaan voetballen, kunnen ze eens afspreken om een potje te gaan voetballen of er samen over te praten.

#### Signalen

Hoe de signalen te formuleren? Dit moet wel eenduidig zijn. Dus als achterdocht 'hoog' staat, betekent dit dan dat de cliënt heel achterdochtig is of juist niet? Dit moet in een latere fase van het ontwerp uitgewerkt worden.

#### Afbeeldingen

Het moet duidelijk zijn voor de behandelaar welke afbeeldingen een gemoedstoestand weergeven en welke een gewenste toestand weergeven ('ik voel me heel rustig' versus 'ik wilde dat ik meer rust had').

Het zou leuk zijn als je veel keuze hebt wat betreft de afbeeldingen die je zelf in je kamer plaatst of aan anderen kunt geven. Dus niet een beperkte set plaatjes, maar de cliënt moet ook zelf kunnen tekenen of googelen naar plaatjes.

#### Suggestie:

Dit zou iets kunnen zijn dat je moet verdienen: een *achievement* die je later *unlockt*. Ook werden andere mediavormen geopperd als iets dat je later kunt verdienen, zoals audio en film.

#### Doelen:

Hoe ver vooruit moeten de doelen geformuleerd worden? Moeten de doelen in categorieën worden ingedeeld? Dit zou kunnen om suggesties te geven voor de doelen waar je aan kunt denken. (Miriam ziet niet waarom je dan niet gewoon in tekst wat suggesties kunt geven, ik persoonlijk ben het hiermee eens.)

Hoe worden doelen gecontroleerd? => kan behandelaar afvinken.

Een moeilijkheid bij de (sub)doelen kan wel zijn dat ze erg persoonlijk zijn.

#### Suggestie:

Het team kan het andere team en/of een eigen teamgenoot uitdagen om bepaalde doelen te verwezenlijken. Het team kan samen nadenken over wat een haalbaar en toch uitdagend doel voor een teamgenoot zou kunnen zijn. De cliënt zelf kan hier ook nog over onderhandelen. Deze feature zou betekenen dat er ook een communicatiefunctie, zoals chat, in het spel moet komen.

#### Suggestie:

Ook real life doelen erin verwerken. Het ene team kan bijvoorbeeld het andere team uitdagen tegen elkaar te basketballen en de winnaar krijgt punten.

Suggestie:

De cliënt kan zelf zijn/haar einddoelen aangeven, de andere spelers kunnen dan subdoelen voor deze cliënt bedenken.

## Rol behandelaar

De behandelaar wil meer kunnen doen dan alleen Big Brother spelen, ook al geven de cliënten aan hier geen moeite mee te hebben. De behandelaar wil een actieve(re) rol in het spel in kunnen nemen. Toch is juist het idee dat het voor de behandelaar niet teveel tijd moet kosten. Het 'efficiënt' mee kunnen kijken is één van de doelen van het spel, om zo meer inzicht in de dagelijkse toestand van de cliënt te krijgen dan met het huidige systeem het geval is. Ze hadden veel moeite met de relatie van signaal gedrag en de doelen lijn en de controle kamer.

Behandelaars hadden moeite met signalering naar de cliënt communiceren op de manier zoals deze nu in de game zit.

Behandelaren zien het niet zitten om het spel zelf te spelen. Ze hebben het al druk genoeg. Er moet gekeken worden naar de "big game".

Uitdrukken met foto's en plaatjes vonden ze een verbetering dan de woorden van vorige prototype.

We fell into one of the pitfalls, everyone in the room busy with the prototype, at the same time. (EGG)

De behandelaar in het grijze shirt, heeft een hele sceptische houding, hij zegt A maar straalt B uit.

De controle kamer brengt zoveel verwarring dat de focus niet meer op het spel lag maar hoe de controle kamer werkt.

Cliënten kunnen geneigd zijn om expres de schuiven anders te zetten om te kijken wat er gebeurd. Ze zullen vals alarm gaan geven om te kijken wat er gebeurt.

Stakeholders weten van elkaar niet wat de een wil en wat de ander wil en wat er echt nodig is qua informatie dat "gedocumenteerd" of "gepresenteerd" moet worden door het systeem.





# **APPENDIX K**



DesignState\_6\_Playtest\_1.1

Content: video 32 minutes 16 seconds Language: Dutch

Description: Raw footage of a play-test with subject matter experts.

# **APPENDIX L**



DesignState\_6\_Playtest\_1.2

Content: video 24 minutes 24 seconds Language: Dutch Description: Raw footage of a play-test with subject matter experts.

# **APPENDIX M**

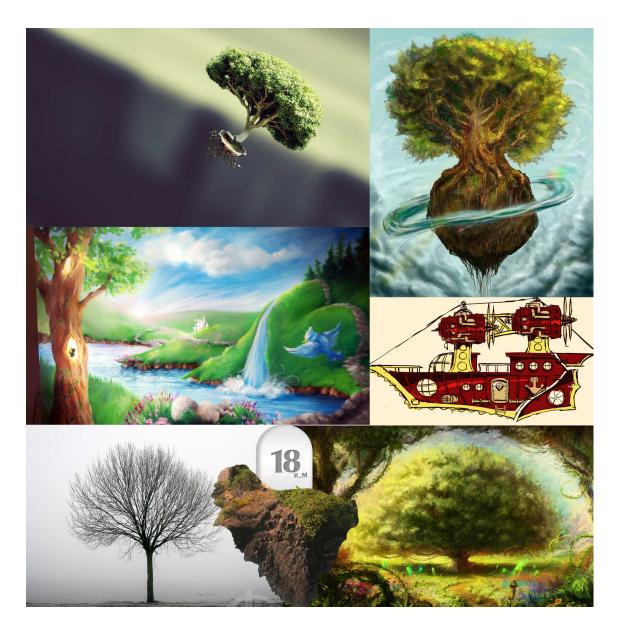


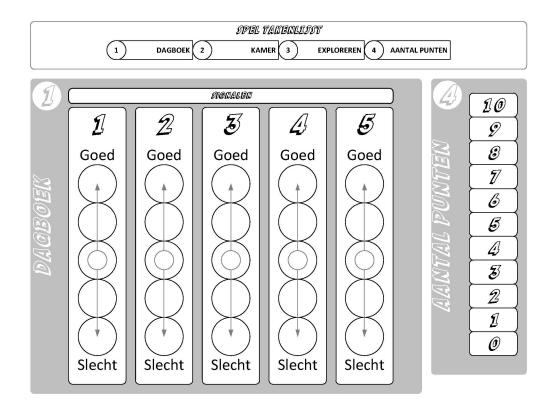
DesignState 7\_Paper

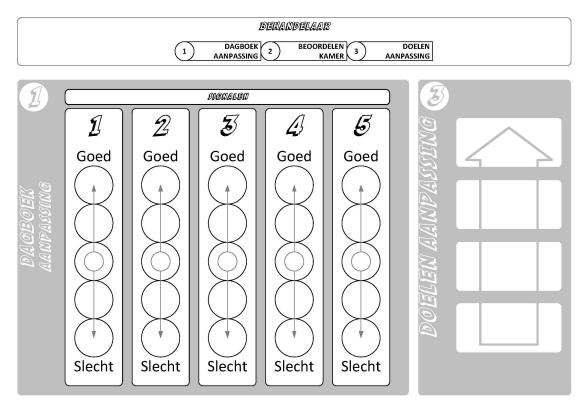
Content: 15 pages, paper prototype

Language: English

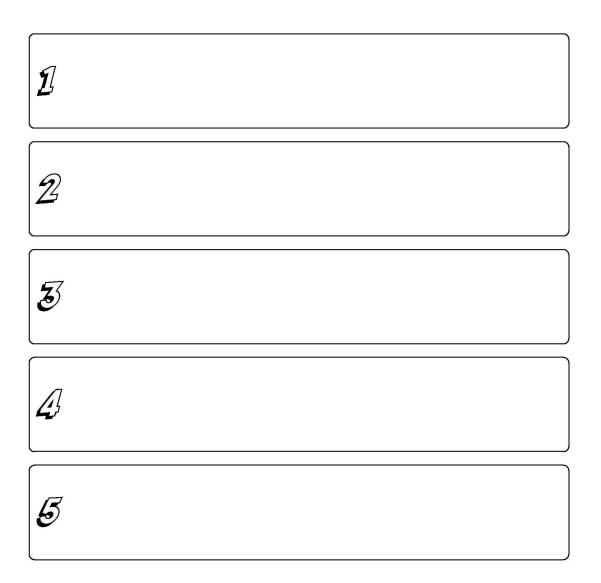
**Description:** The results from Iteration 7 (see figure 8 pg. 43) is a paper prototype includes a team completive element and an updated version of the playable paper prototype.

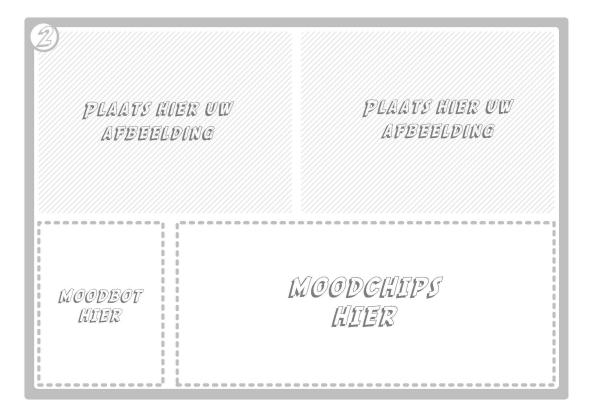


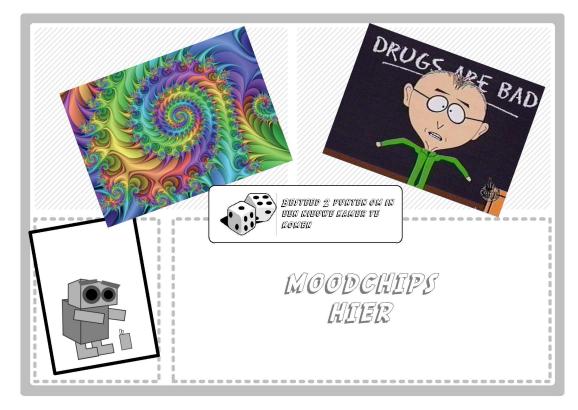




# SEGNALEN



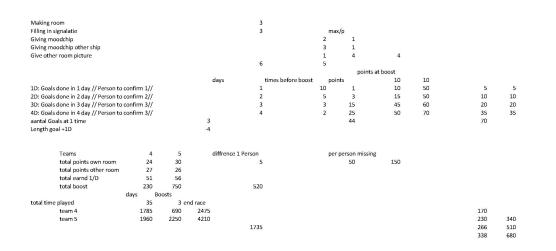




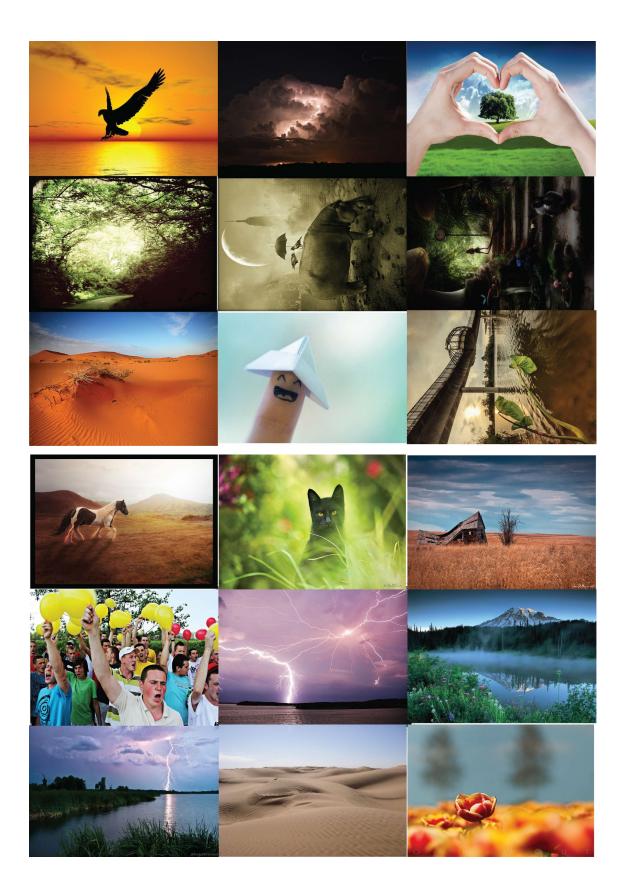


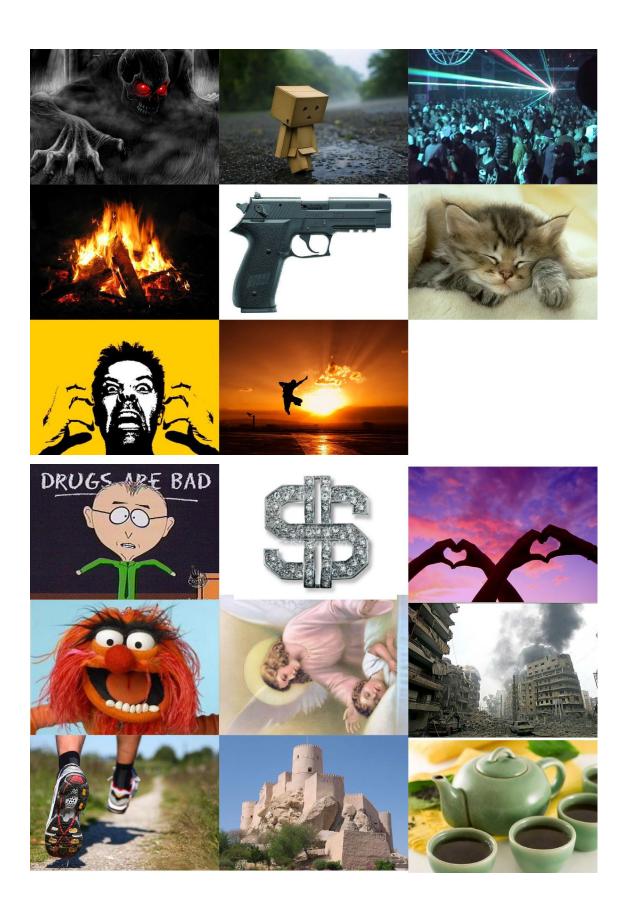
|                   |             |                                | Om uitleg vragen | Kunst maken                        |
|-------------------|-------------|--------------------------------|------------------|------------------------------------|
| Afleiding negeren | Hulp vragen | Navragen hoe<br>anderen denken | Orde scheppen    | Vervangende<br>activiteiten vinden |
| Sport             | Samen zijn  | Kalmeren voor<br>reageren      | Doelen stellen   |                                    |

| POENTS                             | POENTS                     |
|------------------------------------|----------------------------|
| DAGBOEK INVULLEN 3                 | DAGBOEK INVULLEN           |
| KAMER MAKEN 3                      | KAMER MAKEN 3              |
| Moodchep (team) 2                  | Moodchep (team) 2          |
| Moodchip (tecenstander) 3          | Moodchep (tecenstander) 3  |
| GEBRUEK VAN AFBEELDENG 🛛 🛽 🖠       | GEBRUIK VAN AFBEELDING 🛛 🗍 |
|                                    | +                          |
| POENTS                             | POINTS                     |
| DAGBOEK INVULLEN 3                 | DAGBOEK ENVULLEN 3         |
| KAMER MAKEN 3                      | KAMER MAKEN 3              |
| Moodehep (team) 2                  | Moodchep (feam) 2          |
| Moodchep (tegenstander) 3          | Moodchep (tecenstander) 3  |
| GEBRUEK VAN AFBEELDENG 🛛 🛽 🛽 🛽 🛽 🔊 | GEBRUEK VAN AFBEELDENG 🛛 👖 |
|                                    | +                          |
| POENTS                             | POINTS                     |
| DAGBOEK ENVULLEN 3                 | DAGBOEK INVULLEN 3         |
| KAMER MAKEN 3                      | KAMER MAKEN 3              |
| Moodchip (team) 2                  | Moodchep (team) 2          |
| Moodchip (tegenstander) 💰          | Moodchep (tegenstander) 💰  |
| GEBRUEK VAN AFBEELDING 🛛 🛽 🗜       | GEBRUEK VAN AFBEELDENG 🛛 🖠 |









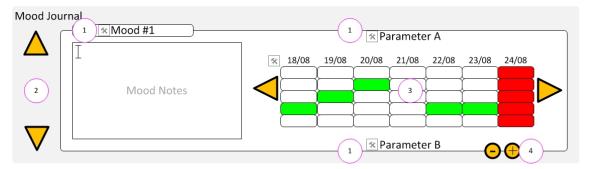
# **APPENDIX N**



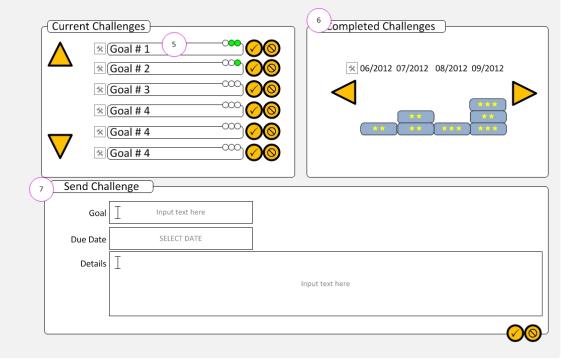
Moodbot\_GameDesignDocument\_1

**Content:** Portable Document Format, 11 pages **Language:** English

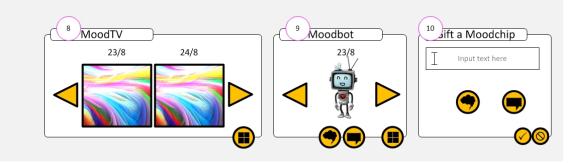
**Description:** Documentation that includes mock-ups Moodbot user interfaces for the main design features, such as the moodjounal, personal challenges, moodbot customization, etc. Also included is documentation of the game's flow and architecture.



Challenges



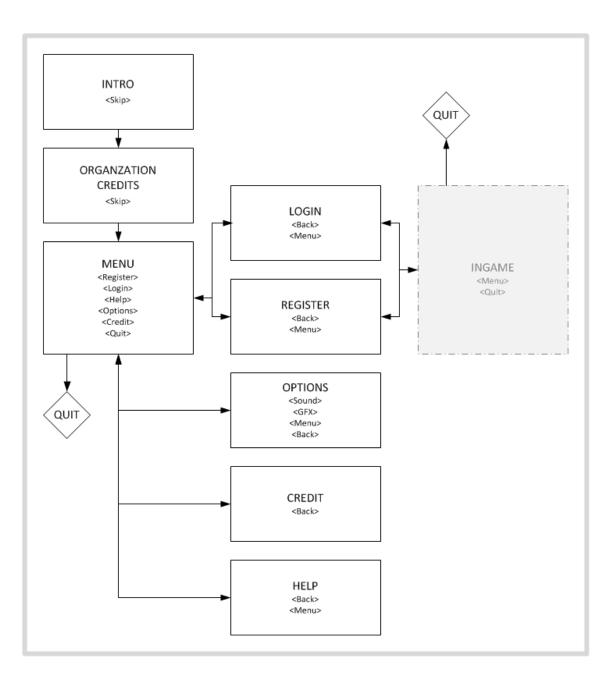
Expressions

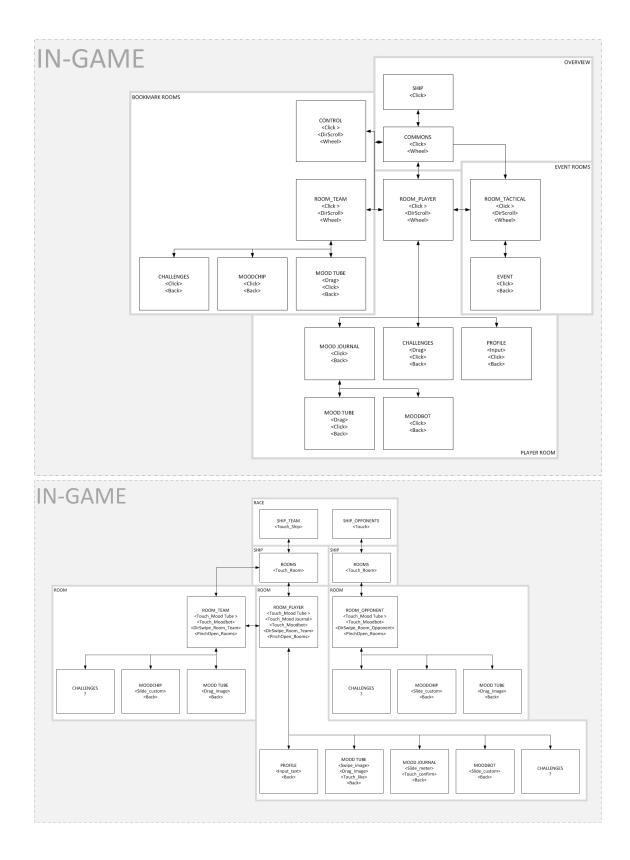


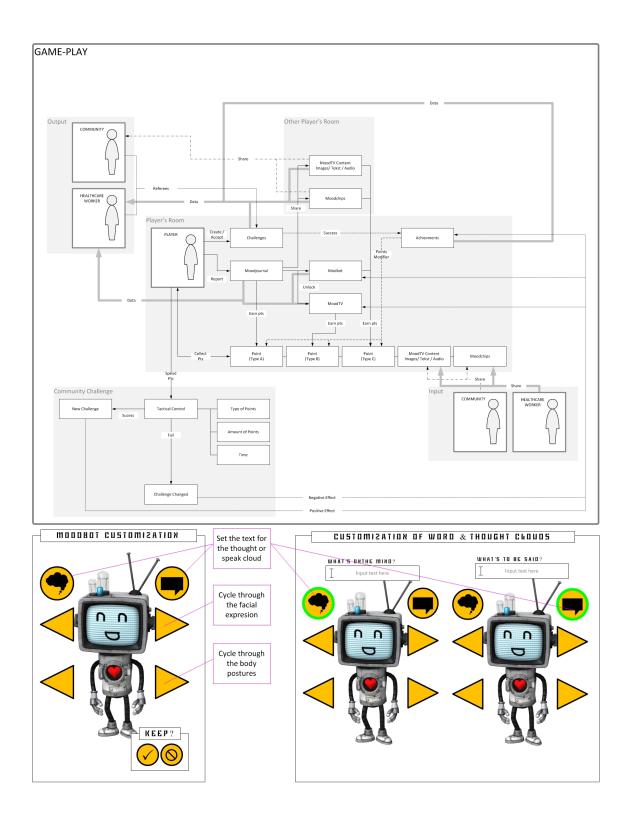
# Statistics

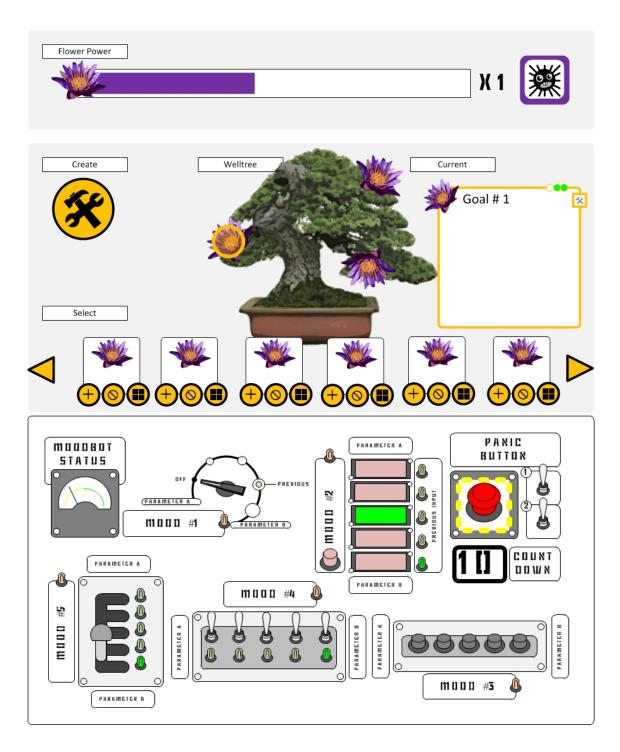


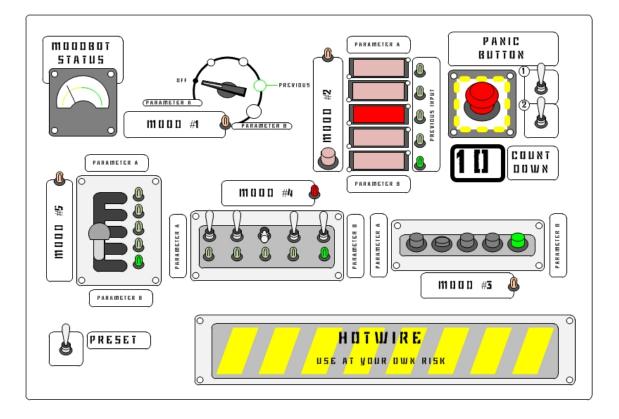
| 1   | 7   |
|---|---|
| Moodjournals are customizable. These fields are edited and determined by client and healthcare workers. Notes can be added to further define these fields.                  | The healthcare worker can create (with or without the client) new challenge and then send it to the client.                                     |
| 2<br>Different moods can be flipped through. Showing every moods all at once might be<br>information overload for clients.  | 8<br>Allows the healthcare work to browse all moodTV programs (created by the client) by<br>date.   |
| 3<br>Healthcare workers can see an overview of the clients input for that particular mood   | 9   |
| over time.  | Allows the healthcare work to browse all moodbots (created by the client) by date.  |
| 4<br>Allows healthcare worker to zoom in to a week and zoom out to a month.   | 10<br>Allows the healthcare worker to send a moodchip to the clients. Healthcare worker<br>may choose to send a though or talk.                 |
| 5<br>Healthcare worker has an overview of the client's current challenges-goals. Challenges<br>are moderated by healthcare workers and other clients in the game community. | 11<br>Stats that report how active the player has been (w/ login, moodjournal, moodbot, etc.)   |
| 6<br>Healthcare workers have access to all previously completed goals.  | 12<br>Stats that report how often the player receives support from the client community (i.e. moodchips, moodtv images, challenge competitions. |
|   | 13<br>Stats that report how often the player performs social actions (i.e. gives moodchips, approves challenges, moodtv images, etc.).          |
| IMPORTANT<br>These mock-ups are only to suggest the information that a healthcare worker could get out  | of the game and is not meant to say that the back-end could do more.  |

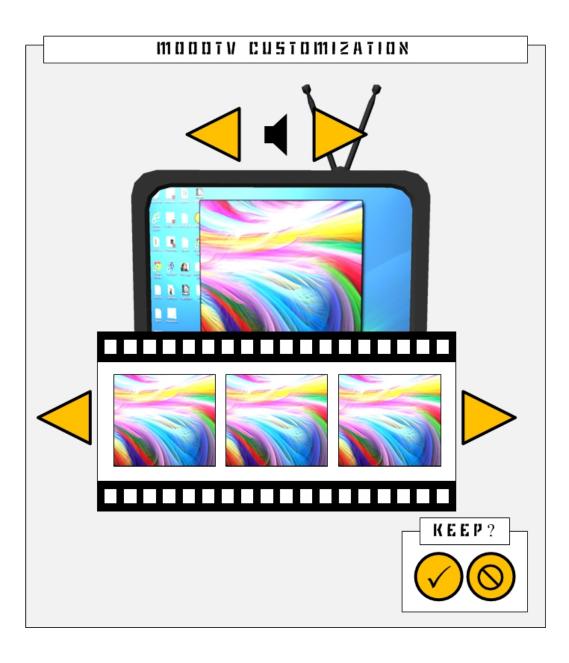












# **APPENDIX O**



Moodbot\_GameDesignDocument\_2

**Content:** Portable Document Format, 43 pages

Language: English

**Description:** Documentation that was originally online that includes detailed information about the game's design as well as feature implementation management.

# Moodbot

#### Intorduction

eBuddy is a pilot project meant to produce a demo version of an applied game that can be used to validate its potential as a healthcare tool. The game concept *Moodbot* is based

on concepts and experimentation done by Willem-Jan Renger done in coordination with <u>Altrecht</u>. As an applied game it will be designed to facilitate the communication between psychiatric patients and healthcare workers.

#### Overview

Moodbot is a multi-player social-cooperative adventure game, where players cooperate as a community to explore their world and collect modbuds. Players collect points during game-play as they complete therapeutic tasks and interact with other players that can be used to influence how the world is explored. The game is meant to be have cloud functionality, and be available on smart phones, tablets and PCs.

#### Walk-through (player/patient)

As the game starts the player first see an Altrecht and HKU logo screen. The player then arrives at the main menu. Here the player can select from menu options (i.e. play, help, credits, sound options, back story, gfx options, register etc.). If the player is playing for the first time he/she will need to register. When the player selects play a back-story screen/animation appears.

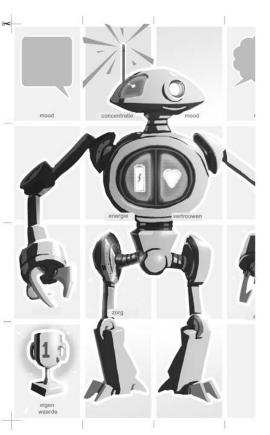
From the back story screen the player arrives in-game. The player's view begins with an overview of the current race positioning of the two teams. The player is automatically assigned to a team after registering, and can move from the race overview to the team space. Teams consist up to 20 players and a game is played by maximum 40 player.

In the team space the player has an overview of his fellow teammate's personal rooms, which are locked at this point in the game. The player's only option at this point is to continue to his personal room.

In the player's personal room the player is invited to perform several game-play tasks: fill out the moodjournal; select a moodbot; and customize your moodtube. When playing the game for the first time the daily journal needs to be co-calibrated by the player/patient and healthcare worker.

As these tasks are completed, dust bunnies are released in the personal room, which can be collected by the player. To collect these the player is faced with a kind of wack-a-mole / hide-and-go-seek game-play. The more dust bunnies a player collects the greater influence the player has on various tasks that influence how the player community explores the game world. Value of a dust bunny can be increased by the player accomplishing real-world tasks.

When the personal room activities have been completed and the player leaves the personal room for the team space he will find that he can now visit other the rooms of other player's. In these rooms the player can collect more dust bunnnies by doing certain social activities: leave a moodchip for the moodbot; share content from their moodtube; and share challenges. The player is limited in the amount of content shared to mood monitors and the number of



Warners Paper prototype: But 1

#### moodchips.

Challenges are devised by the player/patient and healthcare worker during face-to-face consultations and are refereed by player selected co-players or healthcare workers.

When a player visits a tactical room the player can allot his/her collected dust bunnies to a tactical activity (i.e. steering the community right or left). This activity then influences steering, movement, boosts, etc. of the Skyfish. The Skyfish movement is represented on a map.

As the player checks up on the in-game activities the game will notify the player if someone has visited his/her personal space. When the player returns to his personal space he could find: that other players have left mood chips for his/her moodbot; or suggested new content for his/her moodtube. The player may accept or decline content for his/her moodtube.

The player will eventually reach a point in a game session when there is no longer any game actions available. At this point the player can then quit the game and must wait for an game update that occurs at midnight each day. After the game update the player will find that he will have to go through the same tasks but will be offered new content for the mood monitor.

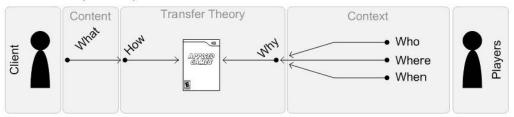
The goal of the game is collecting moodbuds and getting a highscore. After a X amount of time the players must start the collecting from zero and receive the score from the last session.

The game relies on short game sessions that focus on encouraging friendly competition, cooperation, social interaction and peer pressure to motivate and entertain players.

Walk-through (healthcare worker)

## <u>Moodbot</u> >

# Guidelines (ScoMo)



# CONTEXT

#### Who:

Player: Altrecht Clients

Age Groups: 20-70

Abilities: varied (e.g. possible impaired fine motor skills "shaking", impaired perception, impaired motivation)

Main User:

Altrecht Healthcare Worker

Other User:

Client's Family, Client's Friends

# Where:

<u>Plaver</u> Cloud computing (via smartphone, tablet, and PC) Closed clinical environment Home environment Free time Post-clinic visit

<u>Player & Healthcare Worker</u> During consultations

<u>Healthcare Worker:</u> During working hours

#### When:

<u>Player</u> During clinic controlled moments Max. 1 hour a day 5-15 min. game sessions

Player & Healthcare Worker

20-30 min. game setup & creating game goals

<u>Healthcare Worker</u> 5-15 min. per client a week

## CONTENT

#### What:

<u>Plaver</u> Avoid fast movements, actions and audio Positive feedback and empowerment Lifestyle choices Insight into previous states of being Conscious about sociability and conflicts Reduction of incidents of aggression Lessen Relapse symptoms Can eventually be used for different patient groups

<u>User.</u> Client update (e.g. social behaviors, activities, fear, aggression, perceptions) Critical Signals Lessen the time it takes to handle cases

# TRANSFER

## How:

Player: Game-play (e.g. cooperation, daily activities, participation, quizzing) Play Forms (e.g. 1-on-1, multiplayer, general social contact)

## Why:

<u>Player:</u> Obligated to play Particpation Social status Competition

# <u>Game Art</u> >

# Art Asset List

Showing 89 items

| Туре                        | Name                            | Priority | Status   | Finished |
|-----------------------------|---------------------------------|----------|----------|----------|
| Sort                        | Sort                            | Sort     | Sort     | Sort     |
| Character                   | Dust Bunny                      | 1        | Sign off |          |
| Character                   | E(mo)bot                        | 1        | Sign off | ~        |
| Generic Dyn / Ani<br>Object | Metal Leaver Switch             | 1        | Concept  |          |
| Generic Dyn / Ani<br>Object | Metal Ventilation Fin           | 1        | Mockup   |          |
| Generic Dyn / Ani<br>Object | Intercom Unit                   | 1        | Fini     |          |
| Generic Dyn / Ani<br>Object | Metal Cogwheel                  | 1        | Concept  |          |
| Generic Dyn / Ani<br>Object | Pipe Meter (triangle)           | 1        | Concept  |          |
| Generic Dyn / Ani<br>Object | Metal Portal Door               | 1        | WP       |          |
| Generic Dyn / Ani<br>Object | Warning Light                   | 1        | Concept  |          |
| Generic Dyn / Ani<br>Object | Pipe Meter (round)              | 1        | Concept  |          |
| Generic Dyn / Ani<br>Object | Light Switch                    | 1        | Concept  |          |
| Generic Static Object       | Glass middlepiece<br>(Pipe)     | 1        | Concept  |          |
| Generic Static Object       | Plug (electricity)              | 1        | Concept  |          |
| Generic Static Object       | Inlet / Outlet<br>(electricity) | 1        | Concept  |          |
| Generic Static Object       | Metal Grid Plate                | 1        | Concept  |          |
| Generic Static Object       | Metal Pipe Grid                 | 1        | WIP      |          |
| Generic Static Object       | Metal Plate (square)            | 1        | Concept  |          |
| Generic Static Object       | Wood / Metal Crate              | 1        | Concept  |          |
| Generic Static Object       | Metal Window Portal<br>(round)  | 1        | WIP      |          |
| Generic Static Object       | Metal Bolt                      | 1        | WP       |          |
| Generic Static Object       | Hanging Grass                   | 1        | WP       |          |
| Generic Static Object       | Metal Stairstep                 | 1        | Concept  |          |
| Generic Static Object       | Metal Barrel                    | 1        | WP       |          |

| Generic Static Object | Metal Ladder                      | 1  | Concept |
|-----------------------|-----------------------------------|----|---------|
| Generic Static Object | Hanging Lamp                      | 1  | Concept |
| Generic Static Object | Metal Pipe (Head,<br>Middle, Toe) | 1  | Concept |
| Generic Static Object | Metal Railing                     | 1  | WP      |
| Generic Static Object | Metal Plate<br>(rectangle)        | 1  | Concept |
| Generic Static Object | Pipe Wheel                        | 1  | Concept |
| Generic Static Object | Rubber Pipe                       | 1  | Concept |
| HUD                   | Dust Bunny Counter                | 1  | Concept |
| HUD                   | Thought Cloud                     | 1  | Concept |
| HUD                   | Speech Cloud                      | 1  | Concept |
| HUD                   | MoodJournal Panel                 | 1  | Москир  |
| HUD                   | Challenge lcons                   | 1  | Concept |
| HUD                   | Info Cloud                        | 1  | Concept |
| HUD                   | Population Counter                | 1  | Concept |
| HUD                   | Dust Bunny                        | 1  | Concept |
| HUD                   | Arrows                            | 1  | Concept |
| HUD                   | Challenge Info Cloud              | 1  | Concept |
| Level Geometry        | Toilet Room                       | 2  | Concept |
| Level Geometry        | Generic Room                      | Ĩ. | Mockup  |
| Level Geometry        | Laundry Room                      | 2  | Concept |
| Level Geometry        | Kitchen                           | 2  | Concept |
| Level Geometry        | Outdoor Terras                    | 2  | Concept |
| Level Geometry        | Eco Room                          | 2  | Concept |
| Level Geometry        | Water Depot                       | 2  | Concept |
| Level Geometry        | Storage Room                      | 2  | Concept |
| Level Geometry        | Crow Nest                         | 2  | Concept |
| Level Geometry        | Eat / Recreation<br>Room          | 1  | Concept |
| Level Geometry        | Room: Bridge                      | 1  | WP      |
| Texture               | Tree_Bark                         | 1  | WP      |
| Texture               | Wallpaper_SeaShelfs               | 2  | Concept |
| Texture               | Metal_Generic                     | 1  | WP      |
| Texture               | Chain                             | 3  | Concept |
| Texture               | Wallpaper_Animals                 | 2  | Concept |
| Texture               | Flame                             | 1  | Concept |
| Texture               | Wallpaper_Food                    | 2  | Concept |
| Texture               | Metal_Grid                        | 1  | WP      |
| Texture               | Wallpaper_SkyCloud                | 2  | Concept |

|         | S                               |    |         |
|---------|---------------------------------|----|---------|
| Texture | Smoke                           | 1  | Concept |
| Texture | Wood_Floor                      | 1  | WIP     |
| Texture | Wallpaper_ClassicFlo            | 2  | Concept |
| 7       | wers                            |    |         |
| Texture | Cloth_Generic                   | 1  | Concept |
| Texture | Water_Bubbels                   | 1  | Concept |
| Texture | lvy                             | 1  | WP      |
| Texture | Skybox_SkyLand                  | 1  | Concept |
| Texture | Soil_Generic                    | 1  | WIP     |
| Texture | Tree_Wood                       | 1  | WIP     |
| Texture | Meters                          | 1  | Concept |
| Texture | Wood_Generic                    | 1  | WIP     |
| Texture | Wallpaper_Robot                 | 2  | Concept |
| Texture | Plant                           | 1  | WP      |
| Texture | Metal_Crate                     | 1  | WIP     |
| Texture | Wallpaper_Newspap               | 2  | Concept |
|         | ers                             |    |         |
| Texture | Cloth_WallMap                   | 2  | Concept |
| Texture | Flowers                         | 1  | WP      |
| Texture | Wallpaper_MusicNot<br>es        | 2  | Concept |
| Texture | Rope                            | Ĩ. | Concept |
| Texture | Grass                           | 1  | WP      |
| Texture | MetalPlating_Generic            | 1  | WIP     |
| Texture | Wallpaper_Industrial<br>NutBolt | 2  | Concept |
| Texture | Water_Generic                   | 1  | Concept |
| Texture | Wallpaper_Scottisch             | 2  | Concept |
| Texture | Steam                           | 1  | Concept |
| Texture | Cloth_Flags                     | 1  | Concept |
| Texture | Dust_Particle                   | 1  | Concept |
| Texture | Wallpaper_Galactic              | 2  | Concept |
| Texture | Wallpaper_City                  | 2  | Concept |
| r       |                                 |    |         |

Showing 89 items



# <u>Game Art</u> >

# **Art Workflow**

Pre-production phase (Art R&D)

- Style, Color, Setting, Look & Feel, Technique
- Make art-style proposition
- Test-case with target audience
- Tech / Engine
- Pipeline / Workflow / File sharing / etc.
- Define Core art game-play elements / environments / assets / animations / etc.
- Build Mock-up game art assets / level geometry / etc.
- Art implementation & export tests in Game Engine

Production phase (Art refine & iteration / add-on)

- 1st pass polish of Core art game-play elements / envirionments / etc.
- 1st pass art implementation and lighting in Game Engine
- Test-case with target audience

## Polish phase (Art refine / fix & finalize)

- 2nd or 3rd pass polish of Core art game-play elements / environments / etc.
- Fix bugs & artifacts
- Deliver

## **Production Naming Conventions:**

General rule: Always make use of capitals and underscores Maya Files:

According to asset or world geometry distinction name + in-game purpose Example of a generic static asset name: Intercom\_Export Example of a HUD asset name: Intercom\_HUD or HUD\_Intercom <u>FBX Files:</u> According to asset file name (Maya file name) <u>Meshes (in Maya):</u> (Asset file name)\_(*Element*) example: Intercom\_LampGlass <u>Materials (in Maya):</u>

(asset file name)\_(element)\_mat

example: intercom\_lampglass\_mat (without capitals !) Generic Textures:

- (Material type)\_(Distinction)
- (Material type)\_(Distinction)\_(Sort)\_Dif
   (Material type) (Distinction) (Sort) NM
- Photoshop work-file ! Diffuse/color map
- Normal map s Gloss map
- (Material type)\_(Distinction)\_(Sort)\_Gloss

- (Material type)\_(Distinction)\_(Sort)\_Spec Gloss alpha channel !)
- (Material type)\_(Distinction)\_(Sort)\_AO
- (Material type)\_(Distinction)\_(Sort)\_Alpha
- (Material type)\_(Distinction)\_(Sort)\_Mask
- (Material type)\_(Distinction)\_(Sort)\_LM

Example: Metal\_Plating\_Bronze\_Dif

#### Asset Textures:

Basically the same as generic textures

- (Asset file name)\_Element (in case needed)\_Dif
- (Asset file name)\_Element (in case needed)\_NM
- etc.

Example: Intercom\_LampGlass\_Dif HUD Textures:

- HUD\_(hud element name)
- or (hud element name)\_HUD

#### VFX Textures:

(not yet decided) <u>Skybox Textures:</u> (not yet decided)

## SVN guidelines:

Location workfiles: ...\AGD\_SVN\eBuddy\Workfiles\Graphics\Models\.....etc.

Only store Maya files (.ma) and Photoshop files (.psd) here.

Only upload the files needed and no temporary junk (backup files, maya swatches, etc.) to SVN. Naming conventions; see previous topic!

Location gamedata: ...\AGD\_SVN\eBuddy\Unity Project\Assets\Graphics\Models\.....etc.

Only store FBX export files (.fbx) and texture files (.tga or .png) here.

Naming conventions; see previous topic!

Exporting & Importing to Unity; see next topic below!

### Export from Maya to unity:

#### In General:

In Maya, prepare the mesh according to the modeling checklist on the AGD Wiki & export with correct naming of meshes & materials to FBX format.

Important note in preparing the mesh is to make sure that any texture files are stored in the right Unity directories and the right links are set in the Maya materials !

FBX export settings: make sure to export to cm units, Y up axis, Binary FBX 2009. Check Smoothing Groups, Split per-vertex Normals, Tangents, Smooth Mesh. Un-check other stuff you don't need! (when static: un-check animations for instance).

Export to the right Unity dir: ..../ AGD\_SVN / eBuddy / Unity Project / Assets / Graphics / Models / etc. In Unity, Unity automatically imports any FBX export that is saved in the Unity Directories. So at first in most cases Unity will not import the assets correctly (wrong naming & missing materials etc.).

To fix this make sure to delete all the materials (in the by Unity created Materials folder) and then RE-import the

Specular map (saved in the Diffuse alpha channel or in the

Ambient Occlusion map (mostly part of the diffuse map)

- Alpha map
- Mix map

Light-map (when baked lighting is done outside Unity)

root FBX file by checking; *from Model's Material naming* (in the inspector import settings). Always check afterwards if all is corresponding to the right names and materials as you have set up in Maya. In SVN, only upload your files in SVN when all above steps are well executed.

#### World Geometry:

Have the ship with all the rooms at the right locations within Maya and then export the following individual elements; Ship\_Hull The ship itself FX\_(FX name) Special effects (room name)\_WorldGeo The walls of the room. Windows can be attached to the walls (room name)\_Objects All the static objects Transparent objects like the leaves of the tree (room name)\_Sheets (room name)\_DynamicObjects Animated objects Objects used to block lights at the lightbaking stage. Need to be removed in (room name)\_Lightblockers the final game

#### Static Assets:

(to be continued)

#### Animated Assets:

(Wiebe please write something here)

## <u>Game Design</u> >

# **Feature List**

Player

- Players have individual accounts
- Players have a room that represents their personal room
  - Players have a MoodJournal
  - Players have a MoodBot
  - Players have a MoodChart
  - Players have a ChallengeTree
  - Players have a MoodTube
  - Players have a MoodChipTicker
  - Players can collect DustBunnies after completing their: MoodJournal, MoodBot, ChallengeTree and MoodTube.
- Players can visit other players' rooms
- There is a community link to other players' rooms, which allows players to select other players to visit
- Players can leave a MoodChip for other players
- Players can collect DustBunnies after leaving a MoodChip
  - Players can visit TacticalRooms
- Players can spend their DustBunnies on SkyFishControl
  - Steering
  - Moving forward
- This control is represented on the WorldMap
- If a player spends his DustBunnies here, other players will find him located in the TacticalRoom during their game session.
  - Players can select players in the TacticalRooms to visit the other players' room

#### MoodJournal

- Player can record up to five different signals (mood, feelings, activities, etc.)
- The meters are customizable from the back-end
  - Meter meaning
  - Meter rating meanings
- Meters have five positions

#### MoodBot

- Players can customize their MoodBot
  - Select facial expression
  - Select body posture
  - Type in a thought
  - Type in speech
- All these are visible to other players visiting the room
- All these are visible in the back-end

#### MoodChart

- Players can see their MoodJournal input over a period time in a chart
- Players can Switch between the different signal types
- Players can scroll through the reported signals over time
- Players can see the times that they have skipped entering their journal
- Players can see the times they have used the emergency button

#### ChallengeTree

- Players can select a challenge
  - Players select referees (sponsors) from other players
  - Players can indicate that challenge is completed
- Other players can confirm or decline the player's indication
- Challenges are created in the back-end
- A challenge can be harvested
  - Harvested challenges add a percentage of DustBunnies to the player's current collection
- The status and number of challenges are visible to other players visiting the player's room

#### MoodTube

- Players can customize their MoodTube
  - Select music
  - Select images for animation
- Visible when other players visit the player's room

### MoodChips

- Players can create MoodChips while visiting other players' rooms
   Players can type messages to make a MoodChip
- Players can save or delete MoodChips sent by other players
  - Saved MoodChips are displayed on the MoodChipTicker

#### MoodChipTicker

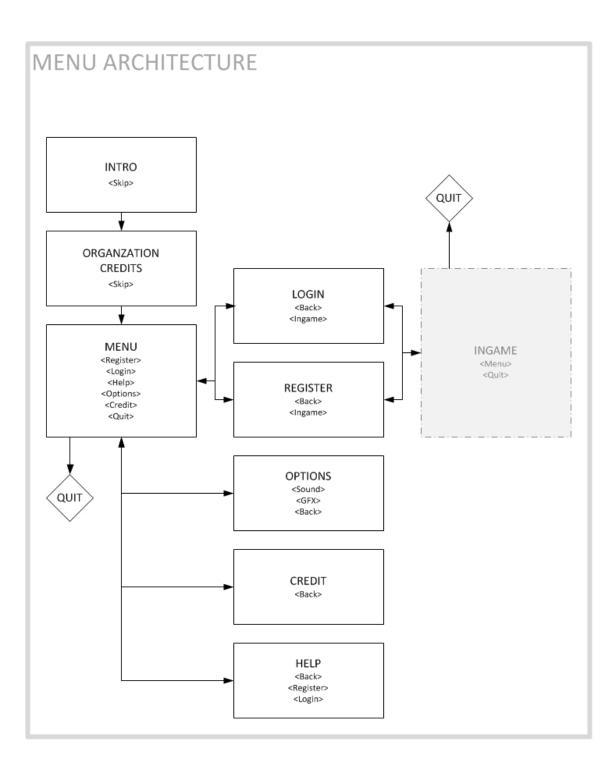
- Saved MoodChips are displayed on the MoodChipTicker
- Visible when other players visit the player's room

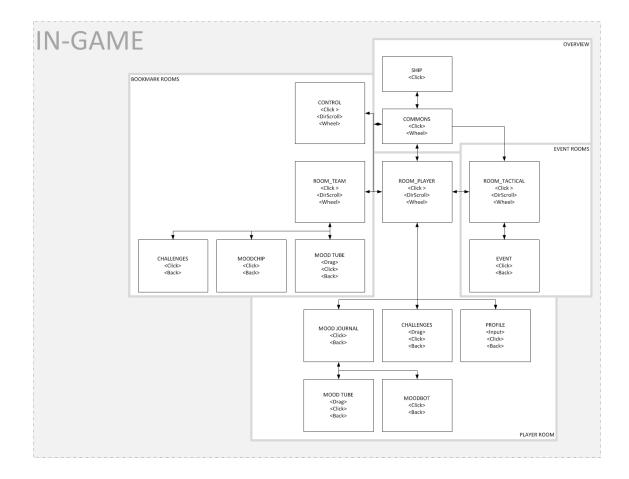
#### DustBunnies

- Players can collect DustBunnies via mini-game
- Players can see their current amount and amount remaining in the room
- Players can spend these in the TacticalRooms to control the SkyFish
  - Steering left or right
  - Moving forward

### SkyFishControl

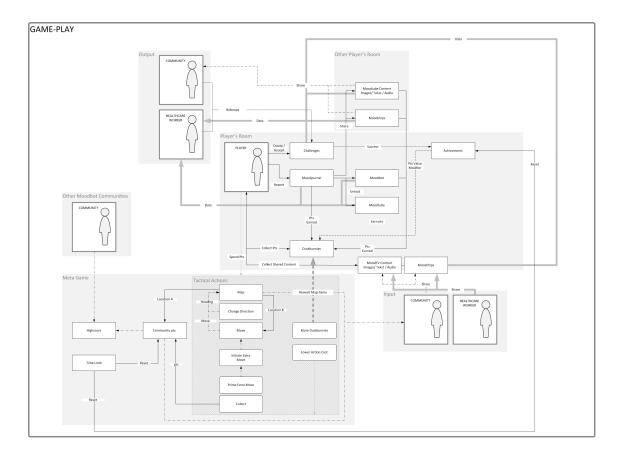
- Located in TacticalRooms
- Players can spend DustBunnies here to control SkyFish
  - Steering left or right
  - Moving forward
- Players can view their SkyFish's location on the WorldMap
- All players receive feedback when they reach a special location on the WorldMap
- All players receive feedback when their SkyFish as changed direction or position
- The player's MoodBot is then visible in the corresponding TacticalRoom to other players that visit the TacticalRoom





| Activity   | <b>Dustannies</b> | Notez   |  |  |  |  |  |  |  |  |  |
|--|-------------------|---|--|--|--|--|--|--|--|--|--|
| Player Room  |                   |   |  |  |  |  |  |  |  |  |  |
| Mondosmal  |                   |   |  |  |  |  |  |  |  |  |  |
| Habrice  | 4                 |   |  |  |  |  |  |  |  |  |  |
| Patio  | 0                 |   |  |  |  |  |  |  |  |  |  |
| Provet   | 2                 |   |  |  |  |  |  |  |  |  |  |
| Meedabe  | 2                 |   |  |  |  |  |  |  |  |  |  |
| Meodbet  | 2                 |   |  |  |  |  |  |  |  |  |  |
| Sharing  |                   |   |  |  |  |  |  |  |  |  |  |
| Monthabe image   | 2                 |   |  |  |  |  |  |  |  |  |  |
| Moodship   | 2                 |   |  |  |  |  |  |  |  |  |  |
| Mos diabe in age   |                   | If the player that receiver the image accepts it then there dust humber are availed the                           |  |  |  |  |  |  |  |  |  |
| Moodship<br>Moodstate in age<br>(accepted)<br>Moodship<br>(accepted) |                   | next game update.<br>If the player that receiver the monotohip accepts if then there dust burnies are awarded the |  |  |  |  |  |  |  |  |  |
|  |                   | next parts update.  |  |  |  |  |  |  |  |  |  |

| Action                 | Dust Bunny Cost           | Result  | Notes  |
|------------------------|---------------------------|---|--|
| Bridae                 |                           |   |  |
| Steering (left)        |                           | Skyfish turns left  | If one direction is paid for before another then the other<br>direction loses all dust bunnies allotted to it. |
| Steering (right)       | 15 x number of<br>players | Skyfish turns right   | If one direction is paid for before another then the other<br>direction loses all dust bunnies allotted to it. |
| Мар                    | 10 x number of<br>players | Map object revealed   | If the cost is paid then a new object is revealed on the<br>map.   |
| Engine Room            |                           |   |  |
| Movement               |                           | Skyfish moves 1 square forward                                  |  |
| Boost                  | 5 x number of<br>players  | Skyfish moves 1 additional<br>square forward                    | Boost must prime for 4 days before usable.   |
| Storage / Cistern Room |                           |   |  |
| Boost Primer           | 5 x number of<br>players  | Meter on the boost goes up an<br>extra level.                   | This reduces the number of days before boost is usable.  |
| Moodbud Harvest        | 30 x number of<br>players | The players' moodbud score<br>increases.                        |  |
| Entertainment Room     |                           |   |  |
| Oil Bar                | 5 x number of<br>players  | A mega dust bunny is released<br>some where in the Skyfish.     | The mega dust bunny is worth 10  |
| Entertainment          | 10 x number of<br>players | The value of all players' dust<br>bunnies value increase by 50% |  |



### Game Design > Player Elements >

# Ship- Navigation Specifications

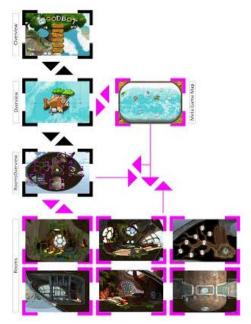
User Interface

**Description**. Ship navigation describes how the player access the various locations in the game Moodbot.

**Overview-** At this camera vantage the player can select the ship to zoom-in.

**RoomsOverview**- At this camera vantage the player can select the a room to zoom-in it. Exiting a RoomOverview returns the player to the *Overview* (which should include options to log out or go to meta game map).

**Room**- A room is a location in the game that the player can accomplish certain game actions. Exiting a room returns the player to the *RoomOverview*.



### Game Design > Player Elements >

## Room- Player

### Specifications

### **User Interface**

**Description:** The room is the player's personal space. Here the player can fill in his Moodjournal, customize his MoodDV, customize his Moodbot, collect Dust Bunnies, adjust his profile, and view and create challenges.

**Moodjournal:** The Moodjournal consists of 5 customizable dials/sliders, a preset option, skip option and emergency contact option. Other players are not able to see this information or access another player's moodjournal. The data from the moodjournal is however accessible to the healthcare worker. The moodjournal can be used more than once a day.

**Mood Dial:** The dial represents a scale between 1-5. **Text A:** Customizable text that represents a dial degree.

Text B: Customizable text that represents a dial degree.

Text Meaning: Customizable text that indicates the meaning of the scale.

Gradient Type: Starting position of the slider starts at one extent or the other of the scale.

Neutral Type: Starting position of the slider starts at 3 (center) of the scale.

Confirmation: Confirms that the player's action.

Past: Each dial has a way to indicate the previous day's set value.

Panic Button: A button that skips the moodjournal, sends a message to approved players and to the therapist.

Hotwire Button: Skips the moodjournal.

Previous Settings Button: Sets all dials to yesterday's settings.

Moodtube: Allows the player to customize a animation of images and sound. Other players are able to see and hear this when they visit the room.



Player Room



Moodjournal



Moodbot

Select Image: Allows the player to select from X amount of images and customize a animation consisting of 3 frames.

Select Audio: Allows the player to choose 1 audio track from a preselection of tracks.

Moodbot: Allows the player to customize a game avatar/character. Other players are able to see this customization when they visit the room.

Input Thought: Allows the player to type in a customizable text representing a thought.

Input Speech: Allows the player to type in a customizable text representing a speech.

Select Face: Allows the player to select a one face from a preselection.

Select Posture: Allows the player to select a one posture from a preselection.

Spirit Sapling: Allows the player to manage his/her personal challenges. The player can add and remove challenges, select three referees, and confirm their completion. This is not accessible by other players. Data is sent to the healthcare worker.

Personal Challenge: Personal challenges can range from a common everyday activity accomplished regularly to larger goals (i.e. such as finishing a study). A player is allowed to have 5 active challenges at one time.

Social Challenge: Selected to stimulate social activities.

Physical Challenge: Selected to stimulate physical challenges.

Daily Challenge: Selected to stimulate daily tasks.

Mental Challenge: Selected to stimulate a mental activity (i.e. planning or management of something)

Game Challenge: Selected to stimulate game activities.

Select Personal Challenge: Allows the player to select and add a personal challenge from a preselection of personal challenges.

Completing a Challenge: The player will need to select three referees before attempting to having the challenge completed acknowledged.

Referees: Three referees will be need to be selected by the



Spirit Sapling (a.k.a Challenge Tree)

player. Referees confirm that the player has completed a personal challenge. The player only needs a majority to have a challenge acknowledged as complete.

**Completing a Challenge:** Allows the player to indicate that the challenge is complete. A completed challenge adds a to the *dust bunny value modifier*.

**Dust Bunny Value Modifier:** This value modifies the value of the dust bunnies collected and spent in the tactical rooms. This allows the player to have more influence in the meta-game actions.

**Dust Bunnies Reward:** Represents X number of dust bunnies released into the game world after completing this action.

### Game Design > Player Elements >

# **Room-Tactical**

## Specifications

Description: In a tactical room the player can spend collected dustbunnies on a particular the meta game.

## Room Type: These are different location in the ship.

Bridge: The bridge is a location that allows players to steer the ship and dicover new location on the *meta map*. Engine: Recreation: Boiler:

Actions Type:

Steering:

Actions Cost:















Game Design > Player Elements >

**Room-Friends** 



Game Design > Meta Game Elements >

Мар





Game Design >

## **GD** Journal

### Design Update

posted Sep 11, 2012, 3:12 AM by Micah Hrehovcsik [updated Sep 11, 2012, 3:12 AM]

#### Changes:

- Game will become a coop game in place of competitive

- There is probably a need for time limit or story structure to accommodate the change
- Internal competition element will also me removed. This makes all player rooms the same.
- An extra action will occur in the game where players can direct their points, efforts or moodbot to a
- special location (room) in order to accomplish story-line challenges.

- The moodjournal will better integrated into the game-play structure

(Edit post)

### Return to eBuddy

posted Aug 6, 2012, 12:36 AM by Micah Hrehovcsik [updated Aug 6, 2012, 12:36 AM]

To-do:

- Needs play-testing
  - Concerned with the long term motivational effect of the game
- UI needs further elaboration
- A new iteration on the digital mock-up needs to occur

(Edit post)

### **UI Design Report**

posted Jul 20, 2012, 4:07 AM by Micah Hrehovcsik [updated Jul 20, 2012, 4:11 AM]

- Started on the UI because the paper prototype and first digital mock-up where ready.
- The first step was to create the menu architect and in game flow
- Creating the menu architecture offers a context for the game
- The following step will include a series of screen mock-ups of the UI
- Creating the mock-up series provides the artist with the game/interaction information needed to design
- the interface around
- At some point after this the UI needs to under go a playtest
- It is inevitable that the UI will need to change and be refined we make new design decissions

#### (Edit post)

1-3 of 3

# Game Story Overview

Subpage Listing

Back Story

<u>Skysle Forja</u> Show and island with a loft of industry and a place where a more robot moodbot is assembled.

Posted Nov 16, 2012, 1:36 AM by Micah Hrehovcsik <u>Dustbunnies</u> Show moodbots running around collecting and using dustbunnies on a skyfish. Posted Nov 16, 2012, 1:34 AM by Micah Hrehovcsik <u>Skyisle d'agua</u> Show moodbots collecting water

and watering a large spirit tree. Posted Nov 16, 2012, 1:32 AM by Micah Hrehovcsik

**Evolution of the Skyphib** The moobot and sapling spirit tree become one and become a Skyphib.

Posted Nov 16, 2012, 1:31 AM by Micah Hrehovcsik
Planetology A look at how the skyfish relates to the
planet.

Posted Nov 16, 2012, 1:29 AM by Micah Hrehovcsik Showing posts 1 - 5 of 7. <u>View more »</u> Game Story Overview >

## **Back Story**

#### Moodbot Mythology

Endless Sky- (a.k.a. Horizon) is world of air. The air pressure becomes so great on this world that its inhabitants can swim through the air. Clouds become so dense that they can support earth like islands.

Skysles- are islands made of petrified clouds where Moodbots can find Spirit Seeds, water and Moodbot parts.

- Skysle d'agua- are large lakes of water supported by petrified clouds.
- Skysle tierra- are made up of mostly earth and trees. Skysle forja- are made up of industrial and mechanical workshops.

Skysle diario- have a monument with clues to the histories of the Moodbots and knowledge of Endless Sky.

**Moodbuds**- are the first stage of the Moodbot and Spirit Tree symbiosis. Moodbuds can be found on Skysles or sometimes fall from a Skyfish's Spirit Tree.

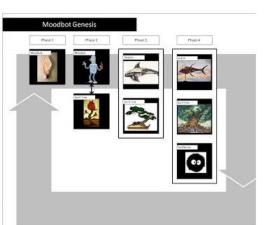
**Moodbots**- are the second stage of the Moodbot and Spirit Tree symbiosis. In this stage the Moodbot and Spirit Tree are separated. The task of the Moodbot is to upkeep their own Spirit Tree, the Skyfish's Spirit Tree and collect Dust Bunnies that help guide the Skyfish through the Endless Sky in order to find Moodbuds, water and Moodbot parts.

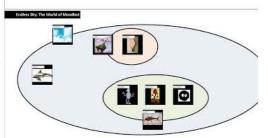
Spirit Tree- Spirit Trees start off as a part of the Moodbuds. In the second stage of the Moodbot and Spirit Tree symbiosis the Spirit Tree is separated from the Moodbot. Spirit Trees represent the preciousness of life, nature and energy. Spirit Trees eventually from the care of the Moodbots reform their symbiosis with the Moodbot to become a Skyphib. Skyphibs eventually evolve into Skyfish.

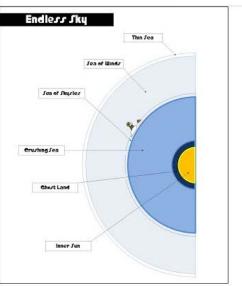
**Skyfish**-Skyfish are the last stage of the Moodbot and Spirit Tree symbiosis. In this stage a Skyfish can have a whole community of moodbots that is provides shelter to.

**Skyphibs**- Skyphibs are the third stage of the Moodbot and Spirit Tree symbiosis. These are smaller than Skyfish and play in the sky like dolphins. Skyphibs are not large enough to shelter Moodbots.

**Dust Bunny**- Dust Bunnies are the life blood of the Skyfish and need to be collected each day by the Moodbots in order







to help the Skyfish to continue on their mission. Dust Bunnies are shy in nature and will hide just about anywhere. Moodbots have learned that being activate is the best way to scare them out into the open. Moodbots with strong Spirit Trees will attract Dust Bunnies out into the open.

## **Moodbot Annals**

### Skysle Forja

posted Nov 16, 2012, 1:36 AM by Micah Hrehovcsik [updated Nov 16, 2012, 1:36 AM]

Show and island with a loft of industry and a place where a more robot moodbot is assembled.

(Edit post)

#### **Dustbunnies**

posted Nov 16, 2012, 1:34 AM by Micah Hrehovcsik

Show moodbots running around collecting and using dustbunnies on a skyfish.

(Edit post)

## Skyisle d'agua

posted Nov 16, 2012, 1:32 AM by Micah Hrehovcsik

Show moodbots collecting water and watering a large spirit tree.

(Edit post)

## **Evolution of the Skyphib**

posted Nov 16, 2012, 1:31 AM by Micah Hrehovcsik

The moobot and sapling spirit tree become one and become a Skyphib.

(Edit post)

### **Planetology**

posted Nov 16, 2012, 1:29 AM by Micah Hrehovcsik

A look at how the skyfish relates to the planet.

(Edit post)

#### **Separation**

posted Nov 16, 2012, 1:27 AM by Micah Hrehovcsik [updated Nov 16, 2012, 1:27 AM]

The moodbot and sapling spirit tree are separated. The moodbot is sad.

(Edit post)

# Harvesting Moodbuds

posted Nov 16, 2012, 1:20 AM by Micah Hrehovcsik

The moodbots harvest moodbuds from a spirit tree.

(Edit post)

1-7 of 7

# Game Issues

Showing 88 items

| Version    | Issue Type    | Description   | Priority | Fixed | Date |
|------------|---------------|---|----------|-------|------|
| Sort       | Sort          | Sort  | Sort     | Sort  | Sort |
| Moodbotv4  | Game Mechanic | Customize<br>moodbot color.   | Wish     |       |      |
| Moodbotv4  | Game Art      | Special cursor<br>when<br>dustbunnies are<br>running around.  | Wish     |       |      |
| Moodbotv10 | Game Copy     | Some of the<br>tutorial texts need<br>to be turned off<br>after the first time.<br>Can this be<br>added to the<br>options?          | Wish     |       |      |
| Moodbotv27 | Play Mechanic | There needs to<br>be a indication as<br>to how many of<br>the player's<br>referees have<br>confirmed their<br>challenge<br>success. | Should   |       |      |
| Moodbotv26 | Game Layout   | Pop-up with text<br>larger.   | Should   |       |      |
| Moodbotv26 | Game Mechanic | Challenge fruit<br>need to be more<br>obvious.  | Should   |       |      |
| Moodbotv26 | Play Mechanic | Challenge fruit<br>icon can show up<br>over the<br>challenge tree.  | Should   |       |      |
| Moodbotv26 | Play Mechanic | Moodchip icon<br>can appear over<br>moodbot.  | Should   |       |      |
| Moodbotv15 | Interaction   | Moodjournal<br>meters need to<br>have their start<br>point<br>customizable.   | Should   |       |      |
| Moodbotv8  | Interaction   | Exit in-game /  | Must     |       |      |

|            |               | logout  |      |
|------------|---------------|---|------|
| Moodbotv27 | Play Mechanic | Last updated<br>time. And time<br>before new dust<br>bunnies will<br>appear.  | Must |
| Moodbotv27 | Game Layout   | The engine<br>room's view<br>needs to be<br>adjusted to<br>capture the<br>moodbot's<br>enterance.                     | Must |
| Moodbotv27 | Bug           | Meta map game<br>dead end.  | Must |
| Moodbotv27 | Bug           | Animation of the<br>player's moodbot<br>does not function<br>upon returning to<br>the player's<br>room.               | Must |
| Moodbotv26 | Interaction   | Intro messages<br>only shown the<br>first time you play<br>the game.  | Must |
| Moodbotv26 | Play Mechanic | Player login<br>timestamp.  | Must |
| Moodbotv26 | Bug           | Challenge<br>messages work<br>only sometimes.   | Must |
| Moodbotv26 | Play Mechanic | The central island<br>needs to be on<br>the map. When<br>the players reach<br>the island a<br>animation is<br>played. | Must |
| Moodbotv26 | Game Mechanic | Server wide<br>message needs<br>to be sent when<br>the ship takes a<br>new action.                                    | Must |
| Moodbotv25 | Game Layout   | Moodgraph return button invisible.  | Must |
| Moodbotv15 | Bug           | Meta game<br>steering & moving<br>forward do not<br>function  | Must |

| Moodbotv15 | Game Copy               | The copy needs<br>an update.  | Must  |
|------------|-------------------------|---|-------|
| Moodbotv15 | Game-play<br>Experience | The Meta game<br>needs to be<br>polished<br>(Indication where<br>the players are,<br>last move, current<br>moves, etc.)     | Must  |
| Moodbotv8  | Interaction             | Need select-able<br>effect on the<br>doors of the<br>commons.   | Could |
| Moodbotv4  | Interaction             | Graph should<br>show different<br>colors for different<br>actions (e.g.<br>hotwire & panic)                                 | Could |
| Moodbotv4  | Interaction             | Have the ability to<br>scroll through the<br>"other" player<br>rooms.   | Could |
| Moodbotv27 | Game Layout             | The challenge<br>tree options<br>needs to be<br>arranged<br>elsewhere.  | Could |
| Moodbotv27 | Bug                     | Moodgraph does<br>not update the<br>first mood-signal<br>until after<br>changing back<br>from other mood-<br>signals.       | Could |
| Moodbotv26 | Play Mechanic           | Moodchips<br>should be<br>represented as<br>tokens in a row.  | Could |
| Moodbotv26 | Game Mechanic           | Moodticker needs<br>to delete<br>moodchips after x<br>amount of time.   | Could |
| Moodbotv26 | Game Mechanic           | If a player's<br>moodchip is<br>excepted the<br>player receives 1<br>extra moodchip<br>the text login. We<br>need a message | Could |

| Moodbotv26 | Game Layout   | to tell the player<br>this is<br>happening.<br>The challenge<br>tree can moved to<br>the side.   | Could |   |
|------------|---------------|--|-------|---|
| Moodbotv12 | Game Mechanic | The moodchip<br>ticker does not<br>update right away<br>after accepting or<br>denying a<br>moodchip.   | Could |   |
| Moodbotv10 | Game Layout   | Moodchip needs<br>to be turned off at<br>moodjournal<br>level.   | Could |   |
| Moodbotv8  | Interaction   | Update the way<br>the text is entered<br>for the speech<br>and thought of the<br>moodbot   | Wish  | ~ |
| Moodbotv8  | Bug           | Blinking object in<br>the bottom left<br>corner. Looks like<br>an hour glass.<br>Happens in all<br>rooms (except<br>other player's<br>room) and<br>overview of the<br>ship | Wish  | ~ |
| Moodbotv8  | Game Audio    | ls there a mouse click sound?  | Wish  | ~ |
| Moodbotv8  | Interaction   | When the trunk is<br>clicked for the first<br>time turn off the<br>shine   | Wish  | ~ |
| Moodbotv8  | Bug           | The gui elements<br>from the list of<br>player referees<br>stays visible if you<br>do not select one<br>even you exit the<br>challenge tree.                               | Wish  | ~ |
| Moodbotv15 | Game Mechanic | Allow challenge<br>tree fruit to be<br>picked and at a %<br>bonus to current<br>dustbunnies.   | Wish  | ~ |

| Moodbotv12 | Bug           | If exiting a tactical<br>challenge the gui<br>elements remains<br>visible into the<br>view of the ship.                          | Wish   | ~            |
|------------|---------------|--|--------|--------------|
| Moodbotv8  | Game Mechanic | ls the audio<br>properly<br>implemented?   | Should | $\checkmark$ |
| Moodbotv8  | Game Mechanic | Moodjournal<br>meters could be<br>high-lighted to<br>indicate they are<br>clickabale   | Should | ~            |
| Moodbotv4  | Interaction   | Moodbots seen<br>by other players<br>in a tactical<br>location can click<br>on these players<br>to see them in<br>their room.    | Should | ~            |
| Moodbotv8  | Interaction   | Dustbunny &<br>modchip HUD<br>element should<br>show the<br>available<br>dustbunnies<br>available in the<br>mini-game<br>moments | Must   | ~            |
| Moodbotv8  | Game Mechanic | Clicking on a fruit<br>from the<br>challenge tree<br>delets it and adds<br>a bonus to the<br>current<br>dustbunnies.             | Must   | ~            |
| Moodbotv8  | Interaction   | Leaving the<br>player commons<br>should bring you<br>back to the<br>overall ship view<br>not the player's<br>room.               | Must   | ~            |
| Moodbotv4  | Interaction   | Challenge tree<br>needs to send out<br>messages to the<br>referees.<br>Referees need to  | Must   | ~            |

|            |               | confirm or negate<br>the completion of<br>the challenge.  |      |                      |
|------------|---------------|---|------|----------------------|
| Moodbotv17 | Bug           | After returning to<br>from the<br>commons the<br>camera system<br>tracks all rooms<br>visited and then<br>runs that<br>sequence when<br>you return to your<br>room. | Must | ~                    |
| Moodbotv15 | Game Layout   | Giving moodchip   | Must | ×                    |
| Moodbotv15 | Bug           | Challenge tree<br>changes do not<br>save  | Must | ~                    |
| Moodbotv15 | Game Copy     | Insert<br>confirmation<br>before linking to<br>another player's<br>room from that<br>player's bot   | Must | ~                    |
| Moodbotv15 | Bug           | Other player's<br>music not played<br>in their room.  | Must | <ul> <li></li> </ul> |
| Moodbotv15 | Bug           | Player's music not saved.   | Must | ~                    |
| Moodbotv15 | Game Mechanic | The dustbunny<br>game is broken in<br>other player's<br>room.   | Must | ~                    |
| Moodbotv15 | Bug           | Challenge tree<br>does not save<br>new challenges.  | Must | ~                    |
| Moodbotv15 | Bug           | Player does not<br>receive<br>moodchips.  | Must | $\checkmark$         |
| Moodbotv15 | Interaction   | Moodjournal<br>meter selection<br>feels clunky  | Must | ~                    |
| Moodbotv15 | Bug           | Moodjournal<br>graph doesn't<br>display correct<br>info.  | Must | ~                    |
| Moodbotv15 | Bug           | Other player's<br>moodbot in other<br>player's room   | Must | ~                    |

|            |                         | needs posture   |      |   |
|------------|-------------------------|---|------|---|
| Moodbotv15 | Bug                     | Moodtube<br>changes do not<br>save  | Must | ~ |
| Moodbotv15 | Game Layout             | The challenge<br>tree is in the way<br>of the moodbot<br>GUI  | Must | × |
| Moodbotv15 | Bug                     | Changes to<br>moodbot (face,<br>posture, speech,<br>thought)  | Must | ~ |
| Moodbotv15 | Bug                     | Moodchip ticker.  | Must | × |
| Moodbotv12 | Bug                     | Animation<br>posture issue<br>when returning to<br>your room after<br>visiting other<br>player's room.  | Must | ~ |
| Moodbotv12 | Game Mechanic           | The map no<br>longer displays<br>ship and<br>locations.   | Must | ~ |
| Moodbotv12 | Bug                     | There are several<br>issues with the<br>moodjournal<br>meters.  | Must | ~ |
| Moodbotv12 | Game-play<br>Experience | The "other"<br>player's rooms<br>need to be<br>revised. The<br>dustbunny game<br>is broken.<br>Challenge tree is<br>missing. "Other"<br>player moodbot<br>needs to be<br>centered. The<br>moodjournal can<br>be removed.<br>Animation of<br>player entering<br>room needs to be<br>implemented. | Must | ~ |
| Moodbotv11 | Bug                     | List of available<br>player rooms is<br>cut off.  | Must | ✓ |
| Moodbotv10 | Game Layout             | Change  | Must | ~ |

|            |                         | Navigation<br>Challenge HUD<br>layout & icons in<br>Bridge Room<br>(see REF &<br>yammer for<br>reference)  |       |   |  |
|------------|-------------------------|--|-------|---|--|
| Moodbotv10 | Bug                     | Players do not<br>receive<br>moodchips.  | Must  | ~ |  |
| Moodbotv10 | Game Layout             | Reposition<br>Navigation<br>Challenge<br>Camera in the<br>Bridge Room<br>(see REF &<br>yammer for<br>reference)  | Must  | ~ |  |
| Moodbotv10 | Game Art                | Replace all<br>Challenge lcons<br>with the right<br>ones (see REF) &<br>resize them<br>(about half<br>smaller)   | Must  | ~ |  |
| Moodbotv8  | Game-play<br>Experience | Option page<br>needs to be<br>implemented  | Could | ~ |  |
| Moodbotv8  | Interaction             | On the challenge<br>tree the fruits<br>should grow as a<br>co-players agree<br>that the challenge<br>has been met.   | Could | ~ |  |
| Moodbotv4  | Game Layout             | resize thought<br>and speech<br>clouds.  | Could | ~ |  |
| Moodbotv15 | Game Layout             | The gui element<br>title for the<br>moodjournal<br>meter should<br>have different<br>location so it is<br>more related to<br>the meter and not<br>in front of the<br>other meters. | Could | ~ |  |
| MoodbotV13 | Game Layout             | Player's name tag<br>needs to be   | Could | ~ |  |

|            |             | moved to a<br>position over the<br>room.  |       |                       |
|------------|-------------|---|-------|-----------------------|
| MoodbotV13 | Game Layout | Adjust bouncing<br>arrow over other<br>player's moodbot<br>in his her room.                                     | Could | ✓                     |
| Moodbotv12 | Bug         | Dustbunny<br>capture doesn't<br>work very well.   | Could | <ul> <li>✓</li> </ul> |
| Moodbotv12 | Bug         | After logging-in<br>the tree-leaves<br>boarder fades<br>out. It should not<br>be seen at all.                   | Could | ✓                     |
| Moodbotv12 | Game Art    | Visual elements<br>for the graph such<br>as the mood<br>select buttons,<br>slider and terug<br>button need gfx. | Could | *                     |
| Moodbotv12 | Game Audio  | At the moodtube,<br>selecting music<br>track is is buggy.   | Could | ×                     |
| Moodbotv12 | Game Layout | Cull challenge<br>tree from view<br>when zoomed in<br>on the moodbot.   | Could | ×                     |
| Moodbotv12 | Bug         | Fix moodtube.<br>There is a<br>database issue.  | Could | ×                     |
| Moodbotv10 | Game Layout | Moodchip text-<br>ticker should only<br>bee seen at<br>player room<br>level.                                    | Could | ~                     |
| Moodbotv10 | Game Layout | Moodchip ticker<br>needs to be<br>turned off at the<br>ship level view.   | Could | ×                     |
| Moodbotv10 | Game Layout | The player's<br>name tag should<br>not be shown<br>when the player<br>is looking at his<br>moodjournal.         | Could | *                     |

Showing 88 items

# **APPENDIX P**



Moodbot\_Questionnaire

**Content:** Portable Document Format, 2 pages

Language: Dutch

**Description:** The questionnaire template used during play-tests to gather data from patients and healthcare workers. The template uses both quantitative and qualitative questions.

#### Moodbot test bij Altrecht ABC

Hieronder staan een aantal stellingen over het gebruik van Moodbot zoals je dit hebt ervaren de afgelopen twee weken. Door het juiste getal achter de stelling te omcirkelen kun je aangeven in hoeverre je het eens bent met de stelling. De getallen gaan van **"1-helemaal niet eens"** naar **"5-helemaal eens"**.

| х. | Voorbeeld                                     | 1                | 2 | 3        | (4)      | 5        |
|----|---|------------------|---|----------|----------|----------|
|    |   |                  |   |          | $\smile$ |          |
|    |   | helemaal         |   | neutraal |          | helemaal |
|    |   | <i>niet</i> eens |   |          |          | eens     |
| 1. | lk vond de besturing van Moodbot<br>makkelijk | 1                | 2 | 3        | 4        | 5        |
| 2. | Ik begreep meteen hoe ik verder               | 1                | 2 | 3        | 4        | 5        |
|    | kon komen / punten kon verdienen              |                  |   |          |          |          |
| 3. | Ik begrijp waarvoor de metingen in            | 1                | 2 | 3        | 4        | 5        |
|    | Moodbot worden gemaakt                        |                  |   |          |          |          |
| 4. | Ik vind het een nuttige toevoeging            | 1                | 2 | 3        | 4        | 5        |
|    | aan mijn therapie                             |                  |   |          |          |          |
| 5. | Ik kreeg met Moodbot beter zicht              | 1                | 2 | 3        | 4        | 5        |
|    | op mijn eigen situatie                        |                  |   |          |          |          |
| 6. | Ik kwam met Moodbot meer in                   | 1                | 2 | 3        | 4        | 5        |
|    | contact met anderen                           |                  |   |          |          |          |

Hieronder staan een aantal "ja / nee" vragen. Omcirkel het antwoord dat voor jou juist is.

|   | 7. | Was je aanwezig bij de start op 21 januari?   | ja / nee |
|---|----|---|----------|
|   | 8. | Zou je Moodbot nog een keer willen gebruiken? | ja / nee |
| Γ | 9. | Zou je Moodbot aanraden?                      | ja / nee |

Als laatste nog een paar open vragen.

| Hoeveel tijd heb je per dag gemiddeld besteed aan Moodbot?                              |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|
| Als je één ding zou mogen vertellen over je ervaring met Moodbot, wat zou dat zijn?     |  |  |  |  |  |  |  |  |  |
| 11. Als je één ding zou mogen vertellen over je ervaring met Moodbot, wat zou dat zijn? |  |  |  |  |  |  |  |  |  |
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|   |  |  |  |  |  |  |  |  |  |
| Wil je nog iets kwijt over jouw ervaring met Moodbot?                                   |  |  |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |  |  |
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### Moodbot test bij Altrecht ABC – begeleider

|       |   | helemaal      |           | neutraal     |              | helemaal |  |  |  |
|-------|---|---------------|-----------|--------------|--------------|----------|--|--|--|
|       |   | niet eens     |           | neuruu       |              | eens     |  |  |  |
| 1.    | Ik heb het gevoel met Moodbot                                       | 1             | 2         | 3            | 4            | 5        |  |  |  |
|       | meer efficiënt te kunnen werken                                     | -             | -         | 5            |              |          |  |  |  |
| 2.    | De informatie die ik met Moodbot                                    | 1             | 2         | 3            | 4            | 5        |  |  |  |
|       | krijg is relevant   |               |           |              | ~            | -        |  |  |  |
| 3.    | Ik vind Moodbot een nuttige   | 1             | 2         | 3            | 4            | 5        |  |  |  |
|       | toevoeging aan therapie   | _             | _         |              |              |          |  |  |  |
| 4.    | lk kreeg met Moodbot meer   | 1             | 2         | 3            | 4            | 5        |  |  |  |
| 24.55 | overzicht op mijn cliënt(en)  | 100           | 327.549   | 100000       | 22           | 2.54     |  |  |  |
|       | 1 (h  |               |           |              |              |          |  |  |  |
| 5.    | .   Was je aanwezig bij de start op 21 januari? ja / nee            |               |           |              |              |          |  |  |  |
| 6.    | Zou je Moodbot nog een keer willen                                  | gebruiken?    |           | ja / nee     | ja / nee     |          |  |  |  |
| 7.    | Zou je Moodbot aanraden aan ander                                   | e hulpverler  | ners?     | ja / nee     | ja / nee     |          |  |  |  |
| 8.    | Geef met een rapportcijfer aan hoe gebruiksvriendelijk de           |               |           |              |              |          |  |  |  |
|       | besturing was (met name de back-end)                                |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
| 9.    | Hoeveel tijd heb je per dag gemidde                                 | ld besteed a  | an Moodb  | ot?          |              |          |  |  |  |
| 10.   | Als je één ding zou mogen vertellen                                 | over je ervar | ing met M | loodbot, wat | zou dat zijn | ?        |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
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|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
| 11.   | Hoe zou je jouw rol in Moodbot omschrijven?                         |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
| 12.   | Was er iets in de besturing van Moodbot dat uitgesproken goed was?  |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
| 13.   | Was er iets in de besturing van Moodbot dat uitgesproken beter kan? |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
| 14.   | Wil je nog iets kwijt over jouw ervaring met Moodbot?               |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |
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|       |   |               |           |              |              |          |  |  |  |
|       |   |               |           |              |              |          |  |  |  |

# **APPENDIX Q**



DesignState \_7\_Digital\_1.1

Content: video 6 minutes 34 seconds

Language: English

**Description:** The results from Iteration 7 (see figure 8 pg. 43) is a digital prototype of the paper prototype of Iteration 7.

# **APPENDIX R**



DesignState 7 Digital 1.2

Content: video 24 minutes 24 seconds

Language: English

Description: The results of Design State 7 play-test with co-designers.

# **APPENDIX S**



DesignState 7 Digital 1.3

Content: video 1 minute 51 seconds

Language: English

**Description:** The results of a digital prototype for a mini-game for Design State 7.

# APPENDIX T



DesignState 7\_Social

Content: video 4 minutes 15 seconds

Language: English

**Description:** The results of the digital hybrid that demonstrated and tested the social game mechanics.

# **APPENDIX U**



DesignState\_7\_Paper\_Playtest

Content: Portable Document Format, 22 pagesLanguage: Dutch w/ English TranslationDescription: A collection of notes and images taken during an extensive internal play-test.

Upscale paper Prototype

<u>Problems now</u> Cards in rooms. --- Te weinig Rooms --- create more rooms Goals --- checking Singalisatie --

# <u>Solving</u>

Cards – print 9\* all cards? Rooms – 9rooms / 4 -- 5 teams Goals - getting goals from others / setting up main goal Signalisatie – getting own signalisatie Race – <u>Points</u> Making room ЗP Filling in signalatie ЗP Giving moodchip 1P Giving moodchip other ship ЗP Give other room picture 1P Goals points check goals

# <u>Goals</u>

Goals over time

| 1D: Goals done in 1 day // Person to confirm 1// | 5P  |
|--|-----|
| 2D: Goals done in 2 day // Person to confirm 2// | 10P |
| 3D: Goals done in 3 day // Person to confirm 3// | 20P |
| 4D: Goals done in 4 day // Person to confirm 3// | 35P |
| Points in goals give boost halfway in the race.  |     |
|  |     |

Length goal +1D = -4P

Other things to do with Goals

Giving badges/ how long before bored

Goals give life to tree. Every goal gives amount of energie to the tree. This tree will give your ship a flowerd look. exponentional points lost in amought of gain.

Customize ship. If customization is free creation maybe. Else to little of impact

Goals:

| 1.  | Get coffee for everybody                  | 5P  |
|-----|---|-----|
| 2.  | Bring a cake to work                      | 50P |
| 3.  | Give a handshake welcome in the morning   | 10P |
| 4.  | Give a complement to 3 people             | 30P |
| 5.  | Massage someone                           | 50P |
| 6.  | Give inspiration to someone               | 20P |
| 7.  | Give your team a pep talk                 | 30P |
| 8.  | Hang up a funny team picture in your ship | 30P |
| 9.  | Make a funny picture when you at work     | 10P |
| 10. | Make a poem for the other team            | 20P |
|     |   |     |

Give tree life. If the tree gets 100P he grows one stage. If the tree starts a new fase it unlocks the use of more pictures in your chamber.

## Race

Time : 5 weeks

Boost at: 1W 3D and 3W and 4 3D

Goals need to be verified for boost to count

Boost stay for next race or next boost

Length goal +1D = -4P

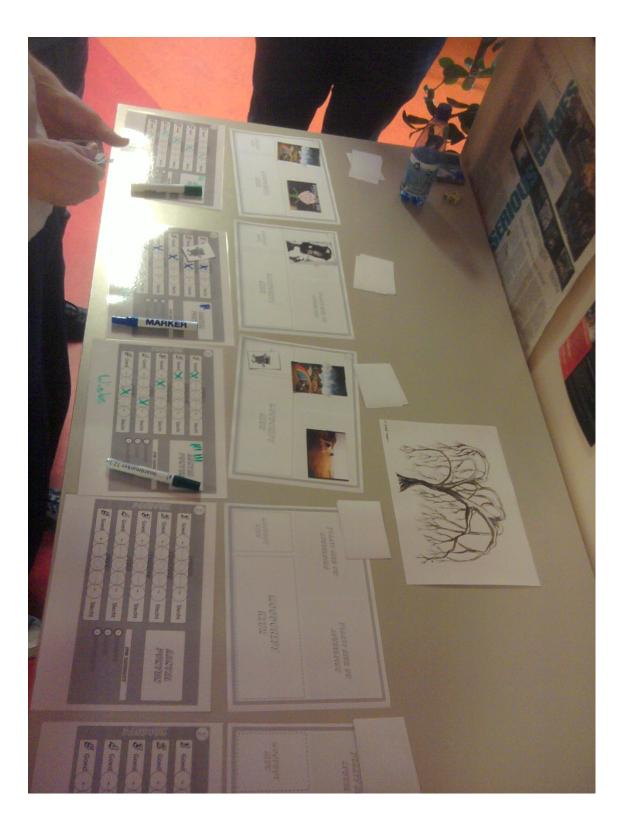
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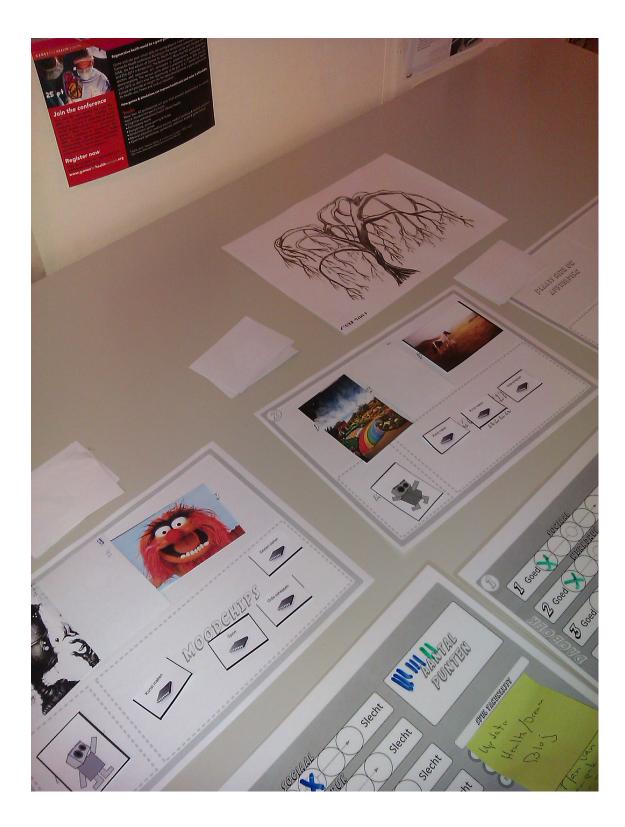
Ships 2 steampunk big Trees states Planets/ worlds for finnish milestones



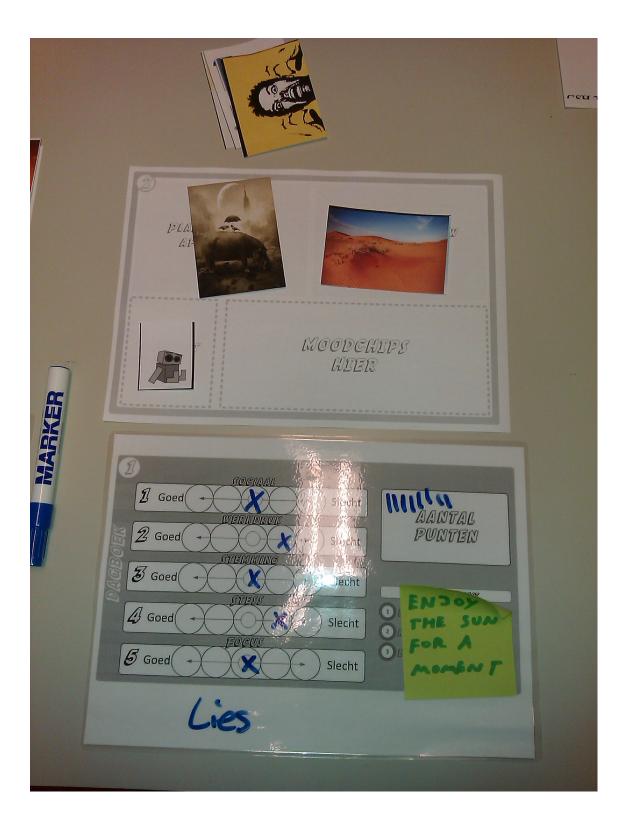








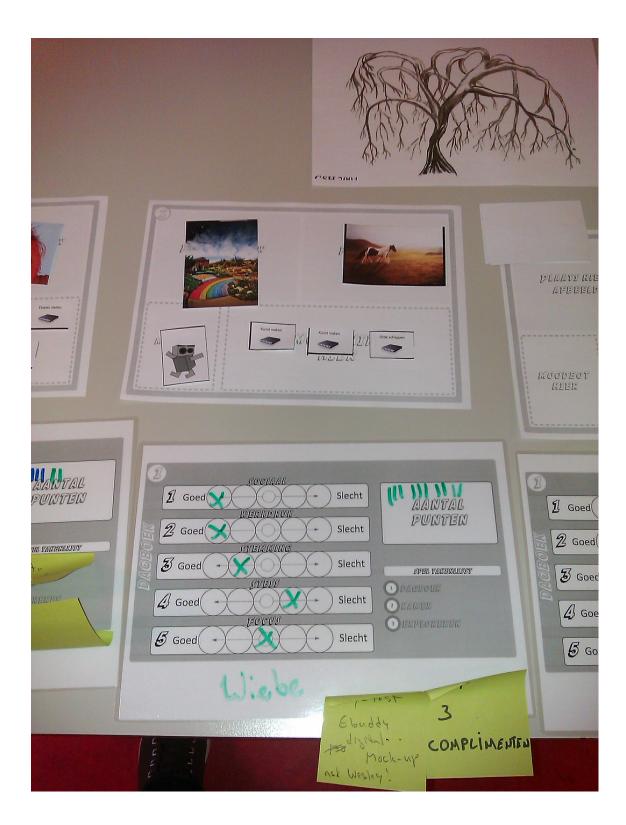
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## Verslag playtest 'Moodbot' bij ABC, 13-6-12 LvR

Aanwezig:

Medewerkers ABC: Fred, Tom, Tonny, Sabine, Jolanda Cliënten: Miriam, Chester, twee jongens HKU/AGD: Micah, Wesley, Lies (excuses als alle namen niet helemaal correct zijn)

Miriam en Jolanda hebben ongeveer 15 minuten het spel gespeeld, waarbij Micah speluitleg gaf en Wesley als 'computer' fungeerde. Hierna hebben de aanwezigen ongeveer een uur gepraat over de mogelijkheden en moeilijkheden van het huidige prototype. Hieronder heb ik per thema de feedback/input uitgewerkt.

### Kamers:

Het dagelijks een kamer bijhouden die de stemming weergeeft spreekt de case managers erg aan dat. Uiteindelijk kan dit een beeld over tijd geven van de ontwikkeling van de cliënt, zonder dat hij/zij daarvoor elke dag in een schriftje hoeft te schrijven.

Chester geeft aan het ook fijn te vinden op deze indirecte manier over zijn stemming te communiceren: "ik ga niet zelf aan de bel trekken, maar vind het wel fijn als de behandelaar in mijn kamer ziet dat ik me slecht voel en dan naar mij toe komt".

## Suggestie:

Het zou ook leuk zijn als de kamers enkele vaste elementen kunnen hebben, favorieten o.i.d. Dus wel per dag een weergave van de stemming, maar ook enkele afbeeldingen die de cliënt er permanent in wil hebben, om de kamer echt eigen te maken.

# Teamsamenstelling

Hoe gaan de teams samengesteld worden? Optie is om teams te maken van cliënten die in dezelfde fase van behandeling zitten. Hierdoor hebben ze vergelijkbare doelen, maar het is ook mooi als de cliënten die verder zijn, de anderen mee kunnen trekken. Dit zou dus juist een meer gevarieerde samenstelling vragen. Ook de vraag is of de teams voor lange tijd hetzelfde blijven of – bijvoorbeeld wekelijks – wisselen. Dit is nog nader te bepalen in een later stadium van de ontwikkeling.

Het spel moet in elk geval ook samen te spelen zijn met cliënten die ambulant zijn. Ook moet het uitnodigen tot Real Life interactie buiten het spel.

### Suggestie:

De aard van de doelen die mensen zich stellen en de afbeeldingen zouden mensen met dezelfde interesses bij elkaar kunnen brengen. Als bijvoorbeeld blijkt dat twee cliënten beide meer willen gaan voetballen, kunnen ze eens afspreken om een potje te gaan voetballen of er samen over te praten.

### Signalen

Hoe de signalen te formuleren? Dit moet wel eenduidig zijn. Dus als achterdocht 'hoog' staat, betekent dit dan dat de cliënt heel achterdochtig is of juist niet? Dit moet in een latere fase van het ontwerp uitgewerkt worden.

### Afbeeldingen

Het moet duidelijk zijn voor de behandelaar welke afbeeldingen een gemoedstoestand weergeven en welke een gewenste toestand weergeven ('ik voel me heel rustig' versus 'ik wilde dat ik meer rust had').

Het zou leuk zijn als je veel keuze hebt wat betreft de afbeeldingen die je zelf in je kamer plaatst of aan anderen kunt geven. Dus niet een beperkte set plaatjes, maar de cliënt moet ook zelf kunnen tekenen of googelen naar plaatjes.

### Suggestie:

Dit zou iets kunnen zijn dat je moet verdienen: een *achievement* die je later *unlockt*. Ook werden andere mediavormen geopperd als iets dat je later kunt verdienen, zoals audio en film.

## **Doelen:**

Hoe ver vooruit moeten de doelen geformuleerd worden? Moeten de doelen in categorieën worden ingedeeld? Dit zou kunnen om suggesties te geven voor de doelen waar je aan kunt denken. (Miriam ziet niet waarom je dan niet gewoon in tekst wat suggesties kunt geven, ik persoonlijk ben het hiermee eens.)

Hoe worden doelen gecontroleerd? => kan behandelaar afvinken.

Een moeilijkheid bij de (sub)doelen kan wel zijn dat ze erg persoonlijk zijn.

#### Suggestie:

Het team kan het andere team en/of een eigen teamgenoot uitdagen om bepaalde doelen te verwezenlijken. Het team kan samen nadenken over wat een haalbaar en toch uitdagend doel voor een teamgenoot zou kunnen zijn. De cliënt zelf kan hier ook nog over onderhandelen. Deze feature zou betekenen dat er ook een communicatiefunctie, zoals chat, in het spel moet komen.

#### Suggestie:

Ook real life doelen erin verwerken. Het ene team kan bijvoorbeeld het andere team uitdagen tegen elkaar te basketballen en de winnaar krijgt punten.

### Suggestie:

De cliënt kan zelf zijn/haar einddoelen aangeven, de andere spelers kunnen dan subdoelen voor deze cliënt bedenken.

# Rol behandelaar

De behandelaar wil meer kunnen doen dan alleen Big Brother spelen, ook al geven de cliënten aan hier geen moeite mee te hebben. De behandelaar wil een actieve(re) rol in het spel in kunnen nemen. Toch is juist het idee dat het voor de behandelaar niet teveel tijd moet kosten. Het 'efficiënt' mee kunnen kijken is één van de doelen van het spel, om zo meer inzicht in de dagelijkse toestand van de cliënt te krijgen dan met het huidige systeem het geval is.

# Test 1

• Sliders

| 0 | Passief       | 'niet zo passief', | slider net onder het midden |
|---|---------------|--------------------|-----------------------------|
| 0 | Gefocusseerd  | 'omdat ik dit doe' | slider net boven het midden |
| 0 | Kalm          |                    | slider in het midden        |
| o | Zelfverzekerd |                    | slider net boven het midden |
| о | Inactief      |                    | slider net onder het midden |

Deze testpersoon interpreteerde het midden van de slider als normale/gemiddelde staat, relatief ten opzichte van gisteren.

- Robot instellen
  - o Stelt de robot in zoals hij zich voelt
  - o Denkt dat de beschikbare poses temaken hebben met de keuze van sliders
  - o De gezichten zijn niet duidelijk / niet genoeg onderscheid
- Wallpaper instellen
  - o Kiest meteen de rode hoekige 'posterized' plaat
  - o Kiest omdat hij die plaat er leuk uit vindt zien
  - Hij meldt dat de plaatjes hem niets zeggen en dat hij gewoon kiest wat er leuk uitziet
- Andere kamers
  - o Kiest een kamer met een robot die hij makkelijk kan 'lezen'
    - "Deze robot zit in de problemen"
      - Wallpaper: geen
      - Moodchip: doelen stellen
      - "Deze robot zit op de grond"
        - Wallpaper: hartje
      - Moodchip: vervangende activiteit
  - o Vindt dat mood een stemming suggereert maar eigenlijk geef je een taak mee
- Challenge
  - o Laat iemand een film-figuur nadoen en maak er een foto van
    - Vraagt de begeleider een zombie na te doen en maakt een foto
- Quotes:
  - o "Waarom staat alleen bij mij het raam open?"
  - o "Deze robot zit zeker in de problemen?"

De eerste jongen die het spel speelde maakte een hele rustige indruk. Hij stelde zich erg communicatief op en probeerde actief de doelstellingen achter de game te begrijpen. Het eerste wat hij zei toen het spel begon (zodra je je kamer ziet) is "hmm, wel grappig" met een intonatie die suggereerde dat hij positief verrast was door hoe het eruit zag. Opvallend was dat hij niets met de wallpapers leek te kunnen. Wel vond hij het prototype in de huidige staat een negatieve sfeer opleggen en vroeg zich af of dat iets over de speler zei, "de kamers zien er zo onverzorgd uit". Een belangrijk ding voor deze speler was dat hij de game te individualistisch vond, en hij zou ook in de game zelf meer coöperatieve mechanics willen zien zoals bijvoorbeeld het uitlenen van punten zodat niet iemand ver achter zou komen te staan. Wel was deze testpersoon overtuigd van applied games, hij bekeek ze op een AGD manier.

# Test 2

- Sliders
  - o Gefocusseerd
  - o Overgevoelig
  - o Depressief
  - o Sportief
  - o Gecontroleerd
- iets boven het midden iets boven het midden middelmatig

middelmatig

middelmatig

Deze testpersoon koos sliders waarbij hij voelde dat ze hem aangingen. Hij zag het middelpunt als 'niet veel / niet weinig'.

- Robot instellen
  - o Zou het logischer vinden om gezicht boven, lichaam onder in GUI te doen
  - o Vindt bijna alle gezichtjes hetzelfde dus kiest zomaar een mooi gezichtje
  - o Maakt zijn avatar beter dan hij zich voelt "in een film is de held toch altijd cool?"
- Wallpaper instellen
  - Vindt de wallpapers oprecht leuk, "het is een soort kunst"
  - o Kiest de grijze wallpaper met de zwarte punten / bladeren
- Andere kamers
  - Kiest eerst een kamer/robot waarvan hij denkt dat die van testpersoon 1 is
    "Dit is duidelijk [persoon 1]" en lacht hierbij
    - Wallpaper: grijze brij.. "Ik ken [persoon 1] en dit past wel bij hem"
    - Moodchip: haalbare doelen stellen

Hierbij moet opgemerkt worden dat deze persoon van mening is dat moodchips meer kwaad zouden doen dan goed. Hij vindt het te persoonlijk, arrogant en beledigend dat je iemand vertelt wat ie moet doen. Zelfs als het compleet anoniem is. Ook wil hij duidelijk kunnen zien welke moodchip hij bij iemand ingesteld heeft, en stelt voor dat je gewicht (of kleur, smiley) mee kan geven om het vriendelijker over te laten komen.

- Challenge
  - o Laat iemand een film-figuur nadoen en maak er een foto van
    - Ik moet Silvester nadoen die net Tweety ingeslikt heeft
- Quotes
  - o "Ik ken [persoon 1] en dit past wel bij hem'
  - o "Moodchips geven voelt als kritiek en met een smiley erbij zou het menselijker zijn"

Deze testpersoon was in de omgang duidelijk heel anders dan de vorige, hij praatte langzamer, bekeek alle design keuzes vooral op een ethische manier. Net zoals testpersoon 1 vond hij het spel individualistisch, maar hij had diverse suggesties waardoor dit opgelost zou kunnen worden. Bijvoorbeeld dat je kadootjes kan geven aan anderen, dat je een gezamelijke woonkamer met je team hebt waarbij iedereen wat aan de aankleding kan doen (of props vrijkopen met punten), en de monitor in de kamer zou meer verschillende wallpapers tegelijkertijd (of in reel) moeten tonen. Ook deze testpersoon lette erg op details, hij klikte vaak op dingen waarvan hij verwachtte dat ze interactief zijn zoals de telefoon en het raam en reageerde teleurgesteld dat deze (op het moment) geen functie hebben. Hij was erg kritisch op het prototype (met name de ethische aspecten ervan), was wel positief tegenover applied games, maar zag het prototype in de huidige staat nog niet werken.

## Test 3

- Sliders
  - o Enthousiast
- veel

heel veel

gemiddeld

- o Spraakzaam
  - Verveeld
- o Verveel o Kalm
- o Eenzaam
- gemiddeld bovengemiddeld "op school"

Deze persoon vond dat het midden neutraal is, alles onder het gemiddelde negatief en daarboven positief.

- Robot instellen
  - o Vindt eveneens dat de keuzes teveel op elkaar lijken
  - o Kiest zittende pose en kruis-oogjes, "vind ik speels"
- Wallpaper instellen
  - o Vindt de duistere (zwarte) wallpapers "gaaf"
- Andere kamers
  - o Grinnikt bij het zien van een ander robotje in een andere kamer
  - o Kiest een rode wallpaper want die vindt hij leuk en hij vindt het poppetje ook leuk
- Quotes
  - o "Deze wallpaper mag meer kleur"
  - "Vind ik speels"

Test drie werd afgenomen na de playtest-tijd, maar de patiënt was erg benieuwd dus ik was niet bij de afsluiting maar heb nog 1 keer een korte playtest sessie gedaan en heb de challenge overgeslagen. Deze jongen was de enige van de drie die de sliders vrij ver van het midden durfde te zetten. De tijd was er niet naar om uitgebreid na te praten maar hij had een positieve houding ten opzichte van de game maar vroeg zich wel af of het leuk is om steeds opnieuw te spelen.

## <u>Goals</u>

## Goals over time

| 1D: Goals done in 1 day // | Person to confirm 1// | 5P |
|----------------------------|-----------------------|----|

2D: Goals done in 2 day // Person to confirm 2// 10P

3D: Goals done in 3 day // Person to confirm 3//

4D: Goals done in 4 day // Person to confirm 3// 35P

Points in goals give boost halfway in the race.

## Length goal +1D = -4P

Other things to do with Goals

## Giving badges/ how long before bored

Goals give life to tree. Every goal gives amount of energie to the tree. This tree will give your ship a flowerd look, exponentional points lost in amought of gain.

20P

Customize ship. If customization is free creation maybe. Else to little of impact

Goals:

| 1.  | Get coffee for everybody                  | 5P  |
|-----|---|-----|
| 2.  | Bring a cake to work                      | 50P |
| 3.  | Give a handshake welcome in the morning   | 10P |
| 4.  | Give a complement to 3 people             | 30P |
| 5.  | Massage someone                           | 50P |
| 6.  | Give inspiration to someone               | 20P |
| 7.  | Give your team a pep talk                 | 30P |
| 8.  | Hang up a funny team picture in your ship | 30P |
| 9.  | Make a funny picture when you at work     | 10P |
| 10. | Make a poem for the other team            | 20P |
|     |   |     |

Give tree life. If the tree gets 100P he grows one stage. If the tree starts a new fase it unlocks the use of more pictures in your chamber.

## Race

Time : 5 weeks

Boost at: 1W 3D and 3W and 4 3D

Goals need to be verified for boost to count

Boost stay for next race or next boost

Length goal +1D = -4P

## <u>To get</u>

Ships 2 steampunk big

Trees states

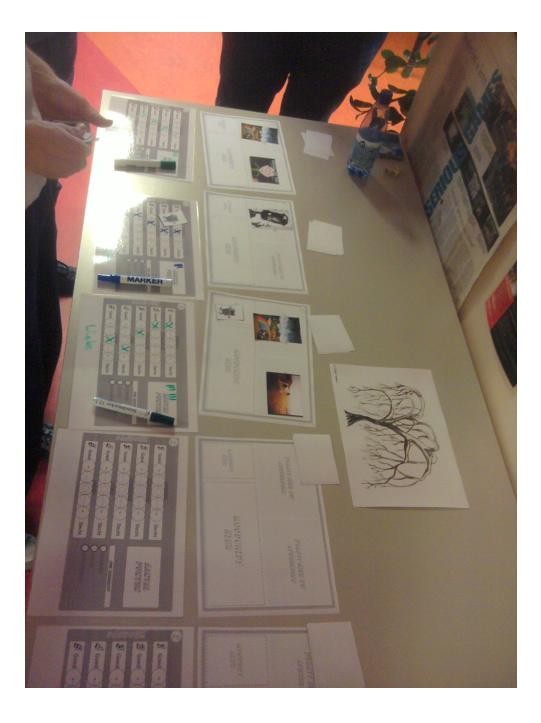
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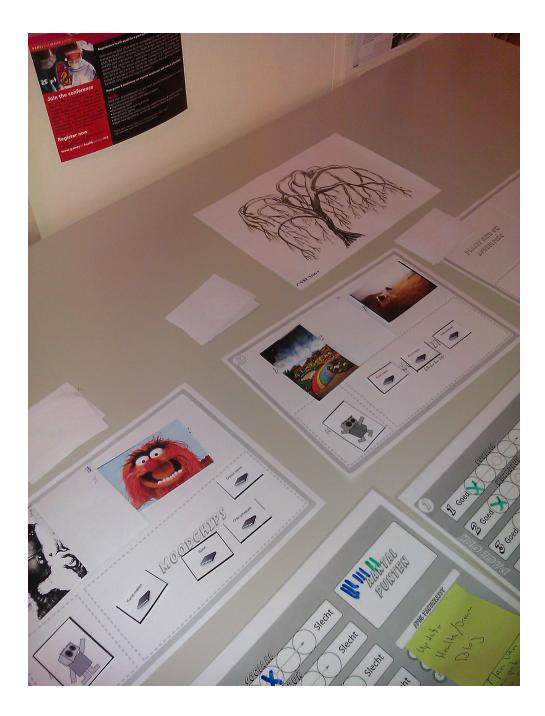
milestones



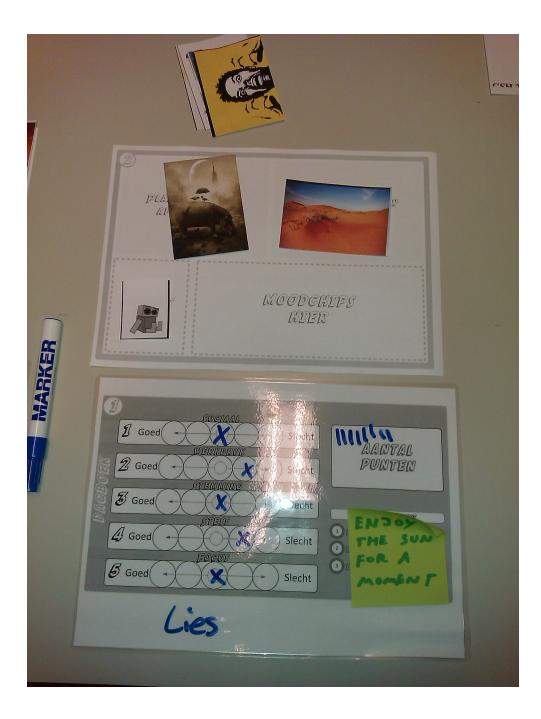


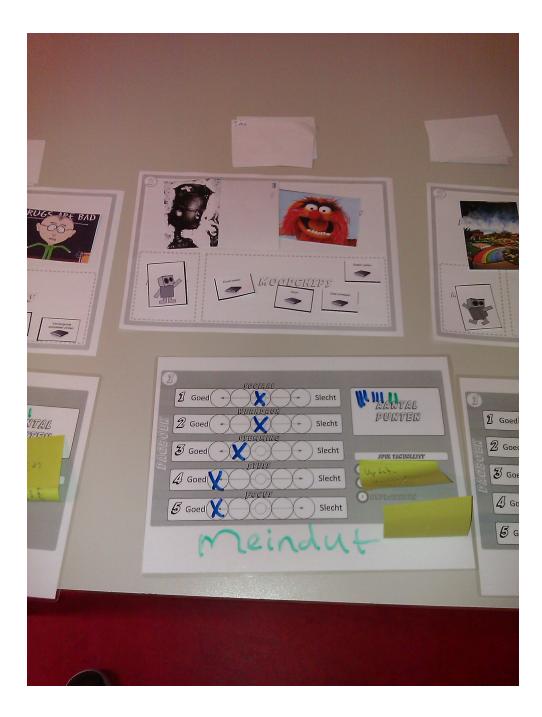


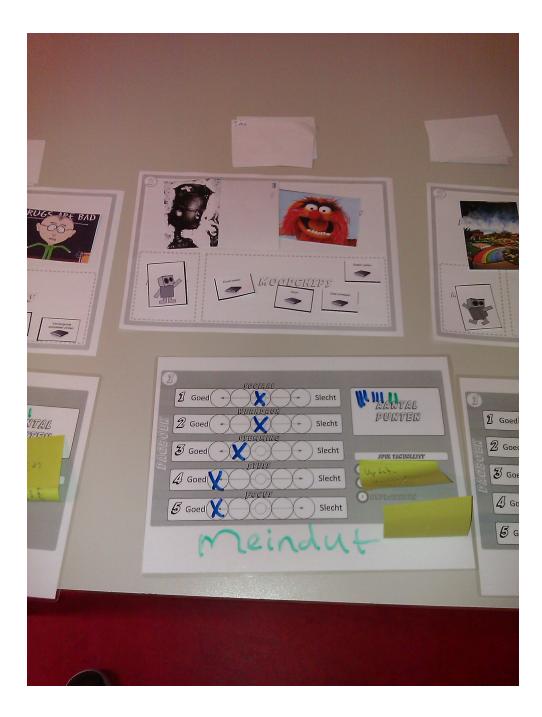




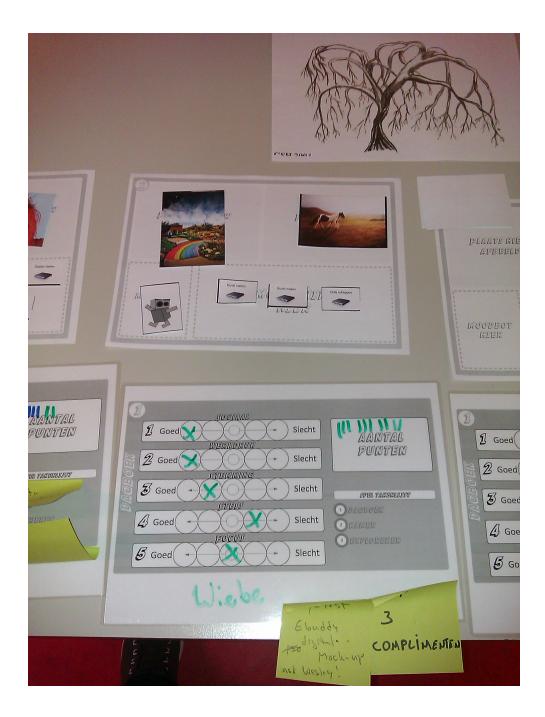
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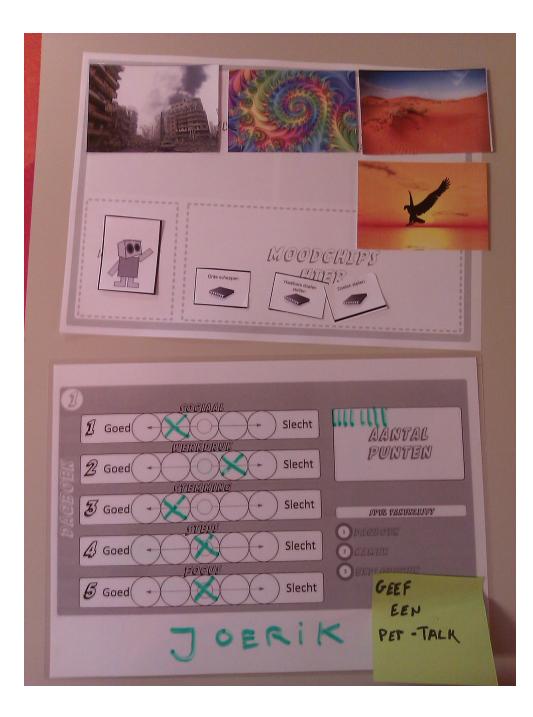












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#### Verslag playtest 'Moodbot' bij ABC, 13-6-12 LvR

#### Aanwezig:

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#### Suggestie:

Het zou ook leuk zijn als de kamers enkele vaste elementen kunnen hebben, favorieten o.i.d. Dus wel per dag een weergave van de stemming, maar ook enkele afbeeldingen die de cliënt er permanent in wil hebben, om de kamer echt eigen te maken.

#### Teamsamenstelling

Hoe gaan de teams samengesteld worden? Optie is om teams te maken van cliënten die in dezelfde fase van behandeling zitten. Hierdoor hebben ze vergelijkbare doelen, maar het is ook mooi als de cliënten die verder zijn, de anderen mee kunnen trekken. Dit zou dus juist een meer gevarieerde samenstelling vragen. Ook de vraag is of de teams voor lange tijd hetzelfde blijven of – bijvoorbeeld wekelijks – wisselen. Dit is nog nader te bepalen in een later stadium van de ontwikkeling.

Het spel moet in elk geval ook samen te spelen zijn met cliënten die ambulant zijn. Ook moet het uitnodigen tot Real Life interactie buiten het spel.

#### Suggestie:

De aard van de doelen die mensen zich stellen en de afbeeldingen zouden mensen met dezelfde interesses bij elkaar kunnen brengen. Als bijvoorbeeld blijkt dat twee cliënten beide meer willen gaan voetballen, kunnen ze eens afspreken om een potje te gaan voetballen of er samen over te praten.

#### Signalen

Hoe de signalen te formuleren? Dit moet wel eenduidig zijn. Dus als achterdocht 'hoog' staat, betekent dit dan dat de cliënt heel achterdochtig is of juist niet? Dit moet in een latere fase van het ontwerp uitgewerkt worden.

#### Afbeeldingen

Het moet duidelijk zijn voor de behandelaar welke afbeeldingen een gemoedstoestand weergeven en welke een gewenste toestand weergeven ('ik voel me heel rustig' versus 'ik wilde dat ik meer rust had').

Het zou leuk zijn als je veel keuze hebt wat betreft de afbeeldingen die je zelf in je kamer plaatst of aan anderen kunt geven. Dus niet een beperkte set plaatjes, maar de cliënt moet ook zelf kunnen tekenen of googelen naar plaatjes.

#### Suggestie:

Dit zou iets kunnen zijn dat je moet verdienen: een *achievement* die je later *unlockt*. Ook werden andere mediavormen geopperd als iets dat je later kunt verdienen, zoals audio en film.

#### Doelen:

Hoe ver vooruit moeten de doelen geformuleerd worden? Moeten de doelen in categorieën worden ingedeeld? Dit zou kunnen om suggesties te geven voor de doelen waar je aan kunt denken. (Miriam ziet niet waarom je dan niet gewoon in tekst wat suggesties kunt geven, ik persoonlijk ben het hiermee eens.)

Hoe worden doelen gecontroleerd? => kan behandelaar afvinken.

Een moeilijkheid bij de (sub)doelen kan wel zijn dat ze erg persoonlijk zijn.

#### Suggestie:

Het team kan het andere team en/of een eigen teamgenoot uitdagen om bepaalde doelen te verwezenlijken. Het team kan samen nadenken over wat een haalbaar en toch uitdagend doel voor een teamgenoot zou kunnen zijn. De cliënt zelf kan hier ook nog over onderhandelen. Deze feature zou betekenen dat er ook een communicatiefunctie, zoals chat, in het spel moet komen.

#### Suggestie:

Ook real life doelen erin verwerken. Het ene team kan bijvoorbeeld het andere team uitdagen tegen elkaar te basketballen en de winnaar krijgt punten.

#### Suggestie:

De cliënt kan zelf zijn/haar einddoelen aangeven, de andere spelers kunnen dan subdoelen voor deze cliënt bedenken.

#### Rol behandelaar

De behandelaar wil meer kunnen doen dan alleen Big Brother spelen, ook al geven de cliënten aan hier geen moeite mee te hebben. De behandelaar wil een actieve(re) rol in het spel in kunnen nemen. Toch is juist het idee dat het voor de behandelaar niet teveel tijd moet kosten. Het 'efficiënt' mee kunnen kijken is één van de doelen van het spel, om zo meer inzicht in de dagelijkse toestand van de cliënt te krijgen dan met het huidige systeem het geval is.

### Test 1

| • | Sliders |               |                    |                             |
|---|---------|---------------|--------------------|-----------------------------|
|   | 0       | Passief       | 'niet zo passief', | slider net onder het midden |
|   | 0       | Gefocusseerd  | 'omdat ik dit doe' | slider net boven het midden |
|   | 0       | Kalm          |                    | slider in het midden        |
|   | 0       | Zelfverzekerd |                    | slider net boven het midden |
|   | 0       | Inactief      |                    | slider net onder het midden |

Deze testpersoon interpreteerde het midden van de slider als normale/gemiddelde staat, relatief ten opzichte van gisteren.

- Robot instellen
  - Stelt de robot in zoals hij zich voelt
  - o Denkt dat de beschikbare poses temaken hebben met de keuze van sliders
  - o De gezichten zijn niet duidelijk / niet genoeg onderscheid
- Wallpaper instellen
  - Kiest meteen de rode hoekige 'posterized' plaat
  - o Kiest omdat hij die plaat er leuk uit vindt zien
  - Hij meldt dat de plaatjes hem niets zeggen en dat hij gewoon kiest wat er leuk uitziet
- Andere kamers
  - o Kiest een kamer met een robot die hij makkelijk kan 'lezen'
    - "Deze robot zit in de problemen"
      - Wallpaper: geen
      - Moodchip: doelen stellen
      - "Deze robot zit op de grond"
      - Wallpaper: hartje
        - Moodchip: vervangende activiteit
  - o Vindt dat mood een stemming suggereert maar eigenlijk geef je een taak mee
- Challenge
  - o Laat iemand een film-figuur nadoen en maak er een foto van
    - Vraagt de begeleider een zombie na te doen en maakt een foto
- Quotes:
  - o "Waarom staat alleen bij mij het raam open?"
  - o "Deze robot zit zeker in de problemen?"

De eerste jongen die het spel speelde maakte een hele rustige indruk. Hij stelde zich erg communicatief op en probeerde actief de doelstellingen achter de game te begrijpen. Het eerste wat hij zei toen het spel begon (zodra je je kamer ziet) is "hmm, wel grappig" met een intonatie die suggereerde dat hij positief verrast was door hoe het eruit zag. Opvallend was dat hij niets met de wallpapers leek te kunnen. Wel vond hij het prototype in de huidige staat een negatieve sfeer opleggen en vroeg zich af of dat iets over de speler zei, "de kamers zien er zo onverzorgd uit". Een belangrijk ding voor deze speler was dat hij de game te individualistisch vond, en hij zou ook in de game zelf meer coöperatieve mechanics willen zien zoals bijvoorbeeld het uitlenen van punten zodat niet iemand ver achter zou komen te staan. Wel was deze testpersoon overtuigd van applied games, hij bekeek ze op een AGD manier.

#### Test 2

.

- o Gefocusseerd o Overgevoelig
- o Depressief
- o Sportief
- o Gecontroleerd
- middelmatig iets boven het midden iets boven het midden middelmatig middelmatig

Deze testpersoon koos sliders waarbij hij voelde dat ze hem aangingen. Hij zag het middelpunt als 'niet veel / niet weinig'.

- Robot instellen
  - o Zou het logischer vinden om gezicht boven, lichaam onder in GUI te doen
  - Vindt bijna alle gezichtjes hetzelfde dus kiest zomaar een mooi gezichtje 0
- o Maakt zijn avatar beter dan hij zich voelt "in een film is de held toch altijd cool?" Wallpaper instellen
- - o Vindt de wallpapers oprecht leuk, "het is een soort kunst"
  - o Kiest de grijze wallpaper met de zwarte punten / bladeren
- Andere kamers
  - 0 Kiest eerst een kamer/robot waarvan hij denkt dat die van testpersoon 1 is
    - "Dit is duidelijk [persoon 1]" en lacht hierbij
      - Wallpaper: grijze brij.. "Ik ken [persoon 1] en dit past wel bij hem"
      - Moodchip: haalbare doelen stellen

Hierbij moet opgemerkt worden dat deze persoon van mening is dat moodchips meer kwaad zouden doen dan goed. Hij vindt het te persoonlijk, arrogant en beledigend dat je iemand vertelt wat ie moet doen. Zelfs als het compleet anoniem is. Ook wil hij duidelijk kunnen zien welke moodchip hij bij iemand ingesteld heeft, en stelt voor dat je gewicht (of kleur, smiley) mee kan geven om het vriendelijker over te laten komen.

- Challenge ٠
  - Laat iemand een film-figuur nadoen en maak er een foto van 0
    - Ik moet Silvester nadoen die net Tweety ingeslikt heeft
- Quotes .
  - o "Ik ken [persoon 1] en dit past wel bij hem'
  - o "Moodchips geven voelt als kritiek en met een smiley erbij zou het menselijker zijn"

Deze testpersoon was in de omgang duidelijk heel anders dan de vorige, hij praatte langzamer, bekeek alle design keuzes vooral op een ethische manier. Net zoals testpersoon 1 vond hij het spel individualistisch, maar hij had diverse suggesties waardoor dit opgelost zou kunnen worden. Bijvoorbeeld dat je kadootjes kan geven aan anderen, dat je een gezamelijke woonkamer met je team hebt waarbij iedereen wat aan de aankleding kan doen (of props vrijkopen met punten), en de monitor in de kamer zou meer verschillende wallpapers tegelijkertijd (of in reel) moeten tonen. Ook deze testpersoon lette erg op details, hij klikte vaak op dingen waarvan hij verwachtte dat ze interactief zijn zoals de telefoon en het raam en reageerde teleurgesteld dat deze (op het moment) geen functie hebben. Hij was erg kritisch op het prototype (met name de ethische aspecten ervan), was wel positief tegenover applied games, maar zag het prototype in de huidige staat nog niet werken.

#### Test 3

- Sliders
  - o Enthousiast
    - heel veel Spraakzaam 0
    - 0 Verveeld gemiddeld 0
      - gemiddeld Kalm
    - bovengemiddeld "op school" 0 Eenzaam

veel

Deze persoon vond dat het midden neutraal is, alles onder het gemiddelde negatief en daarboven positief.

- Robot instellen
  - o Vindt eveneens dat de keuzes teveel op elkaar lijken
  - o Kiest zittende pose en kruis-oogjes, "vind ik speels"
- Wallpaper instellen
  - o Vindt de duistere (zwarte) wallpapers "gaaf"
- Andere kamers
  - o Grinnikt bij het zien van een ander robotje in een andere kamer
    - o Kiest een rode wallpaper want die vindt hij leuk en hij vindt het poppetje ook leuk
- Quotes
  - o "Deze wallpaper mag meer kleur"
  - o "Vind ik speels"

Test drie werd afgenomen na de playtest-tijd, maar de patiënt was erg benieuwd dus ik was niet bij de afsluiting maar heb nog 1 keer een korte playtest sessie gedaan en heb de challenge overgeslagen. Deze jongen was de enige van de drie die de sliders vrij ver van het midden durfde te zetten. De tijd was er niet naar om uitgebreid na te praten maar hij had een positieve houding ten opzichte van de game maar vroeg zich wel af of het leuk is om steeds opnieuw te spelen.

# **APPENDIX V**



DesignState\_7\_Social\_Playtest

**Content:** Portable Document Format, 4 pages

Language: English

**Description:** Data results from testing the social game mechanics in Moodbot.

hatamoto.mizu@gmail.com 👻

# 126 responses

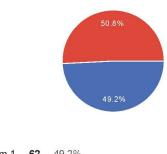
View all responses Publish analytics

## Summary

## Vul j naam in

Aaron Richard Lies Wiebe Marilla Evelyn marilla Djego Meindert Richard van Tol Ina Joerik Francisca Eline Naoya yuko Denise

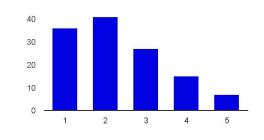
### Selecteer uw team



| Team 1 | 62 | 49.2% |
|--------|----|-------|
| Team 2 | 64 | 50.8% |

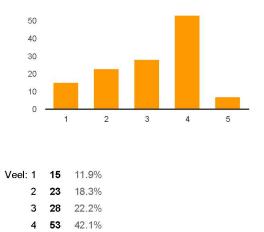
-

## Sociaal Gevoelen



| Veel: 1   | 36 | 28.6% |
|-----------|----|-------|
| 2         | 41 | 32.5% |
| 3         | 27 | 21.4% |
| 4         | 15 | 11.9% |
| Weinig: 5 | 7  | 5.6%  |

## Werkdruk

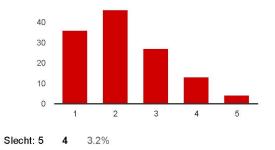


5.6%

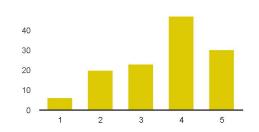
7

Stemming

Weinig: 5

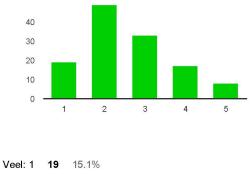


Stress



| Veel: 1   | 6  | 4.8%  |
|-----------|----|-------|
| 2         | 20 | 15.9% |
| 3         | 23 | 18.3% |
| 4         | 47 | 37.3% |
| Weinig: 5 | 30 | 23.8% |

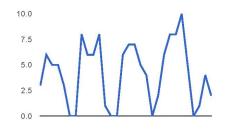




**2 49** 38.9%

|         | 3 | 33 | 26.2% |
|---------|---|----|-------|
|         | 4 | 17 | 13.5% |
| Weinig: | 5 | 8  | 6.3%  |

# Number of daily responses



## **APPENDIX W**

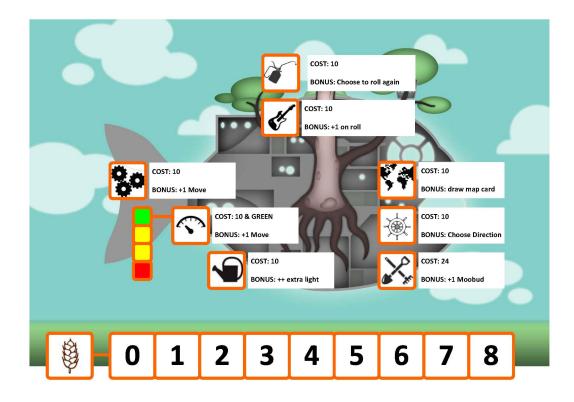


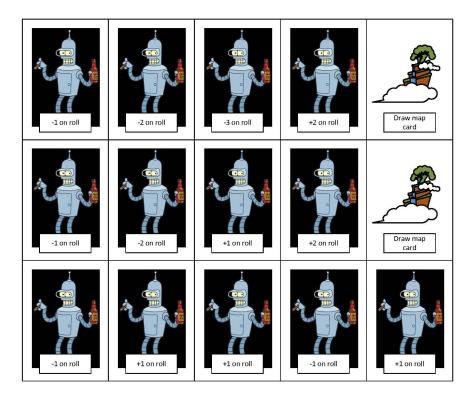
DesignState 8 Paper

Content: 6 pages, paper prototype

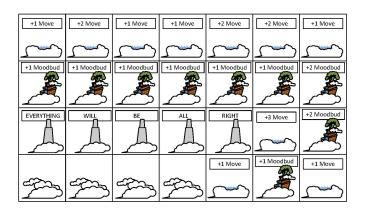
Language: English

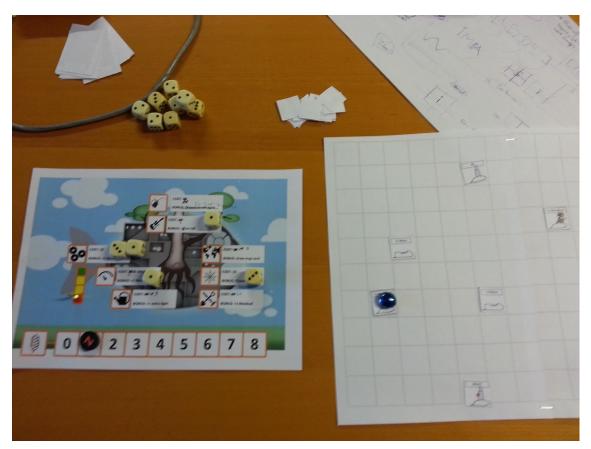
**Description:** The results from Iteration 8 (see figure 8 pg. 43) of a paper prototype that removed the team competitive game elements with a social cooperative element.

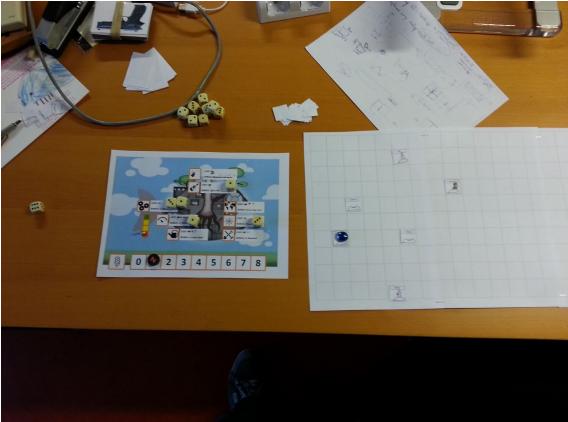




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# **APPENDIX X**



DesignState\_8\_Playtest

**Content:** Portable Document Format, 14 pages

Language: English

**Description:** A collection of notes taken during a play-test with the target audience.

HKU AGD

# eBuddy

# Play-test with first-playable at ABC

Djégo Ibanez 27-8-2012

This document is the written account of the play-test by an observer. Specifically about 3 cases, with six different people. In each case it was a client and caretaker, that were seated behind a laptop and played a digital version, single-player, first-playable prototype of the game for eBuddy, at the ABC institution in Utrecht the Netherlands. Document is written in English and Dutch. English where possible, Dutch where it is more clear to use because of quotes, reactions or descriptions.

Content User-testers User-test 1 User-test 2 User-test 3 Raw notes Raw notes Raw notes Play-test 1 Play-test 1 Play-test 2 Play-test 3 Debrief

#### **User-testers**

#### **User-test 1**

Choose only from positive points, attaches great importance to these points. Trouble with choosing facial expression. Has struggled to understand how the section works with the moodchips and the challenges. Personal advice, even if this only after a certain level, as to where someone is in therapy. Would like to be able to walk around by the ship with the avatar. Keep definitely not of small rooms, and not at all with current style, reminiscent of a cell. Like to see medical terms of one word for clarification. Here they get during therapy and much to do with those terms they are used to it. Has liked an option to "something else" to want to choose, because the list does not have a came with the State of the user. Practitioner would like to add choices itself. Would also like to be able to limit choices, instead of 40 options but 10. Struggling to understand what the challenges are and how that in the game. Would like to protect something into the game, instead of a contest win.

#### **User-test 2**

Quite a lot of trouble to 5 choice to make, would like to choose less. Practitioner would like fewer options and less than 5 to choose, for example, 3. Signalling plan is different from a list of choice for sliders but more concrete behavior that is displayed by the client just before an escalation, this is totally not representative of a signalling plan. A lot of trouble with expression and attitude of robot. Trouble with the moodchips, would like to purchase individual tips that they themselves created. Choose what good, feeling that hear is less important. Choose generally only have positive options. To achieve maximum points and served writs to score goes, and this will be just as long to do so until this is achieved, whether it is needed or is better to be representative or not, that doesn't matter, win and maximum points. Want to customize because it does not have a room comes with feeling or State of mind and finds the room than not representative enough. Understood the challenges and how that was going to work.

#### **User-test 3**

Could easily make 5 choices, understood the terms. Follow instructions literally, comes in there by problems with the system, instructions did not come about one with the flow of the game. Trouble with the chips and effort imagine how the challenges go to work. Trouble with the expressions of the robot. Want more able to adapt in the game and especially setting up the room. Other materials can choose, for example wood. Does not need competition but want to cooperate more and more tactics in the game. Other games which are played by this user-tester are shooters and driving games, what is striking is.

#### **Raw notes**

#### **Before play-testing**

While waiting for everyone to arrive, these remarks were talked about

Clie nt was talking about an app for the iOS device called "G-scheme", which would be something interesting to look at because they use that to also help themselves.

The client had played the paper prototype before and mentioned before starting the play-test for the first-playable digital prototype that he missed "something to the protect" in the paper-version and would like to see that in the game.

Another client asked us, "why is a robot theme?" This question was never answered, no further followup was made, because they wanted to start the play-test.

#### Play-test 1

- Items list
  - $_{\odot}$  Positive points chosen from the list
- Sliders
  - $_{\odot}$  Attach values to selected points
  - High is much
  - Middle little less
  - No statement about what is low on the analog slider
- Room
  - o Robot
    - Choose face started
    - Can not understand what that face is
    - ^^ plus triangle mouth = happy
    - Attitude different interpretations for an attitude, stable and Moody is seen in the same attitude of the robot
    - Finally opted for a seated robot with happy face, is relaxed

οTV

• 2D picture a landscape picture, kind of surface with tuft there on

o Chip

- Chip went give first time not good, given a chip without first see what kind of a chip. Unclear, user-interface tester had explanations needed to understand what needed to be done and how the element works of a chip.
- Client would like personal advice. Sun, happy together, and if want to give advice
- User-tester would like to with the robot run by the ship, through doors to other rooms.
- User-tester has all assignments completed and 90 points obtained
- User-tester would like to different levels. If the client has a certain level range itself advice by typing a message for advice instead of selecting from a list. Choose from a list insufficient and impersonal.
- Facial expression, attitude difficult to see something better to what it needs to, but still tricky
- User-tester does it prefer more realistic, much more detail, can not good formatting what is meant by the expression and attitude
- In one word, the face, to clearer about what the face to express
- Practitioner cannot read what is meant, on the basis of the robot, which is the State of mind of the client.
- Rather use medical terms of one word
- Practitioner itself what can fill in the points, at the beginning, which affects the sliders
- Practitioner limit the number of choices from the list, instead of 40, that the client but can choose from 10 points from the full list
- An "other" option, for points list that goes over the sliders
- What is the difference between passive and inactive? And the other combinations that can be made from the list of words?
- Positive/negative, scale can turn around a point, then see the scale there are positive from if
  you take a quick look at it, but if you looks beyond it is actually negative, only are the sliders so
  influenced that it looks positive.
- Theme

- Don't feel good, looks like a cell, the client has negative experiences with it and makes this Association
- $_{\odot}$  Small boxes, recording, unpleasant
- Can start as it looks now, but during the game should change that, larger rooms
- It should be homelier
- Small room speaks not at all to

#### Play-test 2

- Trouble with choosing 5 choices from the list
- Want more or less can choose, because sometimes 5 are not applicable, but three do
- The terms from the drop down list is tricky because these two sides, positive/negative, prefer to
  only choice of one side
- On a signalling plan concrete behavior, such as, for example, organize everything for a psychosis, rather than the terms where the user tester could choose in the prototype
- Sliders
  - Among few = positive pressure

 $_{\odot}$  Are looking for generally positive choices on

- Room

 $\circ$  First went through the entire prototype around looking through the camera to move

- Had explanation needed to know that the lit room "you" room is in the prototype
- Robot

Reclining robot attitude is seen as "free death"

 $\circ$  Chosen robot is one that stands with a happy face and whisk

- Picture
  - $\circ$  Swirls/Pastel, indicates no exactly feeling to it. But it has round shapes and is colorful, so beautiful.
- Chip
  - $_{\odot}$  Could use this element from the prototype only after extensive explanation of AGD'er

- $\circ$  Found expression of robot very troublesome, attitude and expression of face was unclear
- $_{\odot}$  Was not immediately clear that a chip give a tip to another
- $_{\odot}$  Chip element as a whole is tricky
- $_{\odot}$  User-tester indicates the robot not to common. Finds it hard to get a tip.
- $_{\odot}$  Tips is personal, is easier to own a tip to give to someone that known is
- Different picture as suggestion
  - Give Something encouraging
    - Pastel colorful cheerful waves, for the reason "is fun"
- User-tester chose consciously lying or not lying earlier to help robots, robots. Looks more that these robots and more need help, rather than a robot that sits or stands
- Conscious in rooms chosen not to change the picture
  - But to get maximum score points at some point yet but somewhere in a room to change images, while there there for chosen was not to change it right. But to get the points and to win one anyway to change anything, even though it does not fit better in that situation.
- Practitioner also finds it very difficult to understand what the robots proposals, portraying. Can't
  get out how the robot is by just looking at it
- Conscious in some rooms chosen to change the image and the décor and the robot not
- Want to get the maximum out of it and get maximum points to win the race, and continues through this achieved. Even though there are no changes needed. User-tester remained constant questions or the maximum points obtained were and if necessary take action to all points also went to spend and to achieve really
- Continues to come back to the fact that it is difficult to understand the expression of the robot
- Style of the game is "funny"
- Want more options to the room itself. Does not come to a with how the user tester feels
- Finds the current room drab look, this does not fit with feeling, should therefore like to
  customize the room itself
- A picture from a pile of images, what can the other user to them?
- Own personal tips by a tip to be able to type and send to the other user

- To the question, what do you think of the idea of a race-race against each other, the answer was short and to the point; "fun"
- Where are the challenges?
  - o What would you get?
    - To bed on time, photo do with clock and bed, and upload it to the TV in the game
    - Three times a week sports

#### Play-test 3

Nice to see from paper to digital prototype, treating physicians under each other were very positive

- User-tester (client) choose five terms from the list
- Knew well to pick out everything in the list, could understand the terms
- Reads the scaling explanation, at the sliders, went on there of the sliders set
- Name the scaling, above is quite talkative and feels hypersensitive, but it could still get worse so not everything at the maximum or the minimum scroll position stand
- Reads the command at the next screen, the room, and is going to do what is explained, look around with the mouse and a "select" room, there by not off at the room. See the lit room not as his room. Has to get to the right explaining room
- Reads all the explanation that comes into the picture
- Chosen for General, sleeps a lot. Chosen for reclining robot
- Wallpaper: Field, countryside. Finds user-tester beautiful, loves landscapes
- Want to customize more
- Across the room, other walls, other material. Prefer wood. Would also like to reverse engineer his own room. Habbo-hotel is in the background.
- Find that across the room as a whole lot about personality told, user-tester told he to the look of someone's room a lot about the person can pick up, and therefore wants to love to own his own room in game can customize
- Select Moodchip went very painfully, eventually chosen to a lot of "being together" moodchips out, because that makes for distraction and this helps others
- Offer help to others is common among these user testers, they find it important to help others
- Elements of the game involves the user tester always on its own

- Much trouble to finish reading to the robot how the person is or feels, though they think it's someone of the other clients is that they know of the Group
- Conscious choice at others no other wallpaper. Has not by that there are points
- Self reflection will come forward during the play-test, go there over in discussion with practitioner, because this there wrong, and ask questions
- Choose a wallpaper that is different but the same style for certain persons, thinking that this fits
  with that person and this kind of images, or a happy picture as a wish, as with a greeting card, to
  give this/adjust for other rooms
- What do you think of the style?
  - $\circ$  Would like to customize the style to own more, more
- Nicely made but hard to understand what the expressions are
- What do you think of the idea of a race with ships?
  - Not interesting, less competition. But together achieve something. Doesn't necessarily play against other, prefers a single player option there in
  - $_{\odot}$  Like to See more tactics in the game, something together decide
- Help yourself first and then help others, if you you can't help yourself, how can you help someone else than good?

#### Debrief

- From paper to digital big step, a positive experience
- Expression difficult
- Face expression too skinny, want more capabilities, more distinction
- Thoughts cloud?
- Moodchips more personal advice, than just a standard chip, is not seen or taken seriously as the default is from a list, then it will all be
- Moodchip can be seen as criticism and negative experience, especially if the default is
- Even if the moodchip can be judged by the receiver, there can be a negative review come back, prefer not to receive negative reviews
- Practitioner would like to see at a glance how someone feels, this could not in current prototype
- Practitioner; What actually means that sliders, what they say, what printing them out?

- Scales and denomination of the slider itself fill
- Some felt the analog version of the sliders fine, others would rather have a Yes or no choice
- User-tester would like to write comments at various points during the game to be able to give an explanation on something, post it kind of paste, is afraid that something else is misinterpreted
- Others also indicate to be afraid of wrong interpretations

## Play -- testeBuddy: no tities en recommended velingen

D atum: 27 August 2012 Loca tie: ABC Altrecht, Lange Nieuwstraat 52, Utrecht Writer: Arvind Bajaj

This notes are limited to a limited number of subjects; the useful and van clients valuable feedback is filtered and point by point by topic noted and can be used as a recommendation for the eBuddy team.

#### Robot

- -- The options of the robot feel limited; only the body posture and the gezichtsuitdr can ukking worden changed.
- -- The display of the facial expression for confusion caused when some of the participants ("sleep now the robot or the robot is dead?" when using the 'x' symbol for the eyes at a lying robot). The body postures itself are clear enough, it is the combination with facial expressions that for lack of clarity.
- -- Testers like to see more options and then only the body posture and the shape of the o gene and the mouth to better depict their emotional state.

## oodchips

м

- The moodchips that a client to a client gives other, be on the basis of an
  interpretation on the status of a robot and accompanying room. The intention is to
  moodchips via another client advice through a task.
   Several testers find it a problem that their interpretation about the situation of a
  client may be different from the intention referred to by that client. This is so
  that a problem is partly inherent to the options of the robot. The amount of
  information which is now opinion based, is too little and therefore there is a risk
  increases on the communicate of wrong intentions (noise) between the users of
  the game.
- -- Some clients wanted alternative options such as giving a gift instead of a task-oriented recommendation to thus less social pressure to create.
- -- The rules on giving chips (wanne get zer e, what are the limitations) they n not clearly integrated into the game.
- -- Testers would like to send personal tips instead of predefinede tips.

#### Displa ym

- -- Not every tester found it display relevant, or wanted to correct all explicit images that depict their emotion, but there were no clear negative reactions.
- -- the usefulness of the changing picture screen (when giving chips) of other clients was not clear for all testers.

#### Rooms

- -- Te Need to Visual progression; the toilet and other areas make more beautiful with, for example, the collected points. Material of the wall so make like that corresponds with the real room of the client. The idea that a living room to personally hear because that are typically much about someone and says maybe its different textures for the decoration (wall) of the rooms therefore an option.
- -- Difference between TOILET and other types of suites not clear. The toilet is less fun than the well suite, and you will so also if player ' estraft ' gwith a stay in the toilet if you for example are less active? There Is always someone in the the toilet even though Mohitra with the active game with it?

#### Gameplay

- Against a team play other find many not fine; see clients prefer a team game in which the pure and only runs to progression by means of cooperative.
- -- The Problem with terms that also in the plan, signaling that it is behavior very specific State and expressed in terms not of feeling is as described in the game. Example: the ' behavior I stay longer in my bed are ' from the signaling would plan the game in the ' status ' inactive. Some psychoses are therefore difficult in the game to lay and to predict through eBuddy because they are very specific behavior as have form of display; as a client to that psychosis is because he recognizes or they start with the organizing of stuff. The game, however, gives no option to this kind of behavior and personal so the psychosis. Handlers and clients want to therefore like a option to add descriptions to add to the game.
- -- Choose from a list also feels impersonal for much to testers.

Practitioner would like to in one glance see how someone feels itself, this could not in current prototype.

#### Play-test eBuddy: notes and recommendations

#### Date: 27 August 2012

Location: ABC Altrecht, Lange Nieuwstraat 52, Utrecht

On 27 August 2012 of 15-17 h has taken place within a second play test at ABC it eBuddy-project. This time was a digital prototype tested. Six clients have taken part and four aid workers from ABC. From the HKU were present Niels, Dee, groin, Sjoerd and Valentine.

The following summary is based on all the collected material (notes, film footage, audio recordings) and summarizes the feedback from clients together. This is listed by topic and can be used as a recommendation for the eBuddy team and as feedback to the staff of ABC.

#### Robot/Avatar

- Feel limited to the options of the robot; only the body posture and facial expression can be changed.
- The display of the facial expression caused confusion among some of the participants ("sleep is the robot the robot now or dead?" – when using the 'x ' symbol for the eyes at a lying robot).
   The postures themselves are clear enough, it is the combination with facial expressions for ambiguous.
- Testers like to see more options and then only the body posture and the shape of the eyes and the mouth to better depict their emotional state.

#### Moodchips

- The moodchips that a client to another client, on the basis of an interpretation on the status of a robot and accompanying room. The intention is to moodchips via another client advice. Several testers find it a problem that their interpretation on the situation of a client may be different from the intention of that client. So this is a problem that is partly inherent in the options of the robot. The amount of information which now advice is based, is too little and therefore is there a increases risk of communicating wrong intentions (noise) between the users of the game.
- Some clients wanted alternative options such as giving a gift instead of a task-oriented recommendation to thus less social pressure to create.
- The rules on giving chips (when you get them, what are the limitations) are not clearly integrated into the game.
- Testers would like to send personal tips instead of predefined tips.

#### Display/Wallpaper

 Not every tester found it display relevant, or wanted to correct all explicit images that depict their emotion, but there were no clear negative reactions.  the usefulness of the changing picture screen (when giving chips) of other clients was not clear for all testers.

#### Rooms

- Need for Visual progression; the toilet and other spaces more beautiful with the accumulated points. Material of the wall so make as corresponding to the real room of the client. The view that a room should be personally because that typically much about someone says and maybe its different textures for the decoration (wall) of the rooms therefore an option.
- Difference between TOILET and other types of suites not clear. Is the restroom well less fun than
  the suite, and you will be so even if player ' punished ' with a stay in the toilet if you for example
  are less active? There is always someone in the toilet even though does anyone active with the
  game?

#### Gameplay

- Find many do not play against another team fine; clients prefer a team game in which there are only progression is through cooperation.
- Problem with the terms that are also in the signaling behavior very specific plan, is that it says and not in terms of sensation is described as in the game. Example: the behavior ' I stay longer in my bed ' from the signaling plan would in the game get the status ' inactive '. Some psychoses are therefore difficult to capture in the game and predict via eBuddy because they have very specific behavior as a form of display; as a client to his psychosis is recognized because he or she starts with organizing stuff. However, the game gives no option to this kind of personal behaviour and so the psychosis. Practitioners and clients want to therefore like an option to itself to add descriptions to the game.
- In addition, impersonal feel to choose from a list for many testers.
- Practitioner would like to see at a glance how someone feels, this could not in current prototype.

## **APPENDIX Y**



Moodbot\_GameWlkThrg\_dv\_1.1.1

**Content:** video 4 minutes 42 seconds

Language: English

**Description:** The results from Iteration 8 (see figure 8 pg. 43) of a digital prototype that demonstrates the core game mechanics.

# **APPENDIX Z**



Playtesting\_Method

Content: Portable Document Format, 4 pages

Language: English

**Description:** Documentation concerning the approaches and guidelines taken to play-test.

## AGD Testing Method

#### Method

 Plan- Determine goal, method, roles, testers;

 Preparation- Determine number of players, prepare equipment, agenda, etc.

 Test- Do the play-test and collect data.

 Synthesis- Each observer summarizes his/her observations.

 Analysis- Round table with the development team to discuss the results from the play-test.

Goals- What is the purpose of this playtest?

**Usability**- The goal of usability testing is to determine if users understand how to navigate the game.

Quality Assurance- The goal of quality assurance testing is to determine if the game has bugs (i.e. crashes, unintended behaviors, etc.)

Game-play Experience- The goal of game play-experience testing is to determine if the players enjoy the game or achieve the intended experience.

Game Mechanics- The goal of game mechanics is determine if the player is able to perceive game rules/system.

**Play Mechanics-** The goal of play mechanic testing is to determine if the game is balanced and if the interaction with the game feels right.

Visuals- The goal of visual testing is to determine if the player finds the graphics appealing.

Audio- The goal of audio testing is to determine if the player finds the audio appealing.

**Content Validation-** A content validation test determine if the game has portraits the subject's procedural and/or declarative content correctly.

**Context Validation**- A context validation test determines if the game can be used in its intended environment.

**Transfer Validation**- A transfer validation test determines if the player achieves the applied goals of the game.

Play-testers- Kinds of tests that can be used.

**Fresh**- New players that can be anyone, the most important aspect is that they have no previous knowledge about the game. (*Related Goals: Usability, Game Mechanics, Play Mechanics, Visual, Audio*)

**Target Group**- Intended end players/users. (*Related Goals: Usability, Game Mechanics, Play Mechanics, Visual, Audio, Context Validation, Transfer Validation*)

**Domain Experts-** Knowledge about the applied goals of the game. (*Related Goals: Context Validation, Content Validation*)

Gamers- Knowledge about gaming. (Related Goals: Game Mechanics, Play Mechanics, Visual, Audio, Game-play Experience )

**Non-gamers-** People with little or no gaming experience. (*Related Goals: Game Mechanics, Usability*)

Internal- Testers from our own team. (Related Goals: Game Mechanics, Play Mechanics, Visual, Audio, Quality Assurance)

Roles- The roles we as the testers occupy.

Facilitator- Facilitates the play-test by giving an introduction and describes what is expected from the testers.

**Observer-** Observers observe the testers. Observers may require to interview and capture testers actions with video, photos and/or audio recordings.

#### Equipment-

**Camera-** Facilitates the play-test by giving an introduction and describes what is expected from the testers.

Video- Observers observe the testers. Observers may require to interview and capture testers actions with video, photos and/or audio recordings.

#### Play-test Methods- What kinds of process will be used to accomplish the goals?

#### Black Box:

- 1) Testers get little or no instructions;
- 2) Testers can be in grouped or isolated;
- 3) Testers in groups are allowed to talk to each other;
- Test ends when the *facilitator* determines that the player(s) is unable to go further in the game;
- 5) Feedback moment.

(Related Goals: Game Mechanics, Play Mechanics, Quality Assurance, Game-play Experience, Usability, Context Validation)

#### Walk-though:

- 1) Testers are helped to identify certain possibilities by a *facilitator;*
- 2) Facilitator aims to guide the player through all the game's features;
- 3) Testers are tested individually;
- Test ends when the facilitator has guided the player though all the game's functional features;
- 5) Feedback moment.

(Related Goals: Game Mechanics, Game-play Experience, Usability, Visual, Audio)

#### **Usability Tree:**

- 1) Testers are given a task list *facilitator;*
- 2) Testers complete what they can on the list;
- 3) Testers are tested individually;
- 4) Feedback is collected in the form of a questionnaire associated with the task list.

#### (Related Goals: Usability, Visual, Audio)

#### Heuristic Play-test:

- 1) Testers are given a Black Box or Walk-through test;
- 2) Observers are given a check-list;
- 3) Items on the check-list are checked-off as they are observed;
- The test ends when the facilitator has determines the end of the Black Box or Walkthrough test;
- 5) Feedback is gathered in an interview again with the check-list

(Related Goals: Game Mechanics, Play Mechanics, Game-play Experience, Usability, Visual, Audio)

## APPENDIX AA



Moodbot GameWlkThrg dv 1.1.2

Content: video 5 minutes 42 seconds

Language: English

**Description:** One of the first iterations of Iteration 9 demonstrates changes to the game flow and integration of the social aspect of the game.

# **APPENDIX AB**

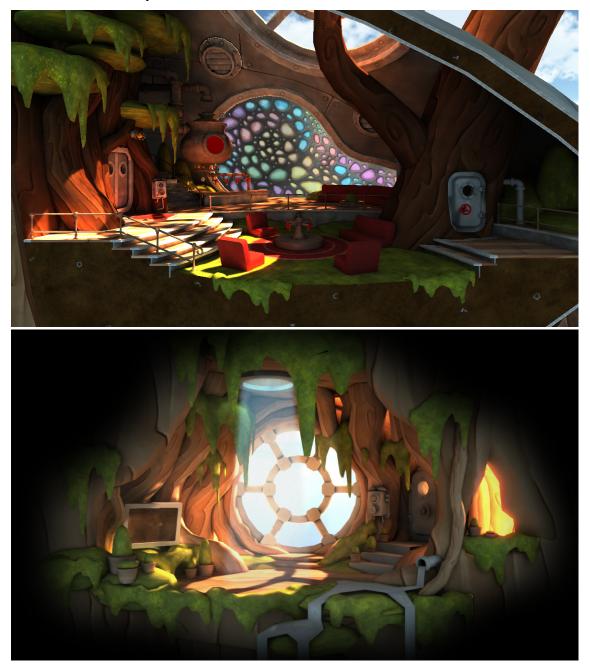


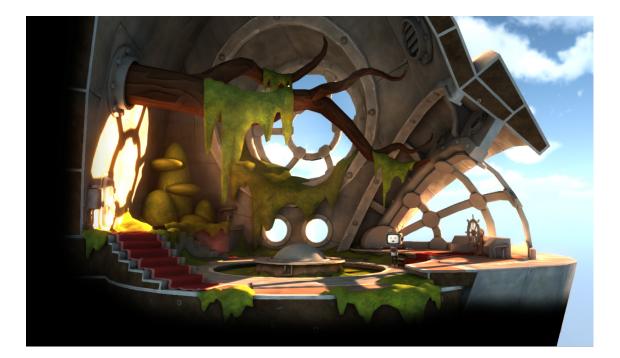
<u>Atmosphere\_Test</u>

Content: Portable Document Format, 16 pages

Language: English

**Description:** A test that was done via Facebook to test the ambience of the visual style of Moodbot.





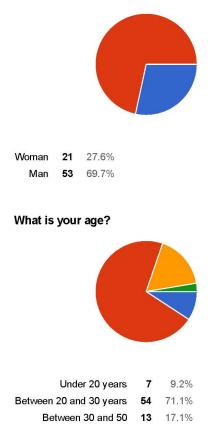
hatamoto.mizu@gmail.com 👻

# 76 responses

View all responses Publish analytics

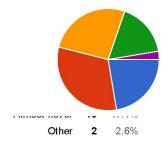
## Summary

### What is your gender?

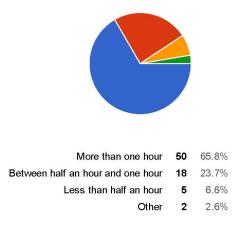


How often do you play an average game?

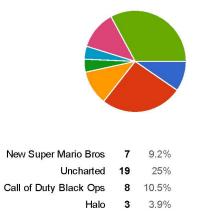
Older than 50 2 2.6%



How long do you play an average of succession?



## Which of these games (sets) you speak the most?



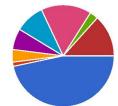
Farm Ville

| FIFA     | 3  | 3.9%  |
|----------|----|-------|
| The Sims | 9  | 11.8% |
| Other    | 24 | 31.6% |
|          |    |       |
|          |    |       |
|          |    |       |
|          |    |       |

0

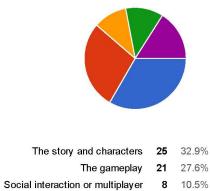
0%

## On what platform do you play most often?



| PC Steam                | 35 | 46.1% |
|-------------------------|----|-------|
| PC Facebook / Hyves     | 1  | 1.3%  |
| Nintendo DS / 3DS       | 3  | 3.9%  |
| PSP / Playstation VITA  | 0  | 0%    |
| iPad / iPhone / Android | 5  | 6.6%  |
| XBOX 360                | 7  | 9.2%  |
| Playstation 3           | 12 | 15.8% |
| Wii                     | 2  | 2.6%  |
| Other                   | 10 | 13.2% |

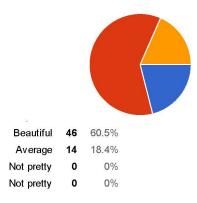
### What is for you the main reason to play a game?



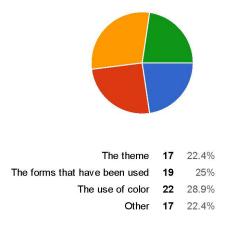
| 2 2       |    |       |
|-----------|----|-------|
| Challenge | 9  | 11.8% |
| Other     | 12 | 15.8% |

## Figure 1

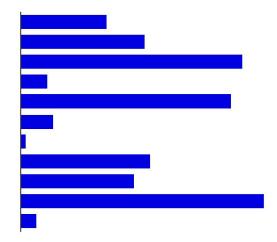
What is your first impression of the picture?



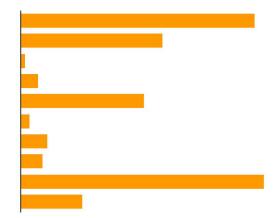
What element in the screenshot affects your mind the most?



Which terms best fit the screenshot? (Choose up to three answers)



which elements from the screenshot grab your attention the most? (Choose up to three answers)



| The Windows               | 53 | 70.7% |
|---------------------------|----|-------|
| The tree branch           | 32 | 42.7% |
| The door                  | 1  | 1.3%  |
| The robot                 | 4  | 5.3%  |
| The plants                | 28 | 37.3% |
| The ventilation shaft     | 2  | 2.7%  |
| The wheel                 | 6  | 8%    |
| The plateau in the middle | 5  | 6.7%  |
| The light                 | 55 | 73.3% |
| Other                     | 14 | 18.7% |
|                           |    |       |

### What kind of space do you think this is? (Give your answer in one sentence)

a room on a deserted planet A terrace, dock for a fly ship Control Room of a habitable fantasy flying vehicle old airship. zeppelin? a magic vessel, a kind of under very in the air, which proceeds slowly. Lounge. It seems someone's bedroom or home. Admission for a flying ship / treehouse Living / hub alien conservatory? Cockpit observe deck of ship? Throne Room Observation area The control room of an airship, where there is the captain. At the top of a cliff or high in a tree abandoned observation tower The bridge / cockpit of a building or the like flying I think this is a kind of control room / wheelhouse. A bunker / base into a mountain with a lot of green goo. The atmosphere reminds me of a compound somewhere in the future after leaving a robot (extinct) is. I would like to know (expectation) what happened to the original inhabitants. The room appears to have been made to the nature and architecture work together (given the special hole for the branch in picture 1) This is strange with my expectation that this (far) is in the future because of broken glass should be if the tree is not grown further.

A kind of crashed zeppelin

It is a part of a large, wildly proliferating forest stranded spaceship in which nature has been trying to assimilate the spaceship.

No idea.

A filthy room

It is the cockpit

Figure 1 is in the cockpit of a zeppelin and figure 2 in a secret base in a mountain. Abandoned building / vehicle from the future. (Actually from the future or the game is still further into the future, think of eg Wall-E)

An abandoned ship?

Abandoned observation deck, high on a mountain built.

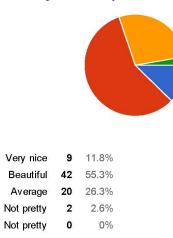
stomach contents of a fish Abandoned aircraft in the forest A home / start place for a character, a village in the air Room from where you will continue but comes back. More a hallway than a room. Type flying instalation a sort of overgrown flying castle The wheelhouse of an abandoned airship. Damaged workspace. A flight for decades is no longer in business. a balcony prayer room a high point, possibly the top of a high tower cave area a location (flying platform / object) in the air Here lives an air-hobbit. It appears on the bridge of a ship, having regard to the steering wheel on the right side of the structure A room high up in a mountain. A (ship) control room. A watchtower or a cockpit of an old spaceship, zeppelin airship or fantasy A 'house' on a rock Viewpoint I think it's a (riumte) ship that gets its energy from the tree. The cockpit of a treehouse-airship? : -S A space high in the sky: living room + Outside and futuristic feeling I get it. Some kind of control chamber (as in on a ship). A space in a wrecked spaceship which is then used as a permanent home on another planet A spaceship I think this place is in a tree and a living space. The space in which you control a ship or similar. a sort of mysterious labortoruim / living room a cockpit or control room **Balconies** A kind of ship or a stranded submarine (Jules Verne style), judging from the round windows, metal beams and steering wheel. The front of a ship A deserted flying woonschip

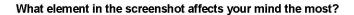
A tree house on the beach near the sea.

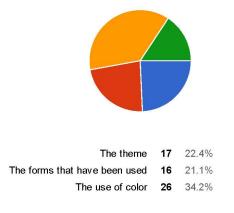
a living room A house on a sea cliff Wheelhouse of a micro planet? Penthouse Home or office from someone or something A bizarre type of ship, judging from the steering wheel and the windows, and the absence of land outside of the structure. Airship Expired sleep, reunion of a bedroom (a large complex as castle.

## Figure 2

What is your first impression of the picture?

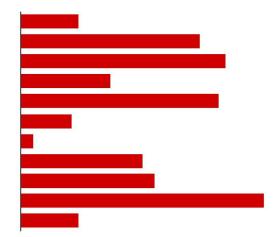






| Other | 11 | 14.5% |
|-------|----|-------|
|-------|----|-------|





| Cheerful     | 9  | 12.5% |
|--------------|----|-------|
| Lonely       | 28 | 38.9% |
| Peace        | 32 | 44.4% |
| Cozy         | 14 | 19.4% |
| Peaceful     | 31 | 43.1% |
| Exciting     | 8  | 11.1% |
| Hostile      | 2  | 2.8%  |
| Friendly     | 19 | 26.4% |
| Enchantingly | 21 | 29.2% |
| Mysterious   | 38 | 52.8% |
| Other        | 9  | 12.5% |
|              |    |       |

Which elements from the screenshot grab your attention the most? (Choose up to three answers)

|                           |    |       | 1 - C |
|---------------------------|----|-------|-------|
|                           |    |       |       |
|                           |    |       |       |
| 1                         |    |       |       |
|                           |    |       |       |
| The wheel                 | 4  | 5.5%  |       |
| The plateau in the middle | 5  | 6.8%  |       |
| The light                 | 45 | 61.6% |       |
| Other                     | 12 | 16.4% |       |

### What kind of space do you think this is? (Give your answer in one sentence)

It seems a sort of garden space through the plants and the water.

Another space in the vehicle .. it can not quite place

living in a tree which is used by strange creatures A magic vessel, a kind of under very in the air, which proceeds slowly. Study or rest area living room A deserted hobbit Living room of Figure 1; same building. A ship A space in a tree, a living room. Home of a robot-hermit A living room with a canyon view as to the viewers' side and a window on the other side. Figure 1 is a cockpit of a zeppelin and figure 2 a secret base in a mountain.

A living room

house in a hollow tree

a house in a tree

Someone's room

- a room in a tree uigeholde
- a deserted observation tower

Here lives an air-hobbit cave. A tree house on the beach near the sea. Cave A room behind the wheelhouse of the micro planet? I think a kind of quiet space for passengers or the crew of the airship. Treehouse window. Type flying ship Open room for a new house (door leading to the house, you are not in the house). Penthouse a cave or building incorporated into a mountain A beinplek of the game, home of the main character (village in the sky) No idea. Inside the space for it, a tree house living room kapitijn hut in a fish no idea a hall in a big house Base or bunker in a mountain. A living room, because I left you see a TV, but I see no furniture. Living room. alien living room A kind of private room Teleportation room (entrance)? Could also be a Zen place. Part of the abandoned houseboat flying Stay An abandoned ship Standard room with a view, anything special Room It would be an important house that you run during your gameplay (the home of King / your grandmother etc.) A kind of personal departure. A hall. cave area A home carved into a mountain interspace This is someone's office. I think this is a living room Abandoned workspace a 'forgotten' room Prison airship

The cockpit sort of flying castle

It's like having a living.

No idea? There are many separate elements that share nothing on the first face with each other. The left part is cozy with plants and a TV / screen. Then you would think a living room. But the right is more like a sewer or prison.

A hall, just a gap which leads to a more important area.

a mysterious living room

Room in a large tree

Outside / porch of a house

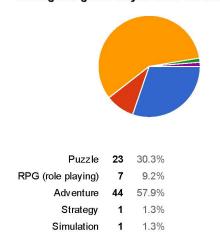
Get more office feeling here. And I wonder what this button does right.

Maybe and spacing to the control room or engine room

It looks like someone lives there, only it is completely overgrown with plants and

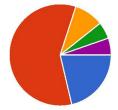
there are no chairs, so if it is very nice, I do not know ...

Living room



### What game genre do you think fits this image?

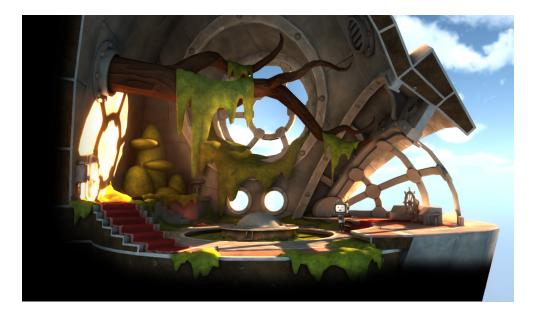
Have you become interested by these images in the game?



| I am very interested             | 16 | 21.1% |
|----------------------------------|----|-------|
| I am a little interested         | 44 | 57.9% |
| I'm only interested if it's free | 7  | 9.2%  |
| I'm not interested at all        | 4  | 5.3%  |
| Other                            | 4  | 5.3%  |

## Number of daily responses





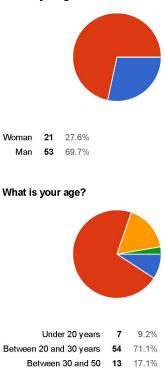
hatamoto.mizu@gmail.com 🔻

# 76 responses

View all responses Publish analytics

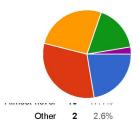
### Summary

What is your gender?

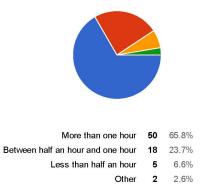


How often do you play an average game?

Older than 50 2 2.6%



How long do you play an average of succession?

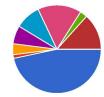


Which of these games (sets) you speak the most?



| New Super Mario Bros   | 7  | 9.2%  |
|------------------------|----|-------|
| Uncharted              | 19 | 25%   |
| Call of Duty Black Ops | 8  | 10.5% |
| Halo                   | 3  | 3.9%  |
| Farm Ville             | 0  | 0%    |
| FIFA                   | 3  | 3.9%  |
| The Sims               | 9  | 11.8% |
| Other                  | 24 | 31.6% |
|                        |    |       |

### On what platform do you play most often?



| PC Steam                | 35 | 46.1% |
|-------------------------|----|-------|
| PC Facebook / Hyves     | 1  | 1.3%  |
| Nintendo DS / 3DS       | 3  | 3.9%  |
| PSP / Playstation VITA  | 0  | 0%    |
| iPad / iPhone / Android | 5  | 6.6%  |
| XBOX 360                | 7  | 9.2%  |
| Playstation 3           | 12 | 15.8% |
| Wii                     | 2  | 2.6%  |
| Other                   | 10 | 13.2% |

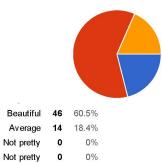
What is for you the main reason to play a game?



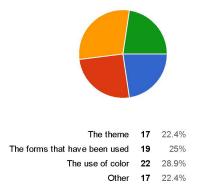
| The story and characters          | 25 | 32.9% |
|-----------------------------------|----|-------|
| The gameplay                      | 21 | 27.6% |
| Social interaction or multiplayer | 8  | 10.5% |
| Challenge                         | 9  | 11.8% |
| Other                             | 12 | 15.8% |

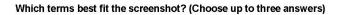
Figure 1

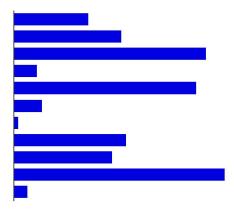
What is your first impression of the picture?



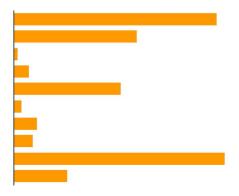
What element in the screenshot affects your mind the most?







which elements from the screenshot grap your attention the most? (Choose up to three answers)



| The Windows               | 53 | 70.7% |
|---------------------------|----|-------|
| The tree branch           | 32 | 42.7% |
| The door                  | 1  | 1.3%  |
| The robot                 | 4  | 5.3%  |
| The plants                | 28 | 37.3% |
| The ventilation shaft     | 2  | 2.7%  |
| The wheel                 | 6  | 8%    |
| The plateau in the middle | 5  | 6.7%  |
| The light                 | 55 | 73.3% |
| Other                     | 14 | 18.7% |

#### What kind of space do you think this is? (Give your answer in one sentence)

a room on a deserted planet A terrace, dock for a fly ship Control Room of a habitable fantasy flying vehicle old airship. zeppelin? a magic vessel, a kind of under very in the air, which proceeds slowly. Lounge. It seems someone's bedroom or home. Admission for a flying ship / treehouse Living / hub alien conservatory? Cockpit observe deck of ship? Throne Room Observation area The control room of an airship, where there is the captain. At the top of a cliff or high in a tree abandoned observation tower The bridge / cockpit of a building or the like flying I think this is a kind of control room / wheelhouse. A bunker / base into a mountain with a lot of green goo. The atmosphere reminds me of a compound somewhere in the future after leaving a robot (extinct) is. I would like to know (expectation) what happened to the original inhabitants. The room appears to have been made to the nature and architecture work together (given the special hole for the branch in picture 1) This is strange with my expectation that this (far) is in the future because of broken glass should be if the tree is not grown further. A kind of crashed zeppelin It is a part of a large, wildly proliferating forest stranded spaceship in which nature has been trying to assimilate the spaceship. No idea. A filthy room It is the cockpit Figure 1 is in the cockpit of a zeppelin and figure 2 in a secret base in a mountain. Abandoned building / vehicle from the future. (Actually from the future or the game is still further into the future, think of eg Wall-E) An abandoned ship?

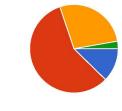
Abandoned observation deck, high on a mountain built.

stomach contents of a fish Abandoned aircraft in the forest A home / start place for a character, a village in the air Room from where you will continue but comes back. More a hallway than a room. Type flying instalation a sort of overgrown flying castle The wheelhouse of an abandoned airship. Damaged workspace. A flight for decades is no longer in business. a balcony prayer room a high point, possibly the top of a high tower cave area a location (flying platform / object) in the air Here lives an air-hobbit. It appears on the bridge of a ship, having regard to the steering wheel on the right side of the structure A room high up in a mountain. A (ship) control room. A watchtower or a cockpit of an old spaceship, zeppelin airship or fantasy A 'house' on a rock Viewpoint I think it's a (riumte) ship that gets its energy from the tree. The cockpit of a treehouse-airship? : -S A space high in the sky: living room + Outside and futuristic feeling I get it. Some kind of control chamber (as in on a ship). A space in a wrecked spaceship which is then used as a permanent home on another planet A spaceship I think this place is in a tree and a living space. The space in which you control a ship or similar. a sort of mysterious labortoruim / living room a cockpit or control room Balconies A kind of ship or a stranded submarine (Jules Verne style), judging from the round windows, metal beams and steering wheel. The front of a ship A deserted flying woonschip A tree house on the beach near the sea.

a living room A house on a sea cliff Wheelhouse of a micro planet? Penthouse Home or office from someone or something A bizarre type of ship, judging from the steering wheel and the windows, and the absence of land outside of the structure. Airship Expired sleep, reunion of a bedroom (a large complex as castle.

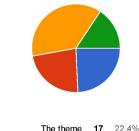
### Figure 2

What is your first impression of the picture?



| Very nice  | 9  | 11.8% |
|------------|----|-------|
| Beautiful  | 42 | 55.3% |
| Average    | 20 | 26.3% |
| Not pretty | 2  | 2.6%  |
| Not pretty | 0  | 0%    |

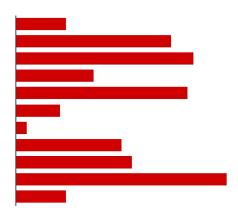
What element in the screenshot affects your mind the most?



|                               | The theme        | 17 | 22.4% |
|-------------------------------|------------------|----|-------|
| The forms that have been used |                  | 16 | 21.1% |
|                               | The use of color | 26 | 34.2% |

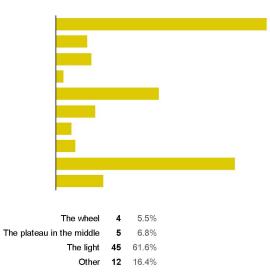
Other 11 14.5%

Which terms best fit the screenshot? (Choose up to three answers)



| Cheerful     | 9  | 12.5% |
|--------------|----|-------|
| Lonely       | 28 | 38.9% |
| Peace        | 32 | 44.4% |
| Cozy         | 14 | 19.4% |
| Peaceful     | 31 | 43.1% |
| Exciting     | 8  | 11.1% |
| Hostile      | 2  | 2.8%  |
| Friendly     | 19 | 26.4% |
| Enchantingly | 21 | 29.2% |
| Mysterious   | 38 | 52.8% |
| Other        | 9  | 12.5% |
|              |    |       |

Which elements from the screenshot grab your attention the most? (Choose up to three answers)



### What kind of space do you think this is? (Give your answer in one sentence)

It seems a sort of garden space through the plants and the water. Another space in the vehicle .. it can not quite place living in a tree which is used by strange creatures A magic vessel, a kind of under very in the air, which proceeds slowly. Study or rest area living room A deserted hobbit Living room of Figure 1; same building. A ship A space in a tree, a living room. Home of a robot-hermit A living room with a canyon view as to the viewers' side and a window on the other side. Figure 1 is a cockpit of a zeppelin and figure 2 a secret base in a mountain. A living room house in a hollow tree a house in a tree Someone's room a room in a tree uigeholde

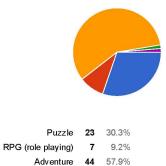
a deserted observation tower

Here lives an air-hobbit cave. A tree house on the beach near the sea. Cave A room behind the wheelhouse of the micro planet? I think a kind of quiet space for passengers or the crew of the airship. Treehouse window. Type flying ship Open room for a new house (door leading to the house, you are not in the house). Penthouse a cave or building incorporated into a mountain A beinplek of the game, home of the main character (village in the sky) No idea. Inside the space for it, a tree house living room kapitijn hut in a fish no idea a hall in a big house Base or bunker in a mountain. A living room, because I left you see a TV, but I see no furniture. Living room. alien living room A kind of private room Teleportation room (entrance)? Could also be a Zen place. Part of the abandoned houseboat flying Stay An abandoned ship Standard room with a view, anything special Room It would be an important house that you run during your gameplay (the home of King / your grandmother etc.) A kind of personal departure. A hall. cave area A home carved into a mountain interspace This is someone's office. I think this is a living room Abandoned workspace a 'forgotten' room Prison airship

The cockpit sort of flying castle It's like having a living. No idea? There are many separate elements that share nothing on the first face with each other. The left part is cozy with plants and a TV / screen. Then you would think a living room. But the right is more like a sewer or prison. A hall, just a gap which leads to a more important area. a mysterious living room Room in a large tree Outside / porch of a house Get more office feeling here. And I wonder what this button does right. Maybe and spacing to the control room or engine room It looks like someone lives there, only it is completely overgrown with plants and there are no chairs, so if it is very nice, I do not know ..

Living room

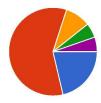
### What game genre do you think fits this image?



 Strategy
 1
 1.3%

 Simulation
 1
 1.3%

Have you become interested by these images in the game?



| I am very interested             | 16 | 21.1% |
|----------------------------------|----|-------|
| I am a little interested         | 44 | 57.9% |
| I'm only interested if it's free | 7  | 9.2%  |
| I'm not interested at all        | 4  | 5.3%  |
| Other                            | 4  | 5.3%  |

## Number of daily responses



## **APPENDIX AC**



Moodbot\_GameWlkThrg\_dv\_1.1.3

Content: video 7 minutes 47 seconds

Language: English

**Description:** Demonstrates the implementation of the most important design features, e.g. the player's room, moodbot customization, personal challenges, etc.

## **APPENDIX AD**



Moodbot\_GameWlkThrg\_dv\_1.12

Content: video 12 minutes 53 seconds

Language: English

**Description:** Demonstrates progress in implementing user interface designs and game features such as referee system.

## **APPENDIX AE**



DesignState\_9.1\_Playtest

**Content:** Portable Document Format, 1 page **Language:** English

**Description:** A collection of notes taken during a play-test with the target audience from Altrecht's ABC department.

Client- Abdel (male) 1<sup>st</sup> time play-tester

- Comment: "His therapy is not a game"
- The client was very enthusiastic towards the end of the session because he seemed to have an idea of how he would use the game in relationship to the moodchips
- Supplied these goals: vacuuming, cooking, shopping, communal living tasks

Altrecht Healthcare worker (female) 1<sup>st</sup> time play-tester

- She commented on the green moss as not being very attractive
- Liked the customization of the moodjournal
- Had several questions about the kinds of information she would get from the game
- Was positive over the various forms of communication (e.g. Liked the moobot face & posture) the game offers to be used during contact moments with the client

Altrecht Healthcare worker- Joris (male) 1st time play-tester

- Joris suggested a different way of introducing the game because the word 'game' seems to create the reaction of therapy is not a game
- Joris and the client commented on the preference to customize their room enviorment more than just with the moodtube

General Observations

- Everyone needed to be walked through the game
- Several aspect of the UI were not immediately recognizable

## **APPENDIX AF**



DesignState\_9.2\_Playtest

Content: Portable Document Format, 9 pages

Language: English

**Description:** A collection of notes taken during a play-test with the target audience from Altrecht's ABC and Roosenburg departments.

### Verslag Playtests 12-12-12 en 4-1-13 bij Roosenburg en ABC

#### Roosenburg

Op woensdag 12-12-12 hebben Micah, Sjoerd en Lies geplaytest bij Roosenburg in Den Dolder. Er is getest met 4 cliënten, twee vrouwen en twee mannen tussen de 40 en 45 jaar. Ook waren er vier hulpverleners aanwezig. In het algemeen verliep de playtest vrij rommelig omdat de cliënten meteen binnen kwamen.

Een volgende keer moeten wij explicieter maken dat we eerst alleen met de hulpverleners willen praten.

#### ABC

Op vrijdag 4-1-13 hebben Micah en Lies getest bij ABC. Hier hebben we getest met vijf (jonge) cliënten, twee vrouwen en drie mannen. Twee van hen hadden ook eerdere versies van Moodbot getest (Mirjam en Chester).

Bij deze playtest waren er wat meer functies geïmplementeerd in Moodbot, zoals het inzetten van punten om het vliegtuig vooruit te laten gaan of te sturen. Echter werkten er dingen niet waarvan we wel gehoopt hadden dat ze zouden werken.

### Resultaten

#### +++Pluspunten++++

- Hulpverleners waren over het algemeen tevreden over **vele mogelijkheden tot communicatie en uitdrukken van de stemming**. Ze gaven aan dat de gezichtsuitdrukkingen en houdingen van de moodbots nog altijd niet volkomen eenduidig zijn, maar dat de tekstballon met vrije tekstinvoer hier wel aan bijdraagt.
- Over het algemeen zijn cliënten enthousiast en zien ze potentie. Ze vinden het een leuke manier om zo met elkaar en hulpverleners in contact te zijn.
- Het selecteren van afbeeldingen voor de moodtube vinden spelers leuk.
- Bij ABC werd gezegd: het is ook leuk via dit spel **in contact te blijven** met ABC als je er weg bent, of juist vanuit ABC contact te houden met de buitenwereld.

#### ---Suggesties----

- Een **melding** als een moodchip geaccepteerd is, zou fijn zijn. Dan weet je ook dat iemand het waardeert (en geen melding als de moodchip niet geaccepteerd wordt.)
- Het **level-up** idee wordt gewaardeerd: het vrijspelen van verschillende opties, zoals nog meer opties om je kamer te customizen met bijvoorbeeld muziek of het uploaden van je eigen afbeeldingen, spreekt cliënten erg aan.

- De 'scheidsrechters' zouden **eens per week** te veranderen moeten zijn (i.v.m. mogelijke ruzies)
- Het zou leuk zijn in de centrale ruimte een soort **centraal prikbord** te hebben. Hier staan bijvoorbeeld dingen als 'de missie van de dag', doelen die behaald zijn en hier zouden spelers centraal kunnen communiceren over de koers van het schip.
- Cliënten zouden zelf ook graag grafieken zien van hun spelverloop/progressie.

### ----Verbeterpunten/onduidelijkheden----

- De spelers bij ABC begrepen niet helemaal waar de **dustbunnies** voor dienden; waarom deze nog gevangen moesten worden en de punten niet 'gewoon' bijgeschreven werden. De speelsheid ervan schenen zij niet helemaal te waarderen (kan ook komen doordat ze moeilijk te pakken waren).
- Cliënten zouden graag zoveel mogelijk mogelijkheden hebben om de kamer en de moodbot persoonlijk te maken / te **customizen**. Dus niet alleen de moodtube.
- Ook meer interactieve elementen in de kamer zou leuk zijn.
- Met name de (wat oudere) cliënten bij Roosenburg hadden erg veel uitleg nodig om het spel te kunnen bedienen.
- Perceptie: bij de (wat oudere) cliënten bij Roosenburg is het misschien beter het geen game te noemen. Ze zeggen: mijn therapie is geen spelletje. Daar zouden we kunnen kiezen voor de term 'online tool' of iets dergelijks. Eén van de mannelijke cliënten vond de moodbot ook te kinderachtig.
- De (wat oudere) cliënten bij Roosenburg hadden meer **zingeving aan de punten** nodig. Inzetten om een schip te besturen leek hen niet genoeg (maar dit was ook nog niet geïmplementeerd bij deze test, bij ABC klaagde niemand hierover).
- Het invullen van tekst bij het geven van een moodchip, wordt door veel proefpersonen verkeerd geïnterpreteerd, namelijk als een **chatfunctie**. Ook willen ze sowieso eerst een vraag stellen aan de speler: *wat is er dan precies aan de hand?* alvorens ze een moodchip willen geven.
- Quote tester (vrouw) bij Roosenburg: *Ik zeg 'Kom je koffie drinken?' en hij zegt niks terug!*
- Groene begroeiing wordt nog steeds als 'smurrie' gezien.

### Opmerking:

Bij ABC zijn de cliënten bang dat het spel na verloop van tijd saai zal worden, omdat de gameplay in principe altijd hetzelfde is. Ze stellen minigames voor die telkens vernieuwd kunnen worden. De hulpverleners stellen ook kleine quizjes voor, bijvoorbeeld over psycho-educatie. Het is de vraag of wij dit ook een goed idee vinden. De cliënten gaven zelf ook aan dat het niet te verslavend mag zijn. We hebben ook uitgelegd dat er bewust is gekozen voor een beperkt aantal moodchips per dag om de speeltijd beperkt te houden.

# Usability / interface (veel van deze dingen wordt al aan gewerkt, dus misschien ten overvloede)

- De bruine pijlen waar men op moet klikken bij het instellen van het 'dashboard' vallen weg tegen de achtergrond.
- De dustbunnies schieten te snel weg en zijn moeilijk te vangen.
- Het inzetten van punten is op dit moment heel omslachtig
- Een plattegrond van kamers zou fijn zijn / snellere navigatie tussen de kamers en naar de juiste personen.

### Mogelijke doelen

Voorbeelden van behandeldoelen zijn:

- Minder roken
- Minder koffie drinken
- Doe mee aan activiteit X
- Kook een maaltijd
- Doe boodschappen /shoppen
- Stofzuigen

# Play tests report 12-12-12 and 4-1-13 by Roosenburg and ABC

#### Roosenburg

On Wednesday 12-12-12 have Micah, Sjoerd and groin geplaytest at Rahi in Den Dolder. There has been tested with 4 clients, two women and two men between 40 and 45 years. Also there were four aid workers present. In general the play test went pretty messy because the clients right away.

The next time we need to make more explicit that we first want to talk only with the aid workers.

### ABC

On Friday 4-1-13 have Micah and groin tested at ABC. Here we have tested with five (young) clients, two women and three men. Two of them also had previous versions of Moodbot tested (Mirjam and Chester).

At this play test, there were some more features implemented in Moodbot, such as the use of points to the airplane forward to let go or to send. We do not, however, worked there are things of which had hoped that they would work.

### Results

- + + + + + + + + Plus points
  - Aid workers were generally satisfied with **many possibilities for communication and expressing the vote**. They indicated that the facial expressions and postures of the moodbots still not perfectly clear, but that the text balloon with free PLU input contributes to this.
  - Clients are generally enthusiastic and they see potential. They find it a fun way to get in touch with each other and so aid workers.
  - Selecting images for the find players like moodtube .
  - At ABC was said: it is also fun through this game **to stay in touch** with ABC if you are away, or from ABC to keep in touch with the outside world.

#### ---Suggestions----

- A **message** is accepted, if a moodchip would be fine. Then you know also that someone appreciates (and no message if the moodchip not accepted.)
- The **level-up** idea is appreciated: clear different options such as even more options to customize your room with for example music or uploading your own graphics, speaks to clients.
- The 'referees' would change once a week (because of possible feuds)

- It would be nice in the central space to have a kind of **Central Bulletin Board** . For example, here are things like ' the Mission of the day ', goals achieved and here players can communicate about the central rate of the ship.
- Clients would also like to see graphs of their game details/progression.

#### -----Disadvantages/ambiguities

- The players at ABC did not understand at all where the **dustbunnies** for served; why this still had to be caught and not ' just ' the points were credited. The playfulness of it seemed they didn't quite appreciate (can also be because they were difficult to address).
- Clients would love to have as many opportunities to the room and the moodbot to personalize/ **Customize**. Not just the moodtube.
- Also more interactive elements in the room would be nice.
- In particular, the (somewhat older) clients in Rahman had very **much** explanation needed to play the game.
- Perception: at the (somewhat older) clients in Rahi it might be better **not to mention game**the. They say: my therapy is not a game. There we would be able to choose the term ' online tool ' or something like that. One of the male clients found the moodbot also too childish.
- The (older) clients in Rahman had more **meaning to the points** needed. Committed to a ship to drive them seemed not enough (but this was also not yet implemented in this test, at ABC no one complained about this).
- Filling out text when giving a moodchip, is considered by many subjects misinterpreted, namely as a **chat function**. They also want to first ask a question in any case as to the player: *What's exactly going on?* before they want to give a moodchip.
- Quote tester (woman) at Rahman: I say 'you drink coffee? ' and he says nothing back!
- Green vegetation is still seen as 'gunk'.

#### Note:

At ABC clients are afraid that the game over time will be boring, because the gameplay in principle is always the same. They enable mini games for which can be renewed. The aid

workers also small quizjes for, for example about psycho-education. The question is whether we find a good idea. The clients also gave itself to that it is not too addictive. We have also explained that there is deliberately chosen for a limited number of moodchips per day to playing time.

# Usability/interface (many of these things is already working on it, so maybe unnecessarily)

- The Brown arrows where you have to click to set the 'dashboard 'fall away against the background.
- The dustbunnies shooting too fast way and are hard to catch.
- Using points is currently very cumbersome
- A city map rooms would be fine/faster navigation between the rooms and to the right people.

# **Possible targets**

Examples of treatment goals are:

- Less smoke
- Less coffee drinking
- Join activity X
- Cooking a meal
- Do messages/shoppen
- Vacuuming

# feature playtest\_17012013

Mini-game

-Mini-game: Dustbunnies

Coregame

-Graph

-Moodtube isn't seen by other players

-moodtube images are gone when the player returns to room

-Moodchips are not working

- -No messages sent out from the challenge tree resolve
- -Player the recieve challenge completion message needs to confirm it or decline it

Metagame

-Metagame points save not working

-Metagame the ship can flip 180

# ABCplaytest notese04012013

**3 Female Players** 

3 male players

2 female healthcare workers

2 male helathcare workers

Healthcare worker was concenred about the interpretation of the facces. Apparently even smilles are a bit of an issue with their meaning.

There was the idea for a chat feature. Players feel they would like to directly be able to caht with other players. Concerning the moodchips there was a question as to how many a player would get. Alos along these lines there was a request to knowing how other players are online at the same time.

The arrow buttons next to the meters are not easy to see.

The was suggestion to add missions to make the tasks in the game easier to understand.

Navigating from room to room is an issue.

There was a request to upload personal images to the moodtube. There was a request to be able to personalize the player's room. There was a suggestyion to have many mini-games and a way to attack other players. There was suggestion for a central meeting room with a news board like thing.

- Concerned comments over face and posture.

- Chat

- Are other player's Online

- Two teams
- Arrows unclear

# feature playtest\_17012013

Mini-game

-Mini-game: Dustbunnies

Coregame

-Graph

-Moodtube isn't seen by other players

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There was a request to upload personal images to the moodtube. There was a request to be able to personalize the player's room. There was a suggestyion to have many mini-games and a way to attack other players. There was suggestion for a central meeting room with a news board like thing.

- Concerned comments over face and posture.

- Chat

- Are other player's Online

- Two teams

- Arrows unclear

- Missions
- Pts vs communication
- Want to help with the moodchip People can't contact
- looking around for people in the rooms is an issue
- More interactive room
- Dress your room
  upload your own images
- Central room w/ news and such message room
- Self biography
- Competition Hockey table (meta game)
- Clouds to hide the dustbunniesDustbuny pong?
- Fresh content
- Quiz questions Puzzles
- External Plugins that give you moodbot points?

- 30-10

- Maybe a community is needed outside the game

# **APPENDIX AG**



Moodbot\_GameWlkThrg\_dv\_1.24

Content: video 10 minutes 05 seconds

Language: English

**Description:** Demonstrates further progress implementing game design features and game graphics. Features such as the player's progression have been implemented.

# **APPENDIX AH**



Moodbot\_GameWlkThrg\_dv\_1.27

Content: video 10 minutes 05 seconds

Language: English

DesignState 10 Playtest

**Description:** Demonstrates further progress implementing game design features and game graphics.

# **APPENDIX AI**



Content: Portable Document Format, 30 pages Language: Dutch w/ English Translation Description: A collection of notes taken from Facebook during a remote play-test with the target audience.

| Feedback   | Status                              | Action   |
|--|-------------------------------------|--|
| Ik kan niet op iemands bericht reageren en ik loop hierdoor vast.  | FIXED                               |  |
| Ik kan helaas niet zien, wat sommige cliënten zeggen of denken.  | FIXED                               |  |
| Ik kan geen moodchip geven.<br>Hoe moet ik uitloggen en mijn gedachtenbalon, moodbothouding en spreekbalon   | FIXED                               |  |
| opslaan?   | FIXED                               |  |
| Hij loopt vast als ik een moodchip wil geven aan een personage,<br>niet iemand van ABC.  | FIXED                               |  |
| Ik sta in de onderzeeboot en de Menu-knop werkt niet?  | FIXED                               |  |
| Ik heb er zelf nauwelijks opgezeten (sorry) terwijl het echt belangrijk is om dagelijks<br>evenin te loggen.   | FIXED                               | Tuning is still required   |
| Zij hebben (na 10 minuten per dag) het na deze week wel ermee gehad: er is niets meer te<br>ontdekken of te bereiken.  | Gameplay<br>Issue                   | The greater goals in the<br>game do not exisit. This<br>is still an issue of game<br>development time and<br>tuning. |
| Ik snap nog steeds niet hoe ik de houding van mijn moodbot nou kan opslaan, op enter<br>duwen helpt in ieder geval niet.   | FIXED                               |  |
| Oh en als je iemand een moodchip stuurt, moet je juist weer niet op enter duwen voordat<br>je op het groene vinkje klikt, want dan krijg je die moodchip niet meer uit beeld (ik weet<br>niet of ie dan wel verzonden is??)  | FIXED                               |  |
| Verder is het nu nog een beetje saai dat je nog niets kunt met je met-frustratie-gevangen<br>dustbunnies.  | FIXED                               | Tuning is still required   |
| hij slaat die bunnies ook nog niet op, dus je doet het nu nog echt voor alleen frustratie  | FIXED                               |  |
| Mijn houding is ook niet opgeslagen nu ik een tweede keer (met veel moeite) in heb<br>gelogd.  | FIXED                               |  |
| Ik hoor ook geen muziekjes als ik in de kamer van een ander ben.   | FIXED                               |  |
| Moodbunnies gaan wel erg snel. Gelukkig kan je blijven proberen en gaan ze niet weg.   | FIXED                               | Tuning is still required   |
| Privacy settings. Nu moet je liegen als je sommige dingen niet met clienten en/of<br>begeleiders wilt delen, wat verkeerde informatie geeft  | Not Included In<br>the Feature List | This is feature that<br>should implemented in<br>the up scaling of the<br>game.                                      |
| Naam van Kamer displayen, bijvoorbeeld machinekamer of stuurkamer, in de ruimte waar<br>je bent.   | UI Problem                          | To Be Fixed  |
| Kunnen reageren op Moodchips.  | FIXED                               | The moodchip isn't<br>designed as a messaging<br>system.   |
| Moodchips kunnen deleten.  | FIXED                               | Accepted moodchips will<br>be deleted after 2-3<br>days.   |
| In het bewonersdeel, dat je een kamer kan kiezen om te bezoeken, zou ik liever iedereens<br>poppetje willen zien met stemming en laatst ingelogd enzo, ipv gewoon een lijst met<br>namen   | UI Problem                          | Good suggestion!   |
| Op zich kun je andermans poppetjes in de andere delen van de skyfish zien, maar het zou<br>wel handig zijn als daar namen bij staan.   | FIXED                               |  |
| Dustbunnies zijn onmogelijk te vangen met alleen een touchpad.   | FIXED                               | Tuning is still required   |
| Inloggen gaat traag op mijn laptop (goed, ruim 4 jaar oud reeds). En de graphics zijn<br>daardoor ook slechter, ik voeg een plaatje toe van hoe de machinekamer er uit ziet op   | FIXED                               |  |
| mijn laptop.<br>Bug bij het inloggen waar de aanwijzer blijft staan: als je toch wilt inloggen (wel essentieel<br>voor het spelen van de game ;) ) Als de knipperaanwijzer aan is, blijft hij als char staan, als<br>hij uit is kan je tabben of klikken zonder dat deze blijft staan. | FIXED                               |  |
| Die dustbunnies zijn nog verrekte moeilijk te vangen!  | FIXED                               | Tuning is still required   |
| Ik weet nog niet precies hoe ik nou mijn houding opgeslagen krijg. Tekst wel, dan moet je<br>dus op enter drukken als je je tekst hebt getypt.<br>Challenges werken niet   | FIXED                               |  |

Acties komen niet terug in het spel

ABCplaytest\_facebook comments\_24062013

Ik kan niet op iemands bericht reageren en ik loop hierdoor vast.

Ik kan helaas niet zien, wat sommige cliënten zeggen of denken.

Ik kan geen moodchip geven.

Ik kan helaas niet zien, wat sommige cliënten zeggen of denken.

Hoe moet ik uitloggen en mijn gedachtenbalon, moodbothouding en spreekbalon opslaan?

Hij loopt vast als ik een moodchip wil geven aan een personage,

niet iemand van ABC.

Ik sta in de onderzeeboot en de Menu-knop werkt niet?

Ik heb er zelf nauwelijks opgezeten (sorry) terwijl het echt belangrijk is om dagelijks evenin te loggen.

Zij hebben (na 10 minuten per dag) het na deze week wel ermee gehad: er is niets meer te ontdekken of te bereiken.

Ik snap nog steeds niet hoe ik de houding van mijn moodbot nou kan opslaan, op enter duwen helpt in ieder geval niet.

Oh en als je iemand een moodchip stuurt, moet je juist weer niet op enter duwen voordat je op het groene vinkje klikt, want dan krijg je die moodchip niet meer uit beeld (ik weet niet of ie dan wel verzonden is??)

Verder is het nu nog een beetje saai dat je nog niets kunt met je met-frustratie-gevangen dustbunnies.

hij slaat die bunnies ook nog niet op, dus je doet het nu nog echt voor alleen frustratie

Mijn houding is ook niet opgeslagen nu ik een tweede keer (met veel moeite) in heb gelogd.

Ik hoor ook geen muziekjes als ik in de kamer van een ander ben.

Moodbunnies gaan wel erg snel. Gelukkig kan je blijven proberen en gaan ze niet weg.

Privacy settings. Nu moet je liegen als je sommige dingen niet met clienten en/of begeleiders wilt delen, wat verkeerde informatie geeft

Naam van Kamer displayen, bijvoorbeeld machinekamer of stuurkamer, in de ruimte waar je bent.

Kunnen reageren op Moodchips. Moodchips kunnen deleten.

In het bewonersdeel, dat je een kamer kan kiezen om te bezoeken, zou ik liever iedereens poppetje willen zien met stemming en laatst ingelogd enzo, ipv gewoon een lijst met namen

Op zich kun je andermans poppetjes in de andere delen van de skyfish zien, maar het zou wel handig zijn als daar namen bij staan.

Dustbunnies zijn onmogelijk te vangen met alleen een touchpad.

Inloggen gaat traag op mijn laptop (goed, ruim 4 jaar oud reeds). En de graphics zijn daardoor ook slechter, ik voeg een plaatje toe van hoe de machinekamer er uit ziet op mijn laptop.

Bug bij het inloggen waar de aanwijzer blijft staan: als je toch wilt inloggen (wel essentieel voor het spelen van de game ;) ) Als de knipperaanwijzer aan is, blijft hij als char staan, als hij uit is kan je tabben of klikken zonder dat deze blijft staan.

Die dustbunnies zijn nog verrekte moeilijk te vangen!

Ik weet nog niet precies hoe ik nou mijn houding opgeslagen krijg. Tekst wel, dan moet je dus op enter drukken als je je tekst hebt getypt.

ABCplaytest\_facebook comments\_24062013

I can't comment on someone's message and I walk because of this.

I unfortunately can not see, what some clients say or think.

I can not moodchip.

I unfortunately can not see, what some clients say or think.

How should I log out and save my gedachtenbalon, moodbothouding and spreekbalon?

He freezes when I want to give a moodchip to a character,

not one of ABC.

I stand in the submarine and the Menu button not working?

I have one myself hardly been on (sorry) while it's really important to log out on a daily basis.

They have (after 10 minutes a day) it after this week had with it: there's nothing left to discover or to reach.

I still don't get how I can store my moodbot well, push enter helps.

Oh and if you send someone a moodchip, you should not push enter again before you click on the green check mark, because then you get that moodchip no longer out of the picture (I don't know if ie or sent??)

Furthermore, it is now still a bit boring that you can anything yet with your with-frustration-caught dustbunnies.

he beats that bunnies also not yet on, so you're doing it now still really for only frustration

My attitude is also not saved now I a second time (with great difficulty) in have logged.

I also hear no music when I'm in the room of another ben.

Moodbunnies go very fast. Fortunately, you can keep trying and they go not off.

Privacy settings. Now you should be lying if you some things not with clients and/or supervisors want to share, what wrong information

Name of Room, for example, engine room or send displayen room, in the room where you are.

Can respond to Moodchips. Can delete Moodchips.

In the residents share a room, you can choose to visit, I would rather like to see puppet with everyone's mood and last login and stuff, instead of just a list of names

In itself can you someone else's dolls in the other parts of the skyfish see, but it would be useful if there names.

Dustbunnies are impossible to catch with only a touchpad.

Login goes slow on my laptop (well, more than 4 years old already). And the graphics are thereby also worse, I'll add a picture of how the engine room looks like on my laptop.

Bug when login where the pointer remains: If you still want to log in (essential for playing the game;)) If the flashing pointer is on, he remains as char, as he is can you tabbing or clicking without this.

That dustbunnies are darn hard to catch!

I still don't know exactly how I well my attitude get stored. Text, then you must press enter if you have typed your text.

#### Roosenbergplaytest\_24062013

ledere dag krijg ik dezelfde welkomstboodschap wat mij het idee geeft dat ik nog niet eerder in het spel ben geweest. Mogelijk is het een idee om me terug te verwelkomen.

Ik probeerde de tekstballon aan te passen van mijn moodbot maar de woorden verwijderen steeds verder van elkaar als ik probeer om erin te klikken.

Tresan merkte op dat ze dustbunny's ingeleverd heeft maar geen resultaat/ feedback kreeg op haar inzet. Dit is ook mijn ervaring waardoor ik me afvraag waarom ik de dustbunny's in zou leveren.

Joris heeft mij opgegeven voor een challenge en ik heb ook al een aantal mensen opgegeven maar er wordt nergens gevraagd of Joris aan een challenge heeft voldaan, ook niet op zijn kamer. Waar moet ik dat aangeven? Micah Hrehovcsik?

In het algemeen vind ik de interactiviteits mogelijkheden met mede spelers en behandelaar mager.

Oriëntatie in het spel is niet duidelijk ,waar ben ik mee bezig wat is het doel? Het in een groep gebruiken zie ik steeds meer als mogelijke toepassing, terwijl dit ook in de game gecreëerd moet worden.

Vandaag alle vroegsignalen kritiek gesteld waar op twee signalen acties zouden moeten volgen. In de backend zie ik geen acties staan bij Mieke, zouden er wel horen te staan. @ Micah Hrehovcsik gaat dit wel goed?

Spookdeelnemers in de machine kamer en ketelhuis ,help!!

Player full screen kan niet terug, ziet er wel gaaf uit. Melding van de "Noodoproep verzonden" blijft op scherm staan.

Daarnaast blijft een bericht dat Joris? heeft geplaatst in beeld staan en verdwijnt niet meer: "Hello world".

De tekst ballonnetjes autosizen niet waardoor tekst wegvalt en je niet goed kunt lezen wat iemand heeft geschreven. Ditzelfde probleem heb je bij de moodchipballonnetjes.

Verder had ik 10 dustbunny's te pakken maar die waren weg nadat ik bij de bewonersruimte vandaan kwam.

De ervaringen (wij verzamelden ze succesvol in een nieuwe, aparte, geheime fasebook-groep; de medewerkers zou ik het via Yammer laten doen) zijn dat de game nog erg beperkt is: er kan nog niet veel, het is nog niet leuk om te spelen, en na een week dagelijks inloggen heb je het echt wel gehad met het spel.

#### Roosenbergplaytest\_24062013

Every day I get the same welcome message which gives me the idea that I have not previously in the game. It might be an idea to welcome me back.

I tried to adjust the balloon of my moodbot but the words still further from each other when I try to remove it.

Tresan noted that she has returned but no result/dust Bunny's got feedback on her commitment. This is also my experience through which I wonder why I would deliver the dust Bunny's in.

Joris has me for a challenge and I have also been a number of people specified but there is nowhere asked if George to a challenge has met, even in his room. Where do I indicate this? Micah Hrehovcsik?

In General, I find the interactiviteits possibilities with fellow players and practitioner skinny.

Orientation in the game is not clear, where am I doing what is the purpose? Use it in a group I see more and more as a possible application, whereas this also needs to be created in the game.

Today all vroegsignalen criticism of actions on two signals should follow. In the backend, I see no actions are at Mieke, would hear. @ Micah Hrehovcsik is this solution good?

Ghost participants in the engine room and boiler house, help!!!!

Player full screen can not go back, looks pretty cool. Mention the "emergency call sent" remains on screen.

In addition, a message that Joris? has posted in image and no longer disappears: "Hello world".

The text balloons autosizen not allowing text drops off and you can't read properly what someone has written. This same problem you have at the moodchipballonnetjes.

Further I had 10 dust Bunny's tackle but those were away after I with the residents space came from.

The experiences (we gathered they are successful in a new, separate, secret fasebook group; the employees would I let do it via Yammer) are that the game is still very limited: there is not much, it's not fun to play, and after a week daily login you have really had with the game.

# Verslag Playtests 12-12-12 en 4-1-13 bij Roosenburg en ABC

### Roosenburg

Op woensdag 12-12-12 hebben Micah, Sjoerd en Lies geplaytest bij Roosenburg in Den Dolder. Er is getest met 4 cliënten, twee vrouwen en twee mannen tussen de 40 en 45 jaar. Ook waren er vier hulpverleners aanwezig. In het algemeen verliep de playtest vrij rommelig omdat de cliënten meteen binnen kwamen.

Een volgende keer moeten wij explicieter maken dat we eerst alleen met de hulpverleners willen praten.

## ABC

Op vrijdag 4-1-13 hebben Micah en Lies getest bij ABC. Hier hebben we getest met vijf (jonge) cliënten, twee vrouwen en drie mannen. Twee van hen hadden ook eerdere versies van Moodbot getest (Mirjam en Chester).

Bij deze playtest waren er wat meer functies geïmplementeerd in Moodbot, zoals het inzetten van punten om het vliegtuig vooruit te laten gaan of te sturen. Echter werkten er dingen niet waarvan we wel gehoopt hadden dat ze zouden werken.

## Resultaten

## +++Pluspunten++++

- Hulpverleners waren over het algemeen tevreden over **vele mogelijkheden tot communicatie en uitdrukken van de stemming**. Ze gaven aan dat de gezichtsuitdrukkingen en houdingen van de moodbots nog altijd niet volkomen eenduidig zijn, maar dat de tekstballon met vrije tekstinvoer hier wel aan bijdraagt.
- Over het algemeen zijn cliënten enthousiast en zien ze potentie. Ze vinden het een leuke manier om zo met elkaar en hulpverleners in contact te zijn.
- Het selecteren van afbeeldingen voor de moodtube vinden spelers leuk.
- Bij ABC werd gezegd: het is ook leuk via dit spel **in contact te blijven** met ABC als je er weg bent, of juist vanuit ABC contact te houden met de buitenwereld.

### ---Suggesties----

- Een **melding** als een moodchip geaccepteerd is, zou fijn zijn. Dan weet je ook dat iemand het waardeert (en geen melding als de moodchip niet geaccepteerd wordt.)
- Het **level-up** idee wordt gewaardeerd: het vrijspelen van verschillende opties, zoals nog meer opties om je kamer te customizen met bijvoorbeeld muziek of het uploaden van je eigen afbeeldingen, spreekt cliënten erg aan.

- De 'scheidsrechters' zouden **eens per week** te veranderen moeten zijn (i.v.m. mogelijke ruzies)
- Het zou leuk zijn in de centrale ruimte een soort **centraal prikbord** te hebben. Hier staan bijvoorbeeld dingen als 'de missie van de dag', doelen die behaald zijn en hier zouden spelers centraal kunnen communiceren over de koers van het schip.
- Cliënten zouden zelf ook graag grafieken zien van hun spelverloop/progressie.

## ----Verbeterpunten/onduidelijkheden----

- De spelers bij ABC begrepen niet helemaal waar de **dustbunnies** voor dienden; waarom deze nog gevangen moesten worden en de punten niet 'gewoon' bijgeschreven werden. De speelsheid ervan schenen zij niet helemaal te waarderen (kan ook komen doordat ze moeilijk te pakken waren).
- Cliënten zouden graag zoveel mogelijk mogelijkheden hebben om de kamer en de moodbot persoonlijk te maken / te **customizen**. Dus niet alleen de moodtube.
- Ook meer interactieve elementen in de kamer zou leuk zijn.
- Met name de (wat oudere) cliënten bij Roosenburg hadden erg **veel uitleg nodig** om het spel te kunnen bedienen.
- Perceptie: bij de (wat oudere) cliënten bij Roosenburg is het misschien beter het geen game te noemen. Ze zeggen: mijn therapie is geen spelletje. Daar zouden we kunnen kiezen voor de term 'online tool' of iets dergelijks. Eén van de mannelijke cliënten vond de moodbot ook te kinderachtig.
- De (wat oudere) cliënten bij Roosenburg hadden meer **zingeving aan de punten** nodig. Inzetten om een schip te besturen leek hen niet genoeg (maar dit was ook nog niet geïmplementeerd bij deze test, bij ABC klaagde niemand hierover).
- Het invullen van tekst bij het geven van een moodchip, wordt door veel proefpersonen verkeerd geïnterpreteerd, namelijk als een **chatfunctie**. Ook willen ze sowieso eerst een vraag stellen aan de speler: *wat is er dan precies aan de hand?* alvorens ze een moodchip willen geven.
- Quote tester (vrouw) bij Roosenburg: *Ik zeg 'Kom je koffie drinken?' en hij zegt niks terug!*
- Groene begroeiing wordt nog steeds als 'smurrie' gezien.

## Opmerking:

Bij ABC zijn de cliënten bang dat het spel na verloop van tijd saai zal worden, omdat de gameplay in principe altijd hetzelfde is. Ze stellen minigames voor die telkens vernieuwd kunnen worden. De hulpverleners stellen ook kleine quizjes voor, bijvoorbeeld over psycho-educatie. Het is de vraag of wij dit ook een goed idee vinden. De cliënten gaven zelf ook aan dat het niet te verslavend mag zijn. We hebben ook uitgelegd dat er bewust is gekozen voor een beperkt aantal moodchips per dag om de speeltijd beperkt te houden.

# Usability / interface (veel van deze dingen wordt al aan gewerkt, dus misschien ten overvloede)

- De bruine pijlen waar men op moet klikken bij het instellen van het 'dashboard' vallen weg tegen de achtergrond.
- De dustbunnies schieten te snel weg en zijn moeilijk te vangen.
- Het inzetten van punten is op dit moment heel omslachtig
- Een plattegrond van kamers zou fijn zijn / snellere navigatie tussen de kamers en naar de juiste personen.

# Mogelijke doelen

Voorbeelden van behandeldoelen zijn:

- Minder roken
- Minder koffie drinken
- Doe mee aan activiteit X
- Kook een maaltijd
- Doe boodschappen /shoppen
- Stofzuigen

# Play tests report 12-12-12 and 4-1-13 by Roosenburg and ABC

#### Roosenburg

On Wednesday 12-12-12 have Micah, Sjoerd and groin geplaytest at Rahi in Den Dolder. There has been tested with 4 clients, two women and two men between 40 and 45 years. Also there were four aid workers present. In general the play test went pretty messy because the clients right away.

The next time we need to make more explicit that we first want to talk only with the aid workers.

### ABC

On Friday 4-1-13 have Micah and groin tested at ABC. Here we have tested with five (young) clients, two women and three men. Two of them also had previous versions of Moodbot tested (Mirjam and Chester).

At this play test, there were some more features implemented in Moodbot, such as the use of points to the airplane forward to let go or to send. We do not, however, worked there are things of which had hoped that they would work.

## Results

- + + + + + + + + Plus points
  - Aid workers were generally satisfied with **many possibilities for communication and expressing the vote**. They indicated that the facial expressions and postures of the moodbots still not perfectly clear, but that the text balloon with free PLU input contributes to this.
  - Clients are generally enthusiastic and they see potential. They find it a fun way to get in touch with each other and so aid workers.
  - Selecting images for the find players like moodtube .
  - At ABC was said: it is also fun through this game **to stay in touch** with ABC if you are away, or from ABC to keep in touch with the outside world.

#### ---Suggestions----

- A **message** is accepted, if a moodchip would be fine. Then you know also that someone appreciates (and no message if the moodchip not accepted.)
- The **level-up** idea is appreciated: clear different options such as even more options to customize your room with for example music or uploading your own graphics, speaks to clients.
- The 'referees' would change once a week (because of possible feuds)

- It would be nice in the central space to have a kind of **Central Bulletin Board** . For example, here are things like ' the Mission of the day ', goals achieved and here players can communicate about the central rate of the ship.
- Clients would also like to see graphs of their game details/progression.

#### -----Disadvantages/ambiguities

- The players at ABC did not understand at all where the **dustbunnies** for served; why this still had to be caught and not ' just ' the points were credited. The playfulness of it seemed they didn't quite appreciate (can also be because they were difficult to address).
- Clients would love to have as many opportunities to the room and the moodbot to personalize/ **Customize**. Not just the moodtube.
- Also more interactive elements in the room would be nice.
- In particular, the (somewhat older) clients in Rahman had very **much** explanation needed to play the game.
- Perception: at the (somewhat older) clients in Rahi it might be better **not to mention game**the. They say: my therapy is not a game. There we would be able to choose the term ' online tool ' or something like that. One of the male clients found the moodbot also too childish.
- The (older) clients in Rahman had more **meaning to the points** needed. Committed to a ship to drive them seemed not enough (but this was also not yet implemented in this test, at ABC no one complained about this).
- Filling out text when giving a moodchip, is considered by many subjects misinterpreted, namely as a **chat function**. They also want to first ask a question in any case as to the player: *What's exactly going on?* before they want to give a moodchip.
- Quote tester (woman) at Rahman: I say 'you drink coffee? ' and he says nothing back!
- Green vegetation is still seen as 'gunk'.

#### Note:

At ABC clients are afraid that the game over time will be boring, because the gameplay in principle is always the same. They enable mini games for which can be renewed. The aid

workers also small quizjes for, for example about psycho-education. The question is whether we find a good idea. The clients also gave itself to that it is not too addictive. We have also explained that there is deliberately chosen for a limited number of moodchips per day to playing time.

# Usability/interface (many of these things is already working on it, so maybe unnecessarily)

- The Brown arrows where you have to click to set the 'dashboard 'fall away against the background.
- The dustbunnies shooting too fast way and are hard to catch.
- Using points is currently very cumbersome
- A city map rooms would be fine/faster navigation between the rooms and to the right people.

# **Possible targets**

Examples of treatment goals are:

- Less smoke
- Less coffee drinking
- Join activity X
- Cooking a meal
- Do messages/shoppen
- Vacuuming

# feature playtest\_17012013

Mini-game

-Mini-game: Dustbunnies

Coregame

-Graph

-Moodtube isn't seen by other players

-moodtube images are gone when the player returns to room

-Moodchips are not working

- -No messages sent out from the challenge tree resolve
- -Player the recieve challenge completion message needs to confirm it or decline it

Metagame

-Metagame points save not working

-Metagame the ship can flip 180

# ABCplaytest notese04012013

**3 Female Players** 

- 3 male players
- 2 female healthcare workers
- 2 male helathcare workers

Healthcare worker was concenred about the interpretation of the facces. Apparently even smilies are a bit of an issue with their meaning.

There was the idea for a chat feature. Players feel they would like to directly be able to caht with other players. Concerning the moodchips there was a question as to how many a player would get. Alos along these lines there was a request to knowing how other players are online at the same time.

The arrow buttons next to the meters are not easy to see.

The was suggestion to add missions to make the tasks in the game easier to understand.

Navigating from room to room is an issue.

There was a request to upload personal images to the moodtube. There was a request to be able to personalize the player's room. There was a suggestyion to have many mini-games and a way to attack other players. There was suggestion for a central meeting room with a news board like thing.

- Concerned comments over face and posture.

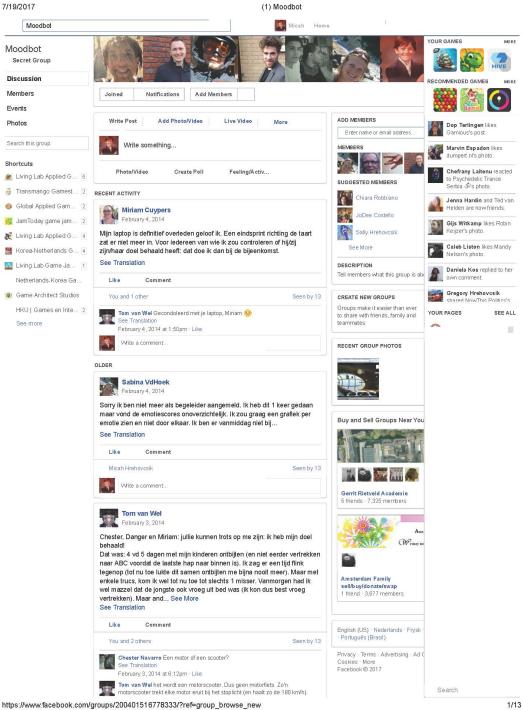
- Chat

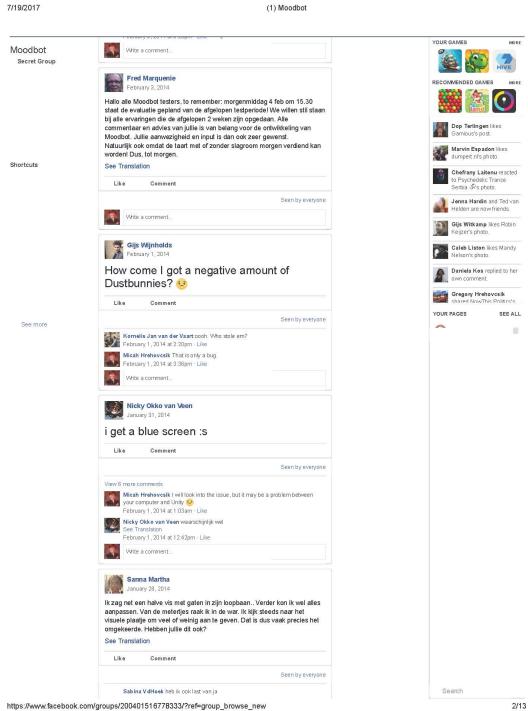
- Are other player's Online
- Two teams
- Arrows unclear

- Missions
- Pts vs communication
- Want to help with the moodchip People can't contact
- looking around for people in the rooms is an issue
- More interactive room
- Dress your room
  upload your own images
- Central room w/ news and such message room
- Self biography
- Competition Hockey table (meta game)
- Clouds to hide the dustbunniesDustbuny pong?
- Fresh content
- Quiz questions Puzzles
- External Plugins that give you moodbot points?

- 30-10

- Maybe a community is needed outside the game



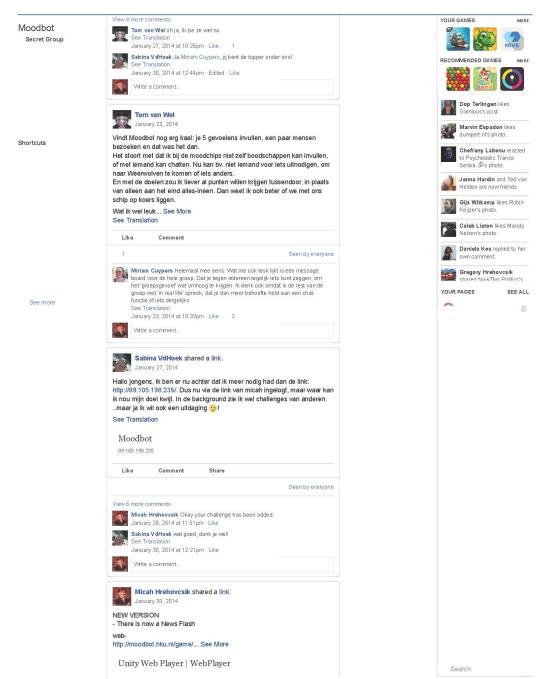


#### 7/19/2017 (1) Moodbot Miriam Cuypers Ik heb er geen last van, maarik snap wel wat je bedoelt. Ik heb in mijn hoofd 'als het niet goed gaat is het laag, als het wel goed gaat is het hoog', weinig energie is niet zo goed, weinig angst is wel goed, dus daarom zijn ze andersom volgens mij. See Translation YOUR GAMES 10 MORE Moodbot Ø <u>i</u> Secret Group HIVE January 30, 2014 at 5: 16pm - Like RECOMMENDED GAMES MORE \* Write a comment. 80 Gijs Wijnholds Dop Terlingen likes Gamious's post. -1 January 28, 2014 Ik kan dus vrijwel niets doen op Moodbot, Marvin Espadon likes dumpert.nl's photo. dus dat wordt niet wat! Shortcuts See Translation Chefrany Laitenu reacted o Psychedelic Trance Serbia ぷ's photo. Like Comment Jenna Hardin and Ted van Helden are now friends. 2 Seen by everyone Gijs Witkamp likes Robin Kejizer's oboto View 8 more comments Micah Hrehovcsik Your meters should now show the parameters. If you already skipped through the meters you will need to wait 3hrs. for the meters to become available again. Let me know if you have any other issues. January 30, 2014 at 12:47pm: Like eijzer's photo Caleb Liston likes Mandy Nelson's abot Gijs Wijnholds it works! January 30, 2014 at 4:08pm - Like Daniela Kos replied to her 2 owo comment \* Write a comment. Gregory Hrehovcsik This Politics's YOUR PAGES SEE ALL Tom van Wel January 29, 2014 See more ~ January 29, 2014 Wat doet het meedoen aan Moodbot met mii (Tom)? Wat doet het meedoen aan Moodbot met mij (1om)? - Ik denk er vaak aan, en het beinvloedt mijn gedrag - Het behalen van punten voor de groep (voor de taart dus) stimuleert me, merk ik. Daarom log ik geregeld in, ondarks dat ik het <spel> zelf eigenlijk saai vind. Ik log in omdat ik toch punten wit halen, en de groep niet in de steek wil laten. Kortom: de punten beïnvloeden mijn gedrag. He invullen van de semming (met de 5 schakelaars) vind ik prima. Vooral omdat dit weer p... See More See Translation Like Comment Seen by everyone View 2 more comments Sabina VdHeek Goed tom om zo je ervaringen te delen. Ik merk dat ik mij er toe moet zetten om in te loggen. Als ik, zoals nu afleding wil voor mijn studie, doe ik vaak even een kaartspelteige. Het zou leuk zijn als moodbot iets is wat ik graag tussen door doe, zove... See Mare. January 30, 2014 at 12:47pm · Like · Sanna Martha Ik kom er ook nog op terug 13 See Translation January 30, 2014 at 3:50pm - Like Write a comment. .\* Miriam Cuypers January 25, 2014 Ik had net (in de nieuwe versie) ook het probleem dat de 5 metertjes niet tevoorschijn kwamen en ineens stond de klok op 3 uur wachten, terwijl ik dus niets had kunnen invullen. Hij heeft nu wel mijn teksten en houding opgeslagen 🔥 Oh en ik had nog een vraag: in de lijst met namen staan een soort van sterretjes achter de namen, sommige mensen hebben 1 ster, of twee sterren, sommigen geen. Wat betekenen die? See Translation Like Comment Search

https://www.facebook.com/groups/200401516778333/?ref=group\_browse\_new

#### 7/19/2017

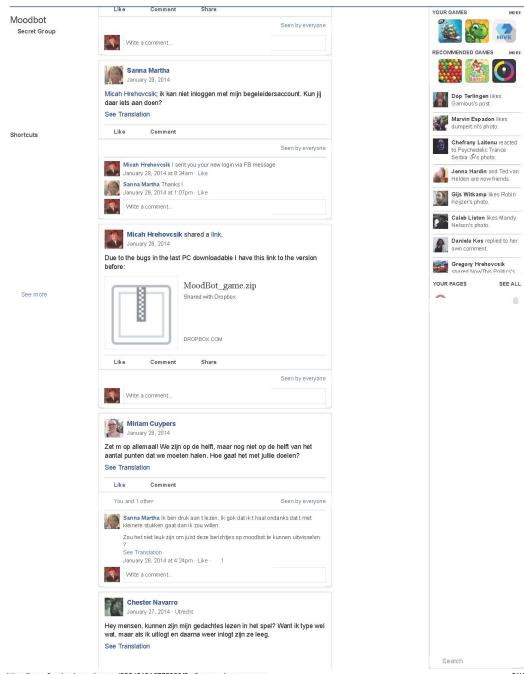
(1) Moodbot



https://www.facebook.com/groups/200401516778333/?ref=group\_browse\_new

#### 7/19/2017

(1) Moodbot



https://www.facebook.com/groups/200401516778333/?ref=group\_browse\_new

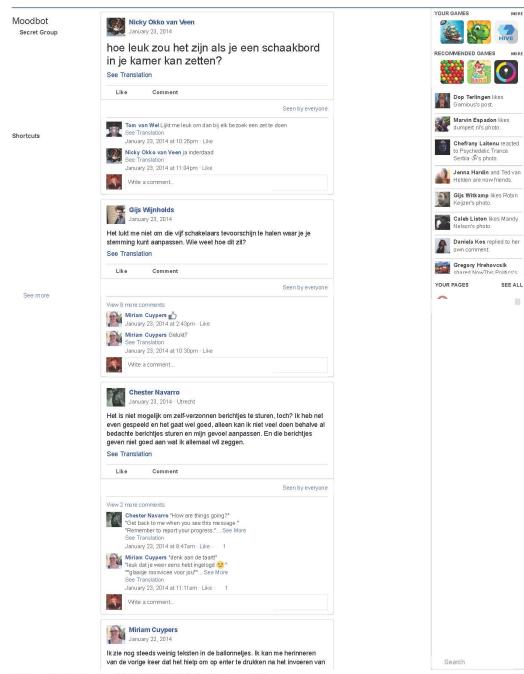
| Moodbot                  | Seen by everyone  | YOUR GAMES MORE                                   |
|--------------------------|---|---|
| Vloodbot<br>Secret Group | Miriam Cuypers Volgens mij helpt het om, als je je tekst getypt hebt, eerst op<br>enter te drukken voor je met je muis het volgende ballonnetje/watdanook<br>aanklikt   | 🌉 談 🙀   |
|                          | See Translation<br>January 27, 2014 at 7:34pm - Like  | RECOMMENDED GAMES MORI                            |
|                          | Wite a comment  | 🎬 😤 💽   |
|                          | Miriam Cuypers<br>January 23, 2014  | <b>Dop Terlingen</b> likes<br>Gamious's post.     |
|                          | Hoe gaat het met iedereens doelen? Gaat het ons lukken die taart te<br>bemachtigen? En ook nog cola light?!   | Marvin Espadon likes<br>dumpert.nl's photo.       |
| hortcuts                 | See Translation   | Chefrany Laitenu reacted<br>to Psychedelic Trance |
|                          | Like Comment  | Serbia 🕉's photo.<br>Jenna Hardin and Ted van     |
|                          | Seen by everyone.<br>View 8 more comments   | Helden are now friends.                           |
|                          | Tom van Wel Vandaag is mij toch gelukt. Nog geen enkel ontbijt met de kids gemist!  | Keijzer's photo.                                  |
|                          | See Translation<br>January 24, 2014 at 7:14pm - Like - 1  | Caleb Liston likes Mandy<br>Nelson's photo.       |
|                          | Sanna Martha Goed bezig allemaall Ik ben nu halverwege mn boek.<br>See Translation<br>January 26, 2014 at 10:18pm - Like - 2  | Daniela Kos replied to her<br>own comment.        |
|                          | Write a comment   | Gregory Hrehovcsik<br>shared NowThis Politics's   |
| See more                 | Micah Hrehovcsik shared a link.   | YOUR PAGES SEE ALI                                |
|                          | http://moodbot.hku.nl/game/<br>download-<br>http://moodbot.hku.nl/download/moodbot.zip<br>Unity Web Player   WebPlayer<br>моосвотнки мц   |   |
|                          | Like Comment Share  |   |
|                          | 1 Seen by everyone  |   |
|                          | View 3 more comments<br>Micah Hrehovosik The download is only for the PC: Sory.<br>January 25, 2014 at 12:45pm - Like<br>Tom van Wel okay<br>January 25, 2014 at 8:37pm - Like<br>White a comment   |   |
|                          |   |   |
|                          | Nicky Okko van Veen           January 25, 2014           Ik had net ook last van die bug waarbij ik niks kon invullen mij die metertjes<br>en hij op cooldown ging, en toen ik naar de scores keek, bleek dat er voor<br>iedere emotie een 1 was ingevuld, 2 keer maarliefst.           See Translation |   |
|                          | Like Comment  |   |
|                          | Seen by everyone  |   |
|                          | View 2 more comments<br>Gijs Wijnholds waar haal je die oude versie vandaan?<br>See Translation<br>January 20, 2014 at 11:27am - Like   |   |
|                          | Miriam Cuypers Die had ik al op mijn computer staan. Die had ik dinsdag erop  | Search  |

| //19/2017   | (1) Moodbot  |  |
|---|--|--|
| Moodbot   | Write a comment  | YOUR GAMES MOI   |
| Secret Group  | Fred Marquenie<br>January 24, 2014   |  |
|   | Goed bezig ledereen zeg. De ervaringen en het commentaar maken het tetsten waardevol. Bedankt, maar ga vooral zo door!   |  |
|   | See Translation  | Dop Terlingen likes<br>Gamious's post.                                 |
|   | 1 Seen by everyone   | Marvin Espadon likes<br>dumpert.nl's photo.                            |
| ortcuts   | Write a comment  | Chefrany Laitenu reacte<br>to Psychedelic Trance                       |
|   | Micah Hrehovcsik<br>January 24, 2014   | Serbia 🕉 sphoto.<br>Jenna Hardin and Ted va<br>Helden are now friends. |
|   | If you have suggestions for new 'moodchip' messages please let me know<br>and I will add them to our message list. They are very limited at the moment.  | Gijs Witkamp likes Robin<br>Keijzer's photo.                           |
|   | Like Comment   | Caleb Liston likes Mandy   |
|   | Seen by everyone   | Nelson's photo.  |
| zelfs een lijst met wel 100 moodchips kunnen maken. Maar dat vind ik niet | Tom van Wei Ik snap dat we moodchips kunnen toevoegen, Micah. We zouden<br>zelfs een lijst met wei 100 moodchips kunnen maken. Maar dat vind ik niet<br>interessant. Ik zou veel liever personijkje moodchips willen geven.  | Daniela Kos replied to he<br>own comment.<br>Gregory Hrehovcsik        |
|   | Bijvoorbeeld: zullen we samen wat gaan drinken va See More<br>See Translation  | shared NowThis Politics's  |
|   | January 24, 2014 at 1:43pm - Like  | YOUR PAGES SEE A   |
| See more  | Write a comment  | ^  |
|   | January 24, 2014<br>Oke, het lukt me om de vijf schakelaars tevoorschijn te halen, maar als ik er<br>op klik krijg ik een leeg veld met pijtjes om de schakelaar over te halen. Ik<br>kan niet verder naar de andere schakelaars. Ik gok dat ik nog geen<br>eigenschappen heb om up te daten. Admin? Fred Marquenie ? Tom van Wel<br>? Kornelis Jan van der Vaart ?<br>See Translation   |  |
|   | Like Comment   |  |
|   | Seen by everyone Write a comment   |  |
|   |  |  |
|   | Chester Navarro<br>January 24, 2014 - Utrecht<br>Hallo, ik heb het spel nu een paar keer gespeeld, maar ik voel niet echt dat<br>ik zin heb om terug te komen. Het enige wat ik eigenlijk kan doen is mijn<br>stemming aanpassen Ik kan niet eens reageren op de stemming van de<br>andere mensen. Ik las de gedachtes en gezegdes van Miriam, maar ik kan<br>er niet op reageren en ook niet op die van anderen.<br>Ook kan ik geen al vastgelegde berichten meer sturen, omdat ik al mijn<br>berichten heb gestuurd. Ik heb tot nu toe geen reden om regelmatig op het<br>spel te komen, behalve om te helpen bij het project. Dus tot nu toe is mijn<br>feedback dat er meer moet zijn om te doen, iets wat mijn aandacht<br>vasthoudt want dat is er nog niet. Hoe dat precies gedaan kan worden, weet |  |
|   | ik nog niet.<br>See Translation  |  |
|   | Like Comment   |  |
|   | 1 Seen by everyone   |  |
|   | Micah Hrehovcsik Thank you for the feedback Chester.<br>January 24, 2014 at 10:51 am - Like  | Search   |
|   |  | -  |

## https://www.facebook.com/groups/200401516778333/?ref=group\_browse\_new

#### 7/19/2017

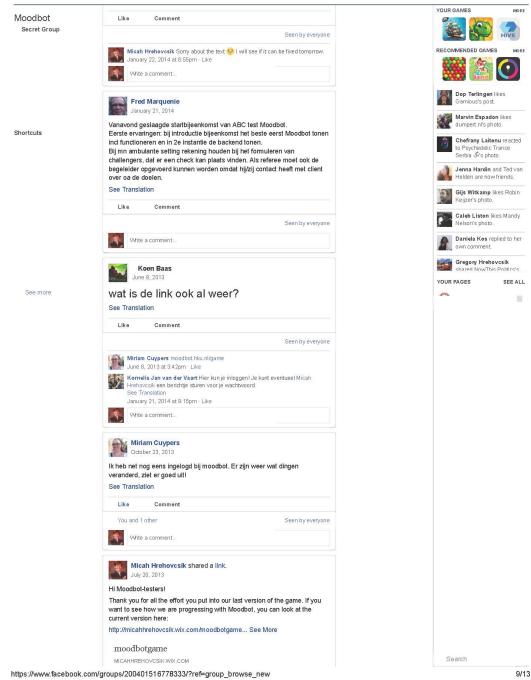
(1) Moodbot



https://www.facebook.com/groups/200401516778333/?ref=group\_browse\_new

#### 7/19/2017

(1) Moodbot

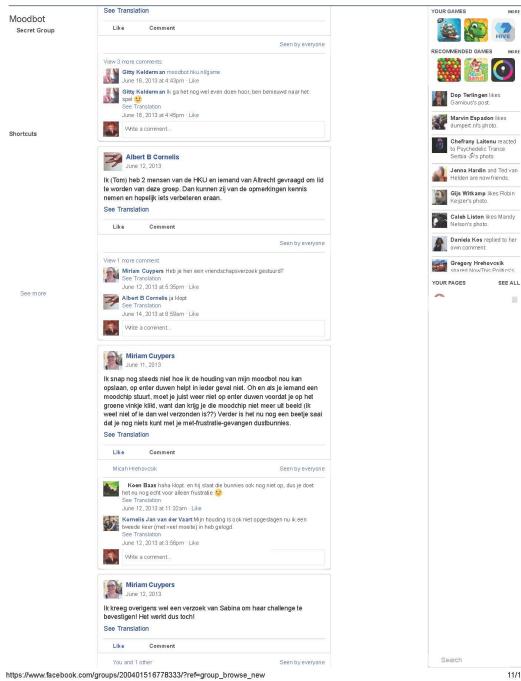


| 7/19/2017               | (1) Moodbot  |   |
|-------------------------|--|---|
|                         | Seen by everyone   | YOUR GAMES MORE                                     |
| Moodbot<br>Secret Group | Write a comment  |   |
|                         | Miriam Cuypers<br>June 8, 2013   |   |
|                         | Ik heb een probleem met downloaden van unity web player, mijn<br>browser/virusscanner/windows vindt in alles wat ik via een link wil<br>downloaden een virus Dus ik krijg niets gedownload (oa ook pdf-jes, kleine<br>programmaatjes ed) lemand een idee?  | Dop Terlingen likes<br>Gamious's post.              |
|                         | See Translation  | Marvin Espadon likes<br>dumpert.nl's photo.         |
| Shortcuts               | Like Comment   | Chefrany Laitenu reacted                            |
|                         | Seen by everyone   | to Psychedelic Trance<br>Serbia ॐ's photo.          |
|                         | View 7 more comments<br>Miriam Cuypers Nou, ik heb m via internet explorer kunnen downloaden. Op<br>IE doet het spel het niet, maar nu kan ik weer op Chrome verder<br>See Translation   | Jenna Hardin and Ted van<br>Helden are now friends. |
|                         | June 8, 2013 at 4:44pm - Like - 1  | Gijs Witkamp likes Robin<br>Keijzer's photo.        |
|                         | Miriam Cuypers Het probleem is trouvens helemaal opgelost Blijkbaar heeft<br>de update van AVG iets in het systeem veranderd en hadden veel meer<br>mensen er last van. Ergens verweg verstopt moest ik een waarde van 3 naar 1<br>veranderen en toen kon ik weer gewoon bijlagen downloaden, hoeral | Caleb Liston likes Mandy<br>Nelson's photo.         |
|                         | See Translation<br>July 2, 2013 at 12:03pm · Liike   | Daniela Kos replied to her own comment.             |
|                         | Write a comment  | Gregory Hrehovcsik<br>shared NowThis Politics's     |
| See more                | Albert B Cornelis  | YOUR PAGES SEE ALL                                  |
|                         | Micah Hrehovcsik is from the HKU, working on the Moodbot project. My<br>question: do you understand everything written in Dutch or should we try to<br>translate the comments to English?  |   |
|                         | Seen by everyone   |   |
|                         | View 1 more comment           Micah Hrehovcsik Yes Dutch is fine, but my written Dutch is really poor.           June 17, 2013 at 4/32pm · Like           Koen Baas you can reply in english, thats ok   |   |
|                         | June 17, 2013 at 10:46pm - Like - 1 Write a comment  |   |
|                         | Albert B Cornelis<br>June 17, 2013   |   |
|                         | Mike heeft mijn zijn ervaringen ge-e-maild.<br>Hieronder volgen zij:<br>gr, Tom  |   |
|                         | ik kan niet op iemands bericht reageren en ik loop hierdoor vast<br>See More<br>See Translation  |   |
|                         | Like Comment   |   |
|                         | Micah Hrehovcsik Seen by everyone  |   |
|                         | White a comment  |   |
|                         | Albert B Cornelis<br>June 14, 2013   |   |
|                         | Vandaag zijn we een week de Moodbot aan het uitproberen.<br>Mijn (Tom) voorstel is om het met een week te verlengen. Ik heb er zelf<br>nauwelijks opgezeten (sorry) terwijl het echt belangrijk is om dagelijks  |   |
|                         |  | Search  |

https://www.facebook.com/groups/200401516778333/?ref=group\_browse\_new

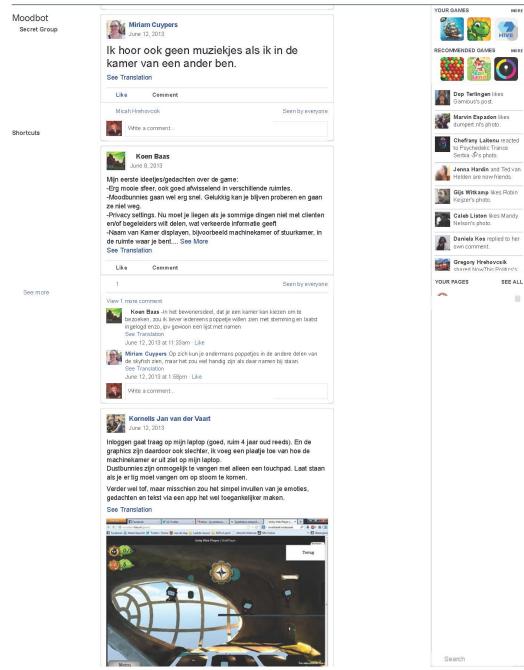
#### 7/19/2017

(1) Moodbot



(1) Moodbot

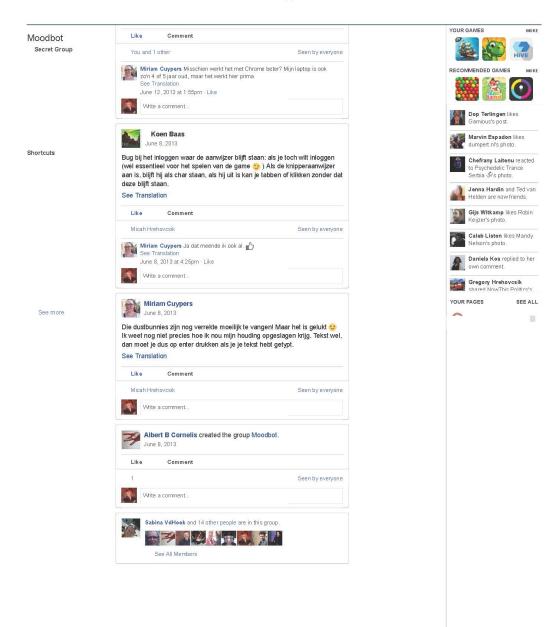
7/19/2017



https://www.facebook.com/groups/200401516778333/?ref=group\_browse\_new

#### 7/19/2017

(1) Moodbot



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13/13

Search

# **APPENDIX AJ**



Moodbot\_GameWlkThrg\_dv\_1.30

Content: video 14 minutes 14 seconds

Language: English

**Description:** Demonstrates the state of Moodbot described in the *Snapshot: Design Crisis*.

# **APPENDIX AK**



Snapshot\_DesignCrisis

Content: video 19 minutes 47 seconds

Language: English

**Description:** The design crisis that resulted in major changes to Moodbot is described here using the epistemic framework to frame the anecdote.

# APPENDIX AL



Epistemic\_Framework\_Introduction Content: video 20 minutes 36 seconds Language: English Description: The epistemic framework is explained in detail.

# **APPENDIX AN**



Epistemic Framework Cards

Content: Portable Document Format, 4 pages

Language: English

**Description:** All the epistemic cards can be found in this document and ready to be printed on demand.

# **APPENDIX AM**



Moodbot\_GameDesignDocument\_3

Content: Portable Document Format, 10 pages

Language: English

**Description:** Documentation create by Junior Game Designer J. LaCoste of the second version of Moodbot which describes the new design direction.

# Moodbot

Game Design document & scenario`s

Junior LaCoste

### Game Design Changes



| Persoonlijke kamer   | C. Personal Challenge   | E. Moodbot  | G Dustburny counter   |
|--|---|---|---|
| A. Moodjournal   | Hier is de persoonlijke challenge te zien van een speler.   | Dit is de persoanlijke maadbat van een speler.  | Hier is een overzicht te zien van hoeveel dustbunny's<br>een spelerheeft verzamelt. |
| Hier vind het invullen van de moodjournal plaats.                        | D. Incoming message   | FGU   | H Progress bar  |
| B Achievements   | Via een box met een uitroepteken erin wordt de speler<br>op de hoogte gebracht dat een buddy zijn/haar taak heeft | Hier is de graphical user interface te zien waarmee een<br>speler naar verschillende kamers kan gaan. | Deze is kort te zien nadat een speler al zijn/haar dust-                            |
| Hier zijn alle achievements te zien die behaald zijn door<br>een speler. | vervult   |   | bunny's heeft verzamelt.  |
|  |   |   |   |
|  |   |   |   |
|  |   |   |   |

### Game Design Changes



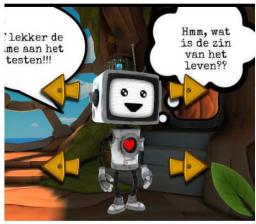
Moodjournal

De moodjournel is de pleats waer de speler els eerst begint met de activiteiten binnen Moodoot. Een speler krijgt per paneel een onderwerp voorges-chotelt, bijvoorbeeld stress, concentratie en erengie.

Warneer een speler op eenhendel drukt komthe en vren toe en ziet hij/zij het desbtreffende onderwerp. Tevens verschijnnener aan weerskanten van de hendel indicators.

Eenspeler dient denaan te gevenop wet voor scheal ditovereerkont met hoe de gebuker zichop het moment voelt. Warneer een speler op eenvan de ndicators ohkt verschuit het pareel in de richt-ng van het gene waar de speler op heeft gedrukt.

∨ia deze manier kan een speler aangeven of hij/zij zichgelukkig voelt die dag bijvoorbeeld



Moodbot

Wanneer een speler zijn/haar moodjournal ingevuld heeft, verschijnt zijn/haar persoonlijke moodbot.

Deze moodbot is de avatar van een speler birnen Moodbot Ean speler kan wat hij/zij wit zeggen en wat hij/zij derkt invullen Wat een speler wit zeggen verschijnt in de Inker belon wat een speler derkt in de rech-ter.

De persoonlijke moodbot kan naast het denken en zeg gen te vens verder worden aangepast door de speler.

Zo is de gezichtsuitdrukking van de moodbot verander-beer en zo zijn er diverse uitdrukkingen beschikbear die allemaal een ander soort emotie uitbeelden.

Naast de gezichtsuitdrukking is het ook mogelijk om de licheanshouding van een moodbot te eranderen. Zo kan een moodbot staan, zitten, uitbundig blij bewegen etc.

Al deze verschillende houdingen moeten de emoties die de speler er vaart op het moment ven aanpassen zo goed mogelijk reflecteren.

#### Game Design Changes

#### Personal Challenge

Midden in de persoorlijke kerner van eenspeler is zijn/ heerpersoorlijke chellenge zichtbeer. Deze verschijnt uit de boorstrork nedecke moodjournet is nejewlid Een speler kan neteensnet en overzichtelijk zijn/heer egen chellenge bekijken

# Wenneer eenspeler in de kamer van een andere spele komt, is de challenge ven die andere speler ook zicht-baar boven de boornstrork.



Wanneer een speler op zijn/haar personal challenge klikt, krijgt de speler het beeld te zien zoals hier-

Stapsgewijs wordt hier het individuele doel weergegeven gevolgd door een button waarmee wordt aargegeven dat een speler vind dat hij/zij het indivi-duele doel heeft behaalt

due doel heeft befratt Worreer de speler op daze button kild wordter een berith verstuur near de desbetraffrade buddies. Ardres spelers krigen dan weengegever in him schema weengegever in him schema moet gewerkingerieder dus een reading speleret dus een eenhold de speler weer hij/zij buddy ven is



er I toe. - Speler 2 klikt op die Personal Challenge' van speler

Speler 2 ziet het overzicht (zoals links aangegevenl

geven) - Speler 22 et zijn næm onder een moodbot icon stæn Tevers is deze ruki kbær. Warnere een speler erop drukt verschijnte een vrik. bij zijn/hær icon Hermze duk speler 2 n dit drukt verschijnter een vink bij zijn/hear icon Hiemee duid speler 2 in dit scenario ean dat hij akkoord gaatmet het feit dat speler I vind dat hij/zijklaar is met de individuele taak Jan



GUI gekregen. Deze graphical user interface moet het voor spelers makkelijker maken om van rooms te kunnen verwissel-

tan is het mogelijk om in de community room te komen Dezeroom wordt later in dooument nøder verklærd.

De knop van de ruimte waar de speler zich bevind wordt groter weergegeven Dit is extra feedback om de speler te vertellen in welke kamer hij/zij zit.





#### Achievement Scherm

In Hoodbot zijn er verschillende achievements te verdi-enen door activiteiten te verrichten in de game. De plaats waar de individuele achievements van een speler zichtbaar zijn is in het achievement scherm.

Een speler kan bij zijnhaar eigen achievement schem komen door op de beker te klikken in zijnhaar persoon-lige kamer. De verschillende boes waar in text wordt weergegeven zijn modular en worden dus uitgebreid naar mate er meer in krint te staan. Om deze reden is er een scroßber toegevoegt.

Warneer een speler de achievements van een andere speler wit zien, dienter eerstnaar de persoonlijke kamer van deze speler te worden gegaan. Vervolgens kan een speler op de beker daar kikken om de achievements van een andere spelert ez zien.

Overview

Het achievementscherm kent in principe twee verschillen-de overzichten. Aan de inkerkant zijn de achievements te zien die behaelt zijn in de huidge week. Rechts zijn de achievements te zien de in totaal zijn ge-haald gedurende het spelen van Moodbot

#### Rangorde achie vernents

vullen.

Achievements binnen Moodbot kennen drie verschillende rangordes, namelijkbrons, zilver en goud. ronzen medailles

Bronzen medalles zijn te verdienen door het doen van de meest basis activiteiten binnen Moodbot. Dit zijn zeken als het invullen van de moodjournel, het instelle in van de moodbot maar ook zaken die de begeleiders zelf in mogen

#### Ziveren medailles

Ziveren medailles worden verdient door uitzonderlijke achtoteen te verrichten. Namelijk het verzamelen van dustumyrs bijvoorbeeld Haar ook de meer presst-igeuze achievernents worden hier neergezet in de top Staan hie toverzicht schem bijvoorbeeld Ookhier mogen begeleiders zelf invuling aan geven.

#### Souden medaille

Een gouden medaille wordt in principe alleen maar ver-dient door het behalen van de persoonlijke challenge en is daarbij ook de meest prestigieuze medalle.

#### Game Design Changes



#### Community HUB

Moodbot kent sinds de laatste design veranderingen nu ook een Community scherm. Het shier datspelers een overzicht kunnen zien van ale spelers binnen de groop de hoodbot spelen. Daarmaast zijn ernog meer zaken te zien, zoals meet jij een buddy benu wie ororine is en hoeveel medatiles een speler al heeft.

#### De speler zelf

Warneer een speler naar de community room toe gaat verschijnt het scherm zoals hierboven te zien.

Het eerste dat een speler ziet is zijn/haareigen overzicht Links staat er groot de naam van de speler zelf Vervolgens ziet hij/zij het gezicht van een moodbot met rechts daarvan alle medailes die de speler heeft behaalt

De spelers waarvan een speler een buddy is zijn zichtbaar precies onder hem. Een speler kan maximaal een buddy zijn voor drie andere speler. Het feit dat een speler een buddy met een andere speler is wordt aangegeven via een groene schakelketting. Online/offline

Tevens is er in het overzicht te zien welke speler online is en welke niet in het voorteeld is te zien hoe de achtergrond van de middekte speler transparant is. Spelers die niet online zijn worden zo weergege ven.

Wanneer er een rode uitroepteken bij een buddy staat betekend dat dat hijz i heeft aangegeven de perscon-lige challenge etheben afgerond. De speler dant dan naar de persconlijke kamer van deze speler te gaan om aan te vinken ofrijzlijhet er mee eens is dat de per-sconlijke taak is afgerond.

#### Andere spelers

Andere spelers worden ander de buddies weerge-geven ap een zelfde wijze alleen zander de groene schakelketting.

#### Game Design Changes

#### De Map

Scenario: De speler komt viade tool in het 'map' schen of ziet een overzicht op een tv/laptop in eengemeen-schappelijke ruimte.

I Een speler komt of via Moodbot bij de mep of ziet vie een tv/laptop dit scherm

een tweppop bis of entry 2:0 after trap schema jan verschillende salernte sien. 2:0 atteren gelech bij (Lide howeverheid dardvarry's die errodig signimolij het weeld-die (grouppdat) kannen het weeldoal is eendoal werd de hete group gezimmel ijknem to sarreett gedunde een vooraf bepreide periode Dit kan larger sijn dan een weel-(weelen meerd named net zivoor dit voorbeeld is een week vergetouden Warneer het mokmunisen daaturry is is vezmeit, is het eind eland berekten het weekdoel geheeld.

3. Order de dustturny indicator (B) is te zien hoeveel dagen een groep hototal de tijd heeft omhet week-deel te behelen Dearneast wordt er weergegeven hoeveel dagen er vestreken zijn in het voorbeeld zijn het dagen efter is dit ook versiele enkurnen dit ook weken meerdenett: zijn.

4 B(C) is to zign hochest afgelegde pod nær het week doet toe vaueel op een speelse mænier wordt weege even het idee to dat het driet elektback moet gever overhoe ver de groep nog van het weekdoel at en twerst toor het progresse werd hopel jik nottweend werkt voor de spelers het schip geat gesteeg vooruit nær mære er meer dustburny's zijn verzemelt door de groep.



5 Bj (D) is het eind efand te zien Dit is de locatie die de groep dient te behelen Boven het eind efand is een vek met tekst te zien Hierin is de uitendelijke beloning te zien die kan worden gehaeld wenneer het schip bij het eind efand is.

6 Pechts op de map (E) is een vek te zienmet een linhet voorbeeld top 5 in de ze top konnen de spelers de de meeste dustury vir hebben verzomet te staarn Het ide is de in de overzicht niet elle groepsleden homen te staarn het moet notieverzeit werken. De hoeveel dustourny's verzomet zoo eventueel ochter de manne ven displeis kunnen staan.

7. Helemael orderin de map (F) is een 'newstar' te zien Het idee achter deze ber is dat het net zo werkt zoels je bijvo-obeeld op het news ziet Ef komtocrister te text voor-bij strollen weerop dregen zoels achievements worden vermeld. De newster moet spelars laten zien wie wat ei gedaan heeft om zoelwart er motiveren

# **Achievements**

Moodbot kent sinds het nieuwe ontwerp ook een zogeheten achievement systeem, zoals eender uitgelegd.

Wanneer een speler bepaalde activite iten doet binnen Moodbot is het mogelijk om daar beloond voor te worden.

Dit gebeurd via achievements. Het idee is dat dit terug te zien is op het scherm in de persoonlijke kamer en tevens op een moodbot zelf.

Hieronder een lijst van voorbeelden van achievements

l Firstl: De eerste van de week zijn die al zijn activiteiten doet in de persoonlijke kamer.

2. Runner up I De tweede van de week zijn die al zijn activiteiten doet in de persoonlijke kamer.

3. Mood Masteri Het invullen van de Moodtube op de persoonlijke kamer.

4. Good neighbourl Het versturen van een Moodchip near een andere speler.

5. Winner! Het behalen van je individuele doel.

6. Supporting Buddyl Buddy zijn van een andere speler.

7. The Judgel Het beoordelen van een andere Buddy.

8 Number Onel Op nummer I staan in de top 5.

9. Keep going lin de top 5 komen

10. Bunny Collectori Al je Dustburny's verzamelen op een dag.

II. The Achie veri Elke dag alles doen en invullen in je persoonlijke kamer.

12. The Masteri De hele week op nummer i staan.

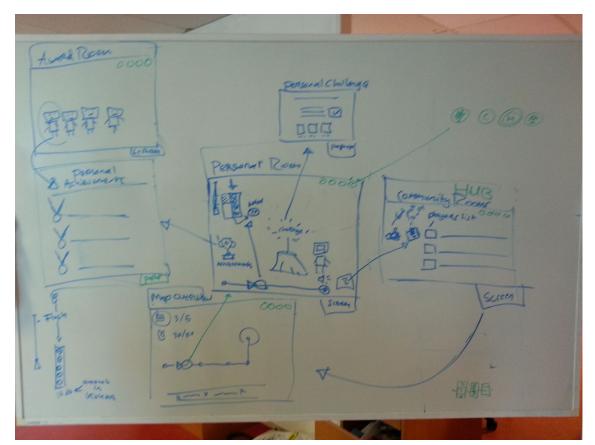
13. The Inspiratori Elke dag een bericht sturen naar een andere speler.

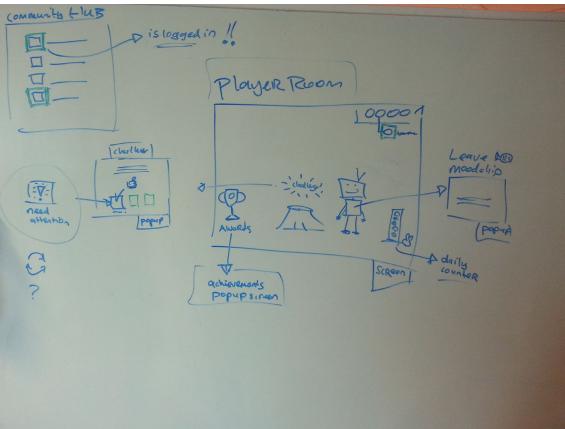


14. The Conquerori Twee of meer weken lang je individuele doelen helen

15 The Leadert Twee of meer weken lang op nummer. Istaan

Dit zijn slechts een aantal voorbeelden van wat voor soort achievements er mogelijk zijn Er zijn hier natuurlijk vele iteraties op mogelijk.





# **APPENDIX AO**



Moodbot\_GameWlkThrg\_dv\_2.1

Content: video 5 minutes 02 seconds

Language: English

**Description:** Demonstrates first implementation of the design features in Moodbot that were the basis for version 2.

# **APPENDIX AP**



<u>DesignState\_21\_Playtest</u>
Content: Portable Document Format, 3 pages
Language: Dutch w/ English Translation
Description: A collection of notes taken from a play-test with the target audience.

#### Moodbot playtest results - 31-10-2013

#### Playtester 1

- Heel onduidelijk waar je begint.
- Weet niet wat hij moet doen.
- Bevestiging buddy's niet duidelijk.
  - "Pending" icon bij Buddy scherm lijkt teveel op een Refresh icon.
- Kamer andere speler lijkt op lobby.
- Kleur van de badges is onduidelijk.
- Map punten lijken klik baar.
  - Feedback op de chain link in het Buddy scherm: Misschien een icoon kiezen dat meer lijkt op het facebook vrienden icoon. En tevens dit icoon ook tonen in het challenge scherm, onderin bij je buddies.
- Afwerking van GUI. Wanneer je van kamers verwisseld verspringt de GUI van x en y positie.

#### Playtester 2

- Moodjournal nog te vaag
  - Misschien ene slider die snapt van punten ipv aanklikken.
- Moodbot: Tekst en denk ballon is nog te vaag. Nog niet duidelijk genoeg dat je er op kunt drukken.
- Buddy scherm: Is ook nog niet duidelijk genoeg.
   Begreep het challenge icoon niet.
- Map: Circkels op de baan waren verwarrend, dachten dat het aparte eilanden waren.

#### Playtester 3

- Achievement cup nog te weinig feedback, je weet niet dat je er op kunt klikken.
   Je kunt alleen op de tekst "week" en "totaal" drukken en niet op het vak eromheen.
- Moodbot: Tekst en denk ballon is nog te vaag. Nog niet duidelijk genoeg dat je er op kunt drukken.
- Buddy scherm: Begreep ook het challenge icoon niet.
- Map: Circkels op de baan waren ook verwarrend, dachten dat het aparte eilanden waren.

#### Moodbot play test results - 31-10-2013

#### Play tester 1

- Very unclear where you start.
- Don't know what to do.
- Confirmation buddy's not clear.

 $\circ$  "Pending" icon at Buddy screen looks too much like a Refresh icon.

- Room other player seems on lobby.
- Color of the badges is unclear.
- Map click points seem baar.
  - Feedback on the chain link in the Buddy screen: Maybe an icon that looks more like the facebook friends icon. And also this icon also show the challenge screen, at the bottom of your buddies.
- Finish by GUI. When you swapped rooms the GUI of x and y position.

#### Play tester 2

• Moodjournal still too vague

 $\,\circ\,$  Maybe one slider that get points instead of clicking.

- Moodbot: text and think balloon is still too vague. Not yet clear enough that you can print.
- Buddy screen: Is also not yet clear enough.

Understood the challenge icon does not appear.

• Folder: Circkels on the runway were confusing, thought it were separate islands.

#### Play tester 3

• Achievement cup still too little feedback, you don't know that you can click.

 $\circ$  You can only on the text "week" and "total" and not on the box around it.

- Moodbot: text and think balloon is still too vague. Not yet clear enough that you can print.
- Buddy screen: also understood the challenge icon does not appear.
- Folder: Circkels on the runway were also confusing, thought it were separate islands.

# APPENDIX AQ



DesignState\_22\_Playtest

Content: Portable Document Format, 4 pages

Language: Dutch w/ English Translation

**Description:** A collection of notes taken from a play-test with the target audience.

4 February 2014: Moodbot evaluation section ABC Present: Miriam (client), Tom does, Fred M., Gijs, Nicky (client), Micah, Chester (client), Kornelis Jan vd Vaart, Marjoram

Experiences Face book nice to Like to write moodchips

Has the interaction encouraged? MB is subject Now little contact with each other; If I would be there more often about clinical I would have Urge was there to make contact I want to be able to see someone's mood. As I adjusted my Robot, I got no response thereby not attractive

Or fill out Or get buzz via app votes also seems fine then I don't every time at the same time. Now I took the rest to score and then I was also always in same vote.

Graph was not clearly in moodbot with bar charts; Better line graph as in the admin.

Recode discuss with ippo

Problem no challenges in it Idea: games button with chess and ability to play with. Add more social and more challenges. Good possibility of faster to become friends with people on abc.

1 purpose that lay far away Therefore better goal with subgoals Check every day or you have something. Possibility of family to goals.

Added Value Moodbot People on abc lonely hard contact For this, use moodbot to make contact

Make concrete goal helped though

Added value in game lies in awareness of purpose what you want!!!! Also scoring meters and there are doing was interesting

Put your thinking

By moodbot you every time recalled working on purpose

Game is now not like, must be fun

Online game threshold is lowering benefits of emotions. Really need that you can send short message

Possibility of adding: message for everyone/group message

Idea to poke male? On face book

Technical feedback: Dials were clumsy with two same arrow

In order to play it one more time; What should be added? Social interaction BV crossword puzzle and there scoring points

Many acts do to you when someone in the room can more convenient on 1 spot can see who. That you can see who has updated his profile.

Walk with stick man

Also fun to customize moodbot room

#### <u>In summary:</u>

#### Requests for Change

- Line graph in Moodbot instead of bar chart
- Hercoderingsfunctie for signals (so that clear signals are displayed in graph)
- Clearer dials with different types of arrow
- Easier access to rooms of group members (less acts)

#### Wishes for new features

- Moodchips write itself
  - That is clearly for the whole group if anyone has adapted his Robot/profile
- Possibility to enter my mobile via my signals
- On different (random) moments a buzz signal to transmit signals (prevents I always on time that it goes well signals try to)
- Games such as chess/crossword puzzle you can play with multiple players bv. Every time move if you're in room of other player comes
- Sub-goals can add
- Add sub-goals that you can check off every day
- Let family members join in or achieved goals can check off
- Group messages/moodchips
- Itself able to walk with Moodbot
- Customize Moodbot room

#### Added value now

- awareness of the goal you want to achieve
- scoring meters and there are doing was interesting; put your thinking
- By moodbot you will be remembered every time to working on purpose

#### General improvements

- Moodbot should be more opportunity for social interaction
- Moodbot should get more challenges to come back/to do

4 februari 2014: Moodbot evaluatie afdeling ABC Aanwezig: Miriam (cliënt), Tom van Wel, Fred Marquenie, Gijs, Nicky (cliënt), Micah, Chester (cliënt), Kornelis Jan vd Vaart, Marjolein

Ervaringen Face book mooie aanvulling Graag zelf moodchips schrijven

Heeft het interactie gestimuleerd? Mb is wel gespreksonderwerp Nu te weinig contact met elkaar; als ik klinisch zou zijn zou ik het er vaker over hebben Drang was er wel om contact te zoeken Ik wil iemands stemming kunnen zien. Als ik mijn Robot aanpaste, kreeg ik geen reactie daardoor niet aantrekkelijk

Of via app stemmingen invullen Of buzz krijgen lijkt me ook fijn dan doe ik het niet elke keer op hetzelfde tijdstip. Nu nam ik de rust om te scoren en dan was ik ook telkens in zelfde stemming.

Grafiek was in moodbot niet duidelijk met staafdiagrammen; Beter lijn grafiek zoals in de admin.

Hercoderen bespreken met ippo

Probleem Geen uitdagingen erin Idee: spelletjes button met schaken en mogelijkheid om mee te spelen. Meer sociaal maken en meer uitdagingen toevoegen. Goede mogelijkheid om sneller vrienden te worden met mensen op abc.

1 doel dat ver weg lag Daarom beter doel met subdoelen Elke dag aanvinken of je iets hebt behaald. Mogelijkheid van familie om doelen goed te keuren.

Meerwaarde Moodbot Mensen op abc eenzaam moeilijk contact Daarvoor moodbot gebruiken contact te maken

Concreet doel maken hielp wel

Meerwaarde in spel ligt in bewustwording van doel wat je wil behalen!!!! Ook scoren van meters en daar mee bezig zijn was interessant

Zet je aan het denken

Door moodbot word je elke keer herinnerd aan werken aan doel

Spel is nu niet leuk, moet wel leuk worden

Online is spel drempel verlagend voor delen van emoties. Daarvoor wel nodig dat je wel kort bericht kunt sturen

Mogelijkheid toevoegen van: Boodschap voor iedereen/groeps boodschap

Idee om poke mannetje? Op face book

Technische feedback: Metertjes waren onhandig met twee dezelfde pijltjes

Om het nog een keer te spelen; wat moet er dan worden toegevoegd? Sociale interactie Bv kruiswoordpuzzel en daar punten mee scoren

Veel handelingen verrichten voor je bij iemand in de kamer kunt handiger op 1 plek kunt zien wie. Dat je kunt zien wie zijn profiel heeft aangepast.

Lopen met poppetje

Ook leuk moodbot kamer aanpassen

#### Samengevat:

Requests for Change

- Lijngrafiek in Moodbot ipv staafdiagram
- Hercoderingsfunctie voor signalen (zodat signalen eenduidig worden weergegeven in grafiek)
- Duidelijkere metertjes met verschillende soorten pijltjes
- Eenvoudiger toegang tot kamers van groepsgenoten (minder handelingen)

Wensen voor nieuwe features

- Zelf moodchips schrijven
  - Dat duidelijk wordt voor de hele groep als iemand zijn Robot/profiel heeft aangepast
  - Mogelijkheid om via mijn mobiel mijn signalen in te voeren
  - Op verschillende (ad random) momenten een buzz signaal krijgen om signalen in te voeren (voorkomt dat ik altijd op moment dat het goed gaat signalen aangeef)
  - Spelletjes toevoegen zoals schaken/kruiswoordpuzzel wat je met meerdere spelers kunt spelen bv. Iedere keer zet doen als je in kamer van andere speler komt
  - Subdoelen kunnen toevoegen
  - Subdoelen toevoegen die je iedere dag kunt afvinken
- Familieleden laten meedoen of dat ze behaalde doelen kunnen afvinken
- Maken van groepsboodschappen/moodchips
- Zelf kunnen lopen met Moodbot
- Moodbot kamer aanpassen

#### Meerwaarde nu

- bewustwording van het doel wat je wil behalen
- scoren van meters en daar mee bezig zijn was interessant; zet je aan het denken
- Door moodbot word je elke keer herinnerd aan het werken aan doel

#### Verbeterpunten algemeen

- Moodbot moet meer mogelijkheid geven voor sociale interactie
- Moodbot moet meer uitdagingen krijgen om terug te komen/om het te gaan doen

# **APPENDIX AR**



Moodbot\_GameWlkThrg\_dv\_2.12

Content: video 9 minutes 03 seconds

Language: English

**Description:** Demonstrates the final state of Moodbot version 2 on the target device iPad.

# **APPENDIX AS**



DesignState\_23\_Playtest

Content: Portable Document Format, 10 pages

Language: Dutch w/ English Translation

**Description:** A collection of notes taken from a play-test with the target audience.

#### Moodbot

28-04-2014 Den Dolder Altrecht Roosenburg

Report of interview with Jeanette Fencers on the provisional results of the Moodbot play test at Altrecht roosenburg. 6 out of 10 patients chosen for the play have satisfactorily participated in test; the other four have been removed from or refrain from participation for various reasons.

The location, Altrecht Rahi is a variable section, intended primarily for crisis care and flow. This has the course of and expectations for the playtest affected; the two main effects of this were a short-lived participation in the play by some patients who test them went to other departments and individual application of Moodbot, where the in-game group interaction elements were not used. By the rapidly changing composition of patients roosenburg there is little mutual trust. For this reason, it is for an individual application chosen to more review on interactions. However, several interactions between play testers and other patients arose from the play test. Personal goals in Moodbot were found to have a good support and strong motivator for initiating contact. Two examples of this:

- A patient with serious depressive problems, inactivity and lack of motivation had as
  personal reward indicated a burger at McDonalds to want to go eat. The personal goal was
  once a week to play badminton. The patient came ' almost immediately ' off the couch and
  became active. Be active for the personal goal eventually also stimulated an overall increase
  in activity. When visiting the McDonalds with the personal attendant was also a ' very
  valuable conversation '.
- Two patients with similar problems and personal goals found in each other support and urged each other to the personal goals and to sustain.

With the experience of the last anecdote came the insight that problems of patients must be taken into account in the formation of Moodbot groups; similar problems supports group-dynamic aspects of communication with mutual recognition.

**Initial expectations** of and responses to Moodbot were at Altrecht roosenburg somewhat divided. The escorts were positive and in commitment went along with the plans of the playtest: they were positive about the possible use and the possible outcomes and registered to the required bet that was asked of them. However, it was soon revealed that do not were met; personal escorts of the play testers had not set up signals, received goals not signed off and seemed to have taken to accompanying speeches in the play test. Finally, full responsibility for the conduct of the playtest at Jeanette Fencers: guidance, control, setting up rounds, enter player information, tracing of certain goals and communicating findings to patients and the other escorts.

This seems to be a pervasief problem, where reluctance to a break with the established system seems to arise from (the experience of) excessive workload. The application of new methods or systems requires a temporary increase in workload and this was consistent the main objection to participation in the playtest. Due to the nature of Rahman as a crisis care with high flow, it is also so that the workload here particularly hood is.

Jeanette Fencers assumes that, in the case of Moodbot, more time should be taken to the back-end and a manual should be available for all escorts. Rolling out Moodbot would also need to be linked to existing protocols and systems. Link with the creation of a crisis-and treatment plan and, in particular, the electronic patient file (SPD) would be a recording of Moodbot in the system more natural and accessible. Treatment goals could, for instance, be linked to Moodbot goals and a quick display of the Moodbot signal one click charts in the SPD would be valuable self-report information. At the feedback of findings and results with Moodbot by Jeanette Fencers on the other escorts and from interactions with the patients themselves saw the escorts have many positive effects. They were gradually more and more enthusiastic and approached Jeanette Fencers for information on progress with Moodbot. Lack of initial participation as an accompanist and an unmodified working pressure, however, retained the abstention of accompanying participation.

The patients responded initial reluctant: they found Moodbot childish, found that a ' game ' not in their therapy image adapted and understood not what its usefulness would be. Some patients were very steadfast in their unwillingness to participate and only pedestrian behavior also played a role in abstention from participation. This "difficult" patients needed an investment to get along in the use of Moodbot and where here time and space for was I managed also to patients. In addition to all the regular duties of a supervisor, however, it is too much work for one person (in this case, Jeanette Fencers) to everything and every participant good. The initial unwilling attitude combined with the lack of space this is sufficient to address carried possible on to the final abstention from 4/10 participants. For the other 6 participants took the experience with Moodbot a positive turn very quickly: they found it fun and came to appreciate it as a tool.

- One patient was early transferred to another Department and gave up on a moment of contact with Jeanette Fencers the so sorry to have Moodbot to find any more, on the new Department to proceed with a private, paper version of Moodbot.
- One patient gave to not to be happy with the end of the play test because it no longer could go further with Moodbot.

Against expectations about the use in showed that the patients did not immediately understood what they should/could do: a lot of time was wasted on useless clicks and boredom and frustration followed this quickly. This has led to a Moodbot in almost all cases in the beginning had to be filled in together with the supervisor and in some cases remained until the end of the play test. It is possible that cognitive ability also affects user understanding. More clear interaction cues are probably necessary to independently to promote use of Moodbot.

Some aspects of the patients had Moodbot be different. A larger choice of Moodbot poses and music that more gradual and personal representative can view differences were desired. More visual feedback of progression was also desired: customizing options that are released or a change in the ship. For a better connection to different types of patients was an option for different themes (declarative view) suggested. The ' flush ' of dustbunnies was expected to be a satisfying action considered, but from multiple comments indicated that this much rather as ' swipe ' action had a ' tap '. It is also desired to make visible signal actions for the patients themselves, as well as a more clear graphical representation of traces over time, like this one in the back-end is displayed. The last was the bonus island at the end after reaching the main goal as a confusing experience: the goal was achieved, what is there still to do? The main goal, however, was very positive and satisfying experience:

 In achieving the headline goal and getting the associated animation and the ' congratulations ' message was attendant Jeanette Fencers on enthusiastic and exuberant way by the patients brought in to share in the moment of completion.

One of the patients gave up after 4 weeks at the no longer fun to find and was stopped. Jeanette Fencers assumed this to be due to a blockage of Moodbot activities and suggested to be able to fix this by gradually adjust signals to the ' interesting '. With the introduction of Moodbot to escorts would then also have to be passed to avoid boredom. For some patients were the targets difficult to achieve; where problems may affect the use of strong Moodbot can be unnecessarily triggered actions associated with signals and not achieve a goal can have a detrimental effect. For example, if a patient exhibits theatrical behavior problems at difficult moments this can lead to a bias in the actual signal image. It's not a destination can be a depressive reaction and lead to abstinence from further participation. To do this, be taken and communication on Moodbot between counselor and patient should be well sustained.

Very positive comments and results are here illustrated by anecdotes. Jeanette Fencers gave to this on more extensive way.

- A patient gave in the general contact to that ' everything went well '. However, from the identification of Moodbot came forward that it's pretty went bad and felt very dim.
- With one patient it was very difficult to get contact. It was not clear what in this patient.
   After joint interpretation of Moodbot with Jeanette Fencers gave this to antipsychotic medication. 'What moodbot does is that you effectively are working.' Jeanette Fencers
- A very angry patient went on a very angry moment together with Jeanette Moodbot fill out and experienced Fencers directly a decrease in anger.
- A patient gave to much more aware of (especially problematic) social behavior (autooritair) and the effect this has on the own State of mind. The Moodbot then used these signals like itself signs in support of own behavioral experiments. 'The patient should do more itself: it helps to develop autonomy. That is really a toegeevoegde value. '- Jeanette Fencers

The Moodbot signals acted often in feedback as a talk tarter; the signals were as 'neutral' something good to discuss with a patient. Together with the patient to determine the signals was also very positive and the cooperation in the application of Moodbot created a positive and supportive experience.

- 'That is nice to Moodbot. It can be quite variable. It is a very beautiful instrument. '-Jeanette Fencers

Completing and kunnin of alert led to the patients also were far more concerned with their own problems and progress; self-awareness and autonomy were strongly supported and actions linked to herein signals led to a ' acceleration in proactive behavior '.

**Back-end results** were considered as very valuable. The escorts gave information about the patients that would be otherwise not available. Early detection was well supported and has quicker intervention made possible: treatment of crisis moments could be applied much more specific. Separation and aggression could in some situations using Moodbot be prevented, as well as psychotic decompensation.

Some clarity in overview in the back end was desired. More agreement between front-and back-end might have helped in overview of progress, such as the position of the ship and earned week goals. Also is not showing at which signal an action when this is triggered after a last fill time. Colleague of Jeanette Fencers, Renske Visser, described the toegevoegdde value of Moodbot on the basis of the traditional balance of responsibility between practitioner and patient. This is normally a one to one relationship, in which the practitioner to patient's is often one-way. '*With Moodbot you create a triangle of responsibility in treatment.*'

#### Moodbot

28-04-2014 Den Dolder Altrecht Roosenburg

Verslag van interview met Jeanette Schermers over de voorlopige uitkomsten van de Moodbot playtest bij Altrecht Roosenburg. 6 uit 10 patiënten gekozen voor de playtest hebben naar tevredenheid meegedaan; de overige vier hebben zich om verschillende redenen onthouden van of onttrokken aan deelname.

**De locatie**, Altrecht Roosenburg is een veranderlijke afdeling, voornamelijk bedoeld voor crisisopvang en doorstroom. Dit heeft het verloop van en verwachtingen voor de playtest beïnvloed; de twee voornaamste effecten hiervan waren een kortstondige deelname aan de playtest door enkele patiënten die doorstroomden naar andere afdelingen en een individuele toepassing van Moodbot, waarbij de in-game groep interactie elementen niet werden gebruikt. Door de snel wisselende samenstelling van patiënten bij Roosenburg is er weinig onderlinge vertrouwen. Hierom is voor een individuele toepassing gekozen om meer overzicht op interacties te behouden. Echter, verschillende interacties tussen playtesters en andere patiënten ontstonden vanuit de playtest. Persoonlijke doelen in Moodbot bleken een goede ondersteuning en sterke motivator te zijn voor het initiëren van contact. Twee voorbeelden hiervan:

- Een patiënt met depressieve problematiek, ernstige inactiviteit en motivatiegebrek had als persoonlijke beloning aangegeven een hamburger bij de McDonalds te willen gaan eten. Het persoonlijke doel hierbij was één keer in de week badminton te spelen. De patiënt kwam 'bijna meteen' van de bank af en werd actief. Actief worden voor het persoonlijke doel stimuleerde uiteindelijk tevens een algehele toename in activiteit. Bij het bezoek aan de McDonalds met de persoonlijke begeleider ontstond eveneens een 'zeer waardevol gesprek'.
- Twee patiënten met vergelijkbare problematiek en persoonlijke doelen vonden in elkaar steun en spoorden elkaar aan de persoonlijke doelen na te streven en vol te houden.

Met de ervaring van de laatste anecdote kwam het inzicht dat problematiek van patiënten in acht moet worden genomen bij de vorming van Moodbot groepen; vergelijkbare problematiek ondersteunt groepsdynamische aspecten van communicatie met wederzijdse herkenning.

Initiële verwachtingen van en reacties op Moodbot waren bij Altrecht Roosenburg enigszins verdeeld. De begeleiders waren positief en gingen in toezegging mee met de plannen van de playtest: zij lieten zich positief uit over het mogelijke gebruik en de mogelijke uitkomsten en schreven zich toe aan de vereiste inzet dat van hen werd gevraagd. Al snel kwam echter naar voren dat hier niet aan werd voldaan; persoonlijke begeleiders van de playtesters hadden signalen niet opgezet, behaalde doelen niet afgetekend en leken zich ontrokken te hebben aan begeleidende deelname aan de playtest. Uiteindelijk belandde volledige verantwoordelijkheid voor het verloop van de playtest bij Jeanette Schermers: begeleiding, controle, opzetten van speelrondes, invoeren van speler informatie, aftekenen van behaalde doelen en communiceren van bevindingen naar patiënten en de andere begeleiders.

Dit lijkt een pervasief probleem te zijn, waarbij onwil om een breuk te maken met het gevestigde systeem lijkt voort te komen uit (de ervaring van) te hoge werkdruk. De toepassing van nieuwe methodes of systemen vereist een tijdelijke toename van werkdruk en dit was consistent de voornaamste bezwaar tegen deelname aan de playtest. Wegens de aard van Roosenburg als crisisopvang met hoge doorstroom is het tevens zo dat de werkdruk hier bijzonder hood is. Jeanette Schermers veronderstelt dat, sowieso in het geval van Moodbot, meer tijd genomen moet worden om de back-end te introduceren en een handleiding beschikbaar moet zijn voor alle begeleiders. Het uitrollen van Moodbot zou eveneens gekoppeld moeten worden aan bestaande protocollen en systemen. Koppeling met de opzet van een crisis- en behandelplan en met name het Electronisch Patiënten Dossier (EPD) zou een opname van Moodbot in het systeem meer natuurlijk en toegankelijk maken. Behandeldoelen zouden bijvoorbeeld kunnen worden gekoppeld aan Moodbot doelen en een snelle één klik weergave van de Moodbot signaalgrafieken in het EPD zou waardevolle zelfrapportageinformatie bieden.

Bij de terugkoppeling van bevindingen en resultaten met Moodbot door Jeanette Schermers aan de andere begeleiders èn vanuit interacties met de patiënten zelf zagen de begeleiders wel veel positieve effecten. Ze werden gaandeweg steeds meer enthousiast en benaderden Jeanette Schermers voor informatie over de voortgang met Moodbot. Gebrek aan initiële deelname als begeleider en een onveranderde werkdruk behield echter de onthouding van begeleidende deelname.

**De patiënten** reageerden initiëel terughoudend: ze vonden Moodbot kinderachtig, vonden dat een 'spel' niet in hun therapiebeeld pastte en begrepen niet wat het nut ervan zou zijn. Sommige patiënten waren zeer standvastig in hun onwil deel te nemen en enige meeloopgedrag speelde tevens een rol in onthouding van deelname. Deze 'moeilijke' patiënten vergden een investering om mee te krijgen in het gebruik van Moodbot en waar hier tijd en ruimte voor was lukte het ook om patiënten bij te draaien. Naast alle reguliere taken van een begeleider is het echter teveel werk voor één persoon (in dit geval Jeanette Schermers) om alles op te zetten en iedere deelnemer goed mee te krijgen. De initiëel onwillige houding gecombineerd met het gebrek aan ruimte dit voldoende te addresseren droeg mogelijk bij aan de uiteindelijke onthouding van 4/10 deelnemers. Voor de overige 6 deelnemers nam de ervaring met Moodbot al heel snel een positieve wending: ze vonden het leuk en kwamen het te waarderen als hulpmiddel.

- Eén patiënt werd vroegtijdig overgeplaatst naar een andere afdeling en gaf op een contactmoment met Jeanette Schermers het zo jammer te vinden geen Moodbot meer te hebben, op de nieuwe afdeling verder te gaan met een eigen, papieren versie van Moodbot.
- Eén patiënt gaf aan niet blij te zijn met het einde van de playtest, omdat deze dan niet meer met Moodbot verder kon gaan.

Tegen verwachtingen over het gebruik in bleek dat de patiënten niet meteen begrepen wat ze moesten / konden doen: veel tijd werd verspild aan nutteloos klikken en verveling en frustratie volgde dit snel op. Dit heeft ertoe geleid dat Moodbot in vrijwel allle gevallen in het begin samen met de begeleider ingevuld moest worden en in sommige gevallen bleef dit tot aan het eind van de playtest. Het is mogelijk dat cognitief vermogen tevens van invloed is op gebruiksbegrip. Meer duidelijke interaction cues zijn waarschijnlijk nodig om zelfstandig gebruik van Moodbot te bevorderen.

Enkele aspecten van Moodbot hadden de patiënten wel graag anders gezien. Een grotere keus aan Moodbot poses en muziek die meer graduele en persoonlijk representatieve verschillen kunnen weergeven waren wel gewenst. Meer visuele feedback van progressie was eveneens gewenst: customizing opties die vrijkomen of een verandering in het schip. Voor een betere aansluiting tot verschillende soorten patiënten was een optie voor verschillende thema's (declaratieve weergave) voorgesteld. De 'flush' van dustbunnies werd wel naar verwachting als een voldoening gevende actie beschouwd, maar uit meerdere reacties werd aangegeven dat men deze veel liever als 'swipe' actie hadden dan een 'tap'. Verder is gewenst signaalacties zichtbaar te maken voor de patiënten zelf, evenals een meer duidelijke grafische weergave van signaalverloop over tijd, zoals deze in de backend is weergegeven. Als laatste werd het bonuseiland aan het eind ná het bereiken van het hoofddoel als verwarrend ervaren: het doel was behaald, wat valt er dan nog te doen? Het hoofddoel behalen werd echter wel als zeer positief en bevredigend ervaren:

Bij het behalen van het hoofddoel en het krijgen van de bijbehorende animatie en het 'gefeliciteerd' bericht werd begeleider Jeanette Schermers op enthousiaste en uitbundige wijze door de patiënten erbij gehaald om te delen in het moment van voltooiing.

Eén van de patiënten gaf na 4 weken aan het niet meer leuk te vinden en was gestopt. Jeanette Schermers veronderstelde dit te kunnen wijten aan een stagnatie van activiteiten in Moodbot en stelde voor dit te kunnen verhelpen door gaandeweg signalen aan te passen om het 'interessant' te houden. Bij de introductie van Moodbot aan begeleiders zou dan ook doorgegeven moeten worden te waken voor verveling.

Voor sommige patiënten waren de doelen lastig te behalen; waar problematiek sterk van invloed kan zijn op het gebruik van Moodbot kunnen acties behorende bij signalen onnodig getriggerd worden en het niet behalen van een doel kan een nadelige uitwerking hebben. Als een patiënt bijvoorbeeld theatrale gedragsproblemen vertoont op moeilijke momenten kan dit tot een vertekening leiden in het werkelijke signaalbeeld. Het niet behalen van een doel kan een depressieve reactie teweeg brengen en leiden tot onthouding van verdere deelname. Hiervoor moet worden gewaakt en communicatie over Moodbot tussen begeleider en patiënt moet goed worden volgehouden.

**Zeer positieve reacties en resultaten** worden hier geïllustreerd aan de hand van anecdotes. Jeanette Schermers gaf aan deze op meer uitgebreide wijze te gaan aanvullen.

- Een patiënt gaf in het algemene contact aan dat 'alles wel goed ging'. Vanuit de signalering van Moodbot kwam echter naar voren dat het behoorlijk slecht ging en dat deze zich erg somber voelde.
- Met één patiënt was het erg moeilijk contact te krijgen. Het was niet duidelijk wat er bij deze patiënt speelde. Na gezamenlijke invulling van Moodbot met Jeanette Schermers gaf deze aan antipsychotische medicatie nodig te hebben. 'Wat moodbot doet is dat je effectief aan het werk bent.' – Jeanette Schermers
- Een erg boze patiënt ging op een erg boos moment samen met Jeanette Schermers Moodbot invullen en ervoer direct een afname in kwaadheid.
- Een patiënt gaf aan veel meer bewust te worden van (vooral problematisch) sociaal gedrag (autooritair) en het effect dat dit heeft op de eigen gemoedstoestand. Vervolgens gebruikte deze de Moodbot signalen als zelfsignalering ter ondersteuning van eigen gedragsexperimenten. 'De patiënt moet meer zelf doen: het helpt bij autonomie ontwikkelen.

Dat is echt een toegeevoegde waarde.' – Jeanette Schermers De Moodbot signalen fungeerden vaak in terugkoppeling als een gesprekstarter; de signalen waren als 'iets neutraals' goed met een patiënt te bespreken. Samen met de patiënt de signalen bepalen werd eveneens als zeer positief ervaren en de samenwerking in het toepassen van Moodbot creëerde een positieve en ondersteunende ervaring.

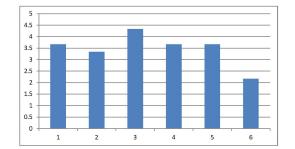
'Dat is mooi aan Moodbot. Je kunt hem heel variabel invullen. Het is een heel mooi instrument.' – Jeanette Schermers

Het invullen en kunnin inzien van signalering leidde ertoe dat de patiënten ook veel meer bezig waren met hun eigen problematiek en voortgang; zelfbewustzijn en autonomie werden hierin sterk ondersteund en acties gekoppeld aan signalen leidden tot een 'versnelling in proactief gedrag'. **Back-end resultaten** werden als zeer waardevol beschouwd. Het gaf begeleiders informatie over de patiënten dat op een andere wijze niet verkrijgbaar zou zijn. Vroegsignalering werd goed ondersteund en heeft sneller ingrijpen mogelijk gemaakt: behandeling van crisismomenten kon veel concreter worden toegepast. Separatie en agressie konden in sommige situaties met behulp van Moodbot worden voorkomen, evenals psychotische decompensatie.

Enige duidelijkheid in overzicht in de back-end was wel gewenst. Meer overeenkomst tussen fronten back-end had mogelijk geholpen bij overzicht van voortgang, zoals de positie van het schip en behaalde weekdoelen. Ook is niet te zien bij welk signaal een actie hoort als deze wordt getriggerd na een laatste invulmoment.

Collega van Jeanette Schermers, Renske Visser, omschreef de toegevoegdde waarde van Moodbot aan de hand van het traditionele balans van verantwoordelijkheid tussen behandelaar en patiënt. Deze is normaal gesproken een één op één relatie, waarbij het toch vaak éénrichtingsverkeer is van behandelaar naar patiënt. 'Met Moodbot creëer je een driehoek van verantwoordelijkheid in behandeling.'

| lk vond de besturing van Moodbot makkelijk   | 4                            | 5                  | 5                            | 4           | 2                             | 2             | 3.666667 |  |
|--|------------------------------|--------------------|------------------------------|-------------|-------------------------------|---------------|----------|--|
| lk begreep meteen hoe ik verder kon komen / pu   | 3                            | 5                  | 5                            | 3           | 2                             | 2             | 3.333333 |  |
| Ik begrijp waarvoor de metingen in Moodbot wo  | 5                            | 5                  | 5                            | 4           | 5                             | 2             | 4.333333 |  |
| Ik vind het een nuttige toevoeging aan mijn thera  | 5                            | 3                  | 4                            | 3           | 4                             | 3             | 3.666667 |  |
| Ik kreeg met Moodbot beter zicht op mijn eigen :   | 3                            | 3                  | 4                            | 3           | 5                             | 4             | 3.666667 |  |
| Ik kwam met Moodbot meer in contact met ande   | 2                            | 2                  | 2                            | 1           | 4                             | 2             | 2.166667 |  |
|  |                              |                    |                              |             |                               |               |          |  |
|  | 0.00000                      | 0.000000           |                              |             |                               |               |          |  |
|  | 3.666667                     | 3.833333           | 4.166667                     | 3           | 3.666667                      | 2.5           |          |  |
|  | 3.666667                     | 3.833333           | 4.166667                     | 3           | 3.666667                      | 2.5           |          |  |
| Was je aanwezig bij de start op 21 januari?  | 3.666667                     | 3.833333           | 4.166667                     | 3           | 3.666667                      | 2.5           |          |  |
| Was je aanwezig bij de start op 21 januari?<br>Zou je Moodbot nog een keer willen gebruiken? | 3.666667                     | 3.833333<br>1<br>0 | 4.166667<br>1<br>1           | 3<br>1<br>0 | 3.666667                      | 2.5<br>1<br>0 |          |  |
|  | 3.666667<br>1<br>1           | 1                  | 4.166667<br>1<br>1<br>1      | 1           | 3.666667<br>1<br>1<br>1       | 1             |          |  |
| Zou je Moodbot nog een keer willen gebruiken?  | 3.666667<br>1<br>1           | 1                  | 4.166667<br>1<br>1<br>1      | 1<br>0      | 3.666667<br>1<br>1<br>1       | 1<br>0        |          |  |
| Zou je Moodbot nog een keer willen gebruiken?  | 3.666667<br>1<br>1<br>1<br>5 | 1                  | 4.166667<br>1<br>1<br>1<br>1 | 1<br>0      | 3.666667<br>1<br>1<br>1<br>30 | 1<br>0        | 13.33333 |  |



#### Moodbot test bij Altrecht ABC

Hieronder staan een aantal stellingen over het gebruik van Moodbot zoals je dit hebt ervaren de afgelopen twee weken. Door het juiste getal achter de stelling te omcirkelen kun je aangeven in hoeverre je het eens bent met de stelling. De getallen gaan van **"1-helemaal niet eens"** naar **"5-helemaal eens"**.

| х. | Voorbeeld                          | 1         | 2 | 3        | (4) | 5        |
|----|------------------------------------|-----------|---|----------|-----|----------|
|    |                                    |           |   |          | 0   |          |
|    |                                    | helemaal  |   | neutraal |     | helemaal |
|    |                                    | niet eens |   |          |     | eens     |
| 1. | Ų.                                 | 1         | 2 | 3        | 4   | 5        |
|    | makkelijk                          |           |   |          |     |          |
| 2. | Ik begreep meteen hoe ik verder    | 1         | 2 | 3        | 4   | 5        |
|    | kon komen / punten kon verdienen   |           |   |          |     |          |
| 3. | Ik begrijp waarvoor de metingen in | 1         | 2 | 3        | 4   | 5        |
|    | Moodbot worden gemaakt             |           |   |          |     |          |
| 4. | Ik vind het een nuttige toevoeging | 1         | 2 | 3        | 4   | 5        |
|    | aan mijn therapie                  |           |   |          |     |          |
| 5. | Ik kreeg met Moodbot beter zicht   | 1         | 2 | 3        | 4   | 5        |
|    | op mijn eigen situatie             |           |   |          |     |          |
| 6. | Ik kwam met Moodbot meer in        | 1         | 2 | 3        | 4   | 5        |
|    | contact met anderen                |           |   |          |     |          |

Hieronder staan een aantal "ja / nee" vragen. Omcirkel het antwoord dat voor jou juist is.

|   | 7. | Was je aanwezig bij de start op 21 januari?   | ja / nee |
|---|----|---|----------|
|   | 8. | Zou je Moodbot nog een keer willen gebruiken? | ja / nee |
| Γ | 9. | Zou je Moodbot aanraden?                      | ja / nee |

Als laatste nog een paar open vragen.

| 10. | Hoeveel tijd heb je per dag gemiddeld besteed aan Moodbot?      |                       |
|-----|---|-----------------------|
| 11. | Als je één ding zou mogen vertellen over je ervaring met Moodbo | ot, wat zou dat ziin? |
|     | ···· ]····  | -,                    |
|     |   |                       |
|     |   |                       |
|     |   |                       |
|     |   |                       |
|     |   |                       |
|     |   |                       |
| 12. | Wil je nog iets kwijt over jouw ervaring met Moodbot?           |                       |
|     |   |                       |
|     |   |                       |
|     |   |                       |
|     |   |                       |
|     |   |                       |
|     |   |                       |
| 1   |   |                       |

#### Moodbot test bij Altrecht ABC – begeleider

|  |  | helemaal      | -            | neutraal    |              | helemaal |  |  |  |  |
|--|--|---------------|--------------|-------------|--------------|----------|--|--|--|--|
|  |  | niet eens     |              | neutraar    |              | eens     |  |  |  |  |
| 1.   | lk heb het gevoel met Moodbot  | 1             | 2            | 3           | 4            | 5        |  |  |  |  |
| 1.   | meer efficiënt te kunnen werken  | 1             | Z            | 5           | 4            | 5        |  |  |  |  |
| 2.   | De informatie die ik met Moodbot   | 1             | 2            | 3           | 4            | 5        |  |  |  |  |
| Ζ.   | SPECIAL REPORTED AND A CONTRACT AND A REAL POINTS OF A REAL POINTS OF A REAL PROPERTY AND A DESCRIPTION OF A REAL POINTS OF A | 1             | Z            | 5           | 4            | 2        |  |  |  |  |
|  | krijg is relevant  |               | -            | 2           |              |          |  |  |  |  |
| 3.   | Ik vind Moodbot een nuttige  | 1             | 2            | 3           | 4            | 5        |  |  |  |  |
|  | toevoeging aan therapie  |               |              |             |              |          |  |  |  |  |
| 4.   | Ik kreeg met Moodbot meer  | 1             | 2            | 3           | 4            | 5        |  |  |  |  |
|  | overzicht op mijn cliënt(en)   | 1.1           |              |             |              |          |  |  |  |  |
| 5.   | Was je aanwezig bij de start op 21 januari? ja / nee   |               |              |             |              |          |  |  |  |  |
|  |  |               |              | ja / nee    |              |          |  |  |  |  |
| <ul><li>6. Zou je Moodbot nog een keer willen gebru</li><li>7. Zou je Moodbot aanraden aan andere hulp</li></ul> |  |               |              |             |              |          |  |  |  |  |
| 7.   |  |               | NO. 1997. AN | ja / nee    |              |          |  |  |  |  |
| 8.   | Geef met een rapportcijfer aan hoe g   |               | ndelijk de   |             |              |          |  |  |  |  |
|  | besturing was (met name de back-er   | 10)           |              |             |              |          |  |  |  |  |
| 9.   | Hoeveel tijd heb je per dag gemiddel   | d bostood o   | an Moodh     | <b>h</b> +2 |              |          |  |  |  |  |
| 10.  | Als je één ding zou mogen vertellen o  |               |              |             | zou dat ziin | о<br>Э   |  |  |  |  |
| 10.  | Als je een ding zou mogen verteilen o  | over je ervar | ing met w    | ooubor, war | zou dat zijn | •        |  |  |  |  |
|  | •••••  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
| 11.  | Hoe zou je jouw rol in Moodbot oms   | chrijven?     |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  | ••••••   |               |              |             |              |          |  |  |  |  |
|  | ••••••   |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
| 10   | Was as into in do hosturing yon Maadhat dat uitessaralyon as diwa?   |               |              |             |              |          |  |  |  |  |
| 12.  | Was er iets in de besturing van Moodbot dat uitgesproken goed was?   |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
| 10   |  |               |              |             |              |          |  |  |  |  |
| 13.  | Was er iets in de besturing van Moodbot dat uitgesproken beter kan?  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
| 14.  | Wil je nog iets kwijt over jouw ervaring met Moodbot?  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |
|  |  |               |              |             |              |          |  |  |  |  |

# GLOSSARY

# ABI (Acquired Brain Injury)

Brain damage caused by events after birth, rather than as part of a genetic or congenital disorder such as fetal alcohol syndrome, perinatal illness or perinatal hypoxia.

#### **Adapting Games**

An applied game that gathers data from players then used by professionals from the domain to adjust the game.

# AGD (Applied Game Design) Scope Model:

An analysis a game designer can use to determine the needs of an applied game design. The analysis can then be used to determine the potential of a game concept and validate the end result from a design.

# **Aggregating Games**

Applied games designed to gather data from players.

# **Applied Games**

Games designed and developed for a purpose other than entertainment, and meant to create an impact outside the game itself in a specific domain and target audience.

# **Applied Game Designer**

An applied game designer is professional that is able to apply his/her knowledge of game design to shape specific game-play experiences and game systems that achieve a purpose other than entertainment.

# **Co-designers**

Professionals from a domain that do not specialise in game design and development, but take an active role in the design and development of an applied game.

# **Cognitive Behaviour Therapy**

Cognitive behaviour therapy is one of the best-researched and empirically supported treatment methods for adults and children. Its theoretical framework assumes that emotions and behaviour are largely a product of cognitions; thus, psychological and behaviour problems can be reduced by altering cognitive processes.

## Creation

A phase in the iterative game design process where the game designer is primarily involved in creating means that communicate design decisions or game-play experiences.

# **Declarative Content**

Declarative knowledge involves knowing that something factual.

#### **Collaborating Games**

Applied games designed, developed and played together by co-designers.

# Domains

A field or industry that uses or could potentially use games for purposes other than entertainment, such as Healthcare, Safety, Education, Cultural Heritage, Cooperate, Military, etc.

#### eHealth

Various initiatives to digitalization patient treatment, patient communication and patient records. These initiatives range from apps on smart phones to using skype for doctor patient consultation to databases with patients' medical records.

#### **Entertainment Game**

Games designed and developed commercially for player's looking for a diversion, amusement and otherwise agreeable occupation of the mind.

# **Entertainment Value**

A subjective value concerned with how a player perceives the experience derived from playing a game.

#### Epistemic

Knowledge, values, beliefs, and processes that form a professional's modus operandi.

# **Epistemic Framework**

A professional's frame of reference that forms the basis for functioning as an expert.

# Evaluation

A phase in the iterative game design process where the game designer decides the next steps of the design based on feedback from external sources, such as player or co-designers.

# Flowcharts

Diagrams in game design used to explore and document the game flow, system elements and game actions.

# Game(s)

Artefacts that use game elements such as rules, goals, area, time, rewards, etc. to create meaningful gameplay experiences for players, such as competition, fellow-ship, role play, gambolling, etc.

#### **Game Designer**

A game designer is a professional that shapes a player's gameplay experience by designing the game system and the interaction with that system.

### **Game Design Document**

Any collection of documentation that describes the design of a game. The documentation can include flowcharts, mock-ups, wireframes, and payoff matrix. In form, the document can range from being a wiki to a word document.

# **Game Mechanics**

Refers to combinations of game elements (e.g. rules, action, rewards, etc.) that create recognisable patterns or elements that can be identified as game activities or results from playing a game.

#### Game-play experience

The subjective experience that a player takes away from having played a game.

#### **Game System**

A system that determines the relationship of formal game elements like rules, time, area, rewards, goals, actions and game activities.

# **Hybrid Digital Prototype**

A paper-based prototype that combines digital elements.

#### Ideation

A phase in the iterative game design process where the game designer is primarily involved in thinking of new ideas or ideas that solve design problems.

# **Iterative Development**

A process of planning, build and testing.

# **Iterative Game Design**

A process of thinking, making and deciding that a game designer under goes to shape the design.

#### **Micro-iteration**

An iteration cycles that playtests within the game development team, i.e. not with co-designers or the target audience.

#### Mock-ups

A combination of Images and diagrams used to visualise specific actions or events in a game.

# **Paper-based Prototyping**

A use of non-digital material to create a rough but playable model of a game system or a part of a game system.

# **Play-testing**

A design activity where the players and/or users play, use or work through the existing design so that the game designer can collect feedback in order to improve the game design.

# **Payoff Matrix**

A simple table or chart used to weight and balance the various the values of attributes given game objects (e.g. health, lives, attack damage, etc.).

# **Practice-led Research**

Practice-led research is defined by the process undertaken and not by the form of the finished element. The goal of all research is to add to the store of knowledge and understanding.

#### **Procedural Content**

Procedural knowledge involves knowing how to do something functional.

# **Production Value**

A subjective value concerned with how a game looks and feels, and includes a game story, graphics, animations, sounds effects, music, etc.

# Psychiatry

The domain of practice of diagnosing and treating mental disorders.

# **Serious Games**

Any game where education is the primary goal, rather than entertainment.

## Solution focused therapy

A form of brief therapy that focuses on a specific problem and direct intervention. Developed in the '80 in the USA and since then adopted across Europe Sweden Germany France and Belgium. The attraction for the application of deceptively simple methods made of this method a very popular practice. The therapist takes responsibility for working more proactively with the client in order to treat clinical and subjective conditions faster.

#### Stakeholder

Owners of a game development project or people that can assert influence on a game development project.

# **Transmitting Games**

Applied games designed educate or communicate ideas to players.

# Triage

Triage is the process of determining the priority of patients' treatments based on the severity of their condition.

# Vitruvius

An ancient Roman architect that defined an approach to architecture based on three key principles of firmitas (soundness or durability), utilitas (utility or convenience), and venustas (attractiveness or beauty).

# Wireframes

A rough sketch or mock-up of HUD (head-up display), GUI (graphical user-interface), UI (user-interfaces) and/or in-game menus.