

Noam Shemtov, ***Beyond the Code – Protection of Non-Textual Features of Software*** (Oxford University Press, 2017)
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Whereas Big Data is frequently referred to as the gold of the 21st century, its value would be largely diminished, if not made impossible, without a creation of the 20th century: Software. This technology has become a ubiquitous element of 21st century life, used on a daily basis in modern life, largely taken for granted. It is an intrinsically complex subject matter which often remains obscure to the uninitiated. Its applications are numerous and enables and fuels further technological development. This consequentially leads to the question how this technology and the investment for its creation are protected. Intellectual property is the obvious candidate, though the complexity surrounding this technology is duplicated by the different means of IP protection for software. This complexity is raised through other legal, as well as non-legal means to protect software. Finally, software is one of the prime examples showcasing how IP can be a friend and a foe in creating and developing new technologies.

The author of the reviewed book makes this amorphous nature of software the starting point of his examination. The main thread going through this publication is an analysis of the nature and scope of protection provided to the non-textual features of software provided in the European Union (EU) and the United States. The book aims to unravel the various layers of legal and non-legal protection mechanism for software and its non-literal elements and how these may create barriers of entry for further development. These elements, from contract, to copyright, from patents to trade secrets, provide a strong position for software companies.

The first chapter of the book discusses contractual issues. In the outset, it is suggested that software companies prefer to license their products rather than selling them to retain a certain level of control. The trouble is that the scope of control through licensing may go beyond of what copyright law mandates leading to a regulatory conflict. In addition, licensing may not only have effect *inter partes* but may extend beyond the contracting parties. The

chapter discusses how the analysed jurisdictions address this issue. Contracts of adhesion are common nowadays where usual bargaining is not present anymore and a take-it-or-leave-it approach prevails. The cumulation of contracts and technical protection measures may enhance the locking-out effect and may impair otherwise legal activities permitted under copyright law or cover elements not protected by copyright. The author concludes that this could have negative effects on encouraging innovation in the software sector. Chapter 2 discusses the legislative and juridical responses to restrictive licensing provisions outlined in chapter 1 in both jurisdictions and analyses the effects of pre-emption in the US and the application of antitrust/ competition laws.

Chapter 3 discusses reverse engineering and de-compilations. It provides a very useful explanation of the practicalities of these actions. It then discusses under which circumstances decompilation is possible within both analysed jurisdictions and analyses important video games related cases in the US. Chapter 4 then discusses the role of the idea-expression in detail and applies it to software-related disputes. Chapter 5 combines the threads developed in the previous chapters and provides an original angle on how restrictive licensing provisions could be addressed. Based on a functional view of copyright law and by applying analogies from other IP rights, Shemtov submits that the current activism of the CJEU on public policy issues could be the way forward on how copyright is exercised in relation to software products.

The remaining chapters provide an instructive overview of other intellectual property rights and how these may provide a means to control non-textual elements of software. The chapter on patents introduces this right as an attractive option to right holders in comparison to other rights. It compares the patent eligibility of software in the US and the Europe and perceives a trend of convergence between the two jurisdictions. Chapter 7 provides an interesting discussion of how user graphic user interfaces are protected by trade mark and design rights - an issue very relevant for the video games industry. The final chapter looks at trade secrets as an additional and attractive layer of protection. Often, reverse engineering is a complicated and burdensome undertaking which makes "poaching an employee" from a competitor an attractive alternative. The chapter discusses the laws of both

jurisdictions with regard to trade secret and analyses the application of the Trade Secret Directive which has recently come into force.¹

In conclusion, Dr Shemtov has delivered an excellent and very accessible monograph which will provide a useful addition to the scholarship in this field. The baffling complexity of the measures surrounding and protecting software which are introduced by the author are masterly analysed and dissected. In other words, Dr Shemtov has expertly unravelled this Gordic knot. The book applies solid and balanced analysis of the issues at hand and combines many threads with an authoritative, original and critical stance which will be of benefit for a wide readership interested in the development of software.

¹ Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure [2016] OJ L 157.