

2013

DEBATING OVER THE UNITARY  
PATENT: IMPLICATIONS ON  
SOFTWARE DEVELOPMENT



Daphne Mangaloussi  
Erasmus University  
of Rotterdam  
28/6/2013

DEBATING OVER THE UNITARY PATENT:  
IMPLICATIONS ON SOFTWARE DEVELOPMENT

A thesis submitted in partial fulfillment of the  
requirements for the degree of  
Master in Media Studies  
Programme: Media, Culture & Society

by  
Daphne Mangalousi  
Student number: 369488  
Email: daphnemang@gmail.com

Supervisor: Lela Mosemghvdlishvili, M.Sc.  
Second Reader: Dr. Ericka Menchen-Trevino

Erasmus University of Rotterdam

28/ 06/ 2013

Rotterdam

## **Abstract**

The integration of software in the contemporary world is evidently important since it is incorporated in every existent technology (whether that is realized or not); a fact makes the understanding of software, its technology and its context crucial. At the same time, during the last decades the growing importance of information and technology shed light to the significance of the forms of ownership provided by Intellectual Property rights; under which the technology of software is also protected. This thesis focuses on software patents (as a form of ownership) and the implications that the unitary patent (introduced at the end of 2012 as a reform of the European patent system) could possibly have for software development. For that purpose, two opposing discourses are examined through textual analysis of their discursive production; and their ideological roots are identified and compared. The discussion that derives from the findings (under the prism of hegemony and the theories of technology and software) is very enlightening for further research. This research argues that the more technology and in this case software is stripped off its cultural reference and is not the outcome of an inclusively democratic procedure the more the discussion will be relocated towards its democratization.

**Key words:** software development; patents; discourse theory; EU; democratization of technology

## **Acknowledgments**

This thesis was made possible by the extremely inspiring supervision of Lela Mosemghvlishvili and the kind cooperativeness of Gérald Sédrati-Dinet, Yannis Skoulikaris and Jeanne Tadeusz.

## **List of abbreviations**

CAFC= Court of Appeal for the Federal Circuit

CDA= Critical Discourse Analysis

CTT= Critical Theory of Technology

ECJ= European Court of Justice

EP= European Parliament

EPC= European Patent Convention

EPO= European Patent Office

EU= European Union

ICT= Information and Communications Technology

IP= Intellectual Property

LMDT= Laclau and Mouffe's Discourse Theory

MEP(s) = Member(s) of European Parliament

NPO(s) = National Patent Office (s)

PR= Public Relations

R&D= Research and Development

SST= Social Shaping of Technology

UK= United Kingdom

UPC= Unified Patent Court

US= United States

## Content page

Abstract	iii
Acknowledgment	iv
List of abbreviations	v
<b>Chapter 1: Introduction</b>	<b>1</b>
1.1 Over software patents	3
1.2 Patent law systems: US, EU & software patents	4
1.3 Towards a European patent law reform: the unitary patent	5
1.4 Why do software patents matter?	6
<b>Chapter 2: Theoretical Framework</b>	<b>11</b>
2.1 Conceptualizing software	11
2.2 Contextualizing software	13
2.3 Social Shaping of Technology (SST)	15
2.4 Critical Theory of Technology (CTT)	16
2.5 Discourse Theory	19
2.5.1 Laclau & Mouffe's Discourse Theory (LMDT)	20
2.5.2 Critical Discourse Analysis (CDA)	22
<b>Chapter 3: Discourse Analytical Framework (Methodology)</b>	<b>24</b>
3.1 Social change, articulation and interdiscursivity	24
3.2 The context: the order of discourse	25
3.3 Discourse, key signifiers & chains of meaning	25
3.4 Discursive practice, text and social practice	27
3.5 Deconstruction, hegemony & hegemonic intervention	27
3.6 Research Questions	28

<b>Chapter 4: Discourse Analysis of Exemplary Texts</b>	<b>29</b>
4.1 Context: The discursive practice of EPO	29
4.2 EPO's discourse	31
4.3 Context: The discursive practice of April	45
4.4 April's discourse	46
<b>Chapter 5: Discussion</b>	<b>60</b>
4.1 Social Practice: Comparative Analysis	60
4.1.1 Differences in conceiving innovation vis- à-vis global economic order	60
4.1.2 Differences in the conception of the contemporarily globalized world	61
4.2 Social Practice: Further Discussion	63
4.2.1 Perceptions on software/ code	63
4.2.2 Perceptions on software patents & innovation	65
4.2.3 Software patents & SST	65
4.2.4 Software patents & CTT	68
4.2.5 Discussion on ideology	71
<b>Chapter 6: Conclusions</b>	<b>74</b>
<b>Reference list</b>	<b>79</b>
<b>Appendices</b>	<b>86</b>
Appendix A	86
Appendix B	87
Appendix C	88
Appendix D	89
Appendix E	92
Appendix F	94
Appendix G	104

## Chapter 1: Introduction

On the 23<sup>rd</sup> of February 2013, an article under the title *Monsanto seed suit and software patents* was published in the San Francisco Chronicle, building upon the following:

“It might seem strange that a dispute between a farmer and a seed company could have effects across Silicon Valley. Yet the outcome of *Bowman vs. Monsanto*, a case before the U.S. Supreme Court, could be crucial to the way software companies fight for their patents.” (Garling, 2013)

Monsanto is a seed- making company and Bowman is a farmer who bought Monsanto’s seeds from a third party and planted them. The specific seeds however, are patented and only licensed for a specific use. Bowman seems to have infringed Monsanto’s patent by planting the seeds and as a consequence, Monsanto sued Bowman. Still, the question deriving is: *How could that be possibly related to software patents?* Garling (2013) explains that in the court “Monsanto argues that seeds, at a very basic level, are a lot - though not exactly - like software”, since software and Monsanto’s seeds are both patented to be later only licensed for a specific use.

In such context, it is entailed that there are some indirectly obvious processes that to a great extent define patent law as it notably “depends on comparisons between technologies” (Bessen & Meurer, 2008, p. 201); i.e. there is a high dependence on case law. According to McLeod (2001), patent law is a form of intellectual property law to protect “from unauthorized commercial use” (p. 5) certain types “of cultural expression and information” (p. 3); which has to be considered as inventive. A stricter and not vague definition of patents cannot though be given as they are dependent on the patent law system they evolve in as well as on the wider historical context (see Bracha, 2004; Mahne, 2012); a patent is to be granted if according to the “general legal regime [...] a set of substantive and procedural conditions arise, [...] patentability criteria are fulfilled” (Bracha, 2004, p.182). This is where questions of patentability arise and this is also the case with software patents, the focus of this thesis; which “play a major role in the rise of litigation” as argued by Bessen and Meurer (2008, p. 191), since patents are often



regarded and treated as a competitive advantage and a strategic choice (Nieh, 2010). It could be argued that innovation gets to some extent locked into patents, through which's ownership innovation is afterwards directed.

In retrospective, the first software patent ever was granted to Martin Goetz in 1968 in the U.S for a method of sorting data (Arthur, 2013). Until that time software patents were not considered a high- priority option, when until the mid-1990s even “major software firms opposed software patents” (Bessen & Meurer, 2008, p. 189). In a recent interview, Goetz stated that at that time (in 1970s) any developed software was competing “against free software”, precisely “the reason [why he] tried to get a patent” as he didn't want IBM “to copy [his] method and also distribute it by giving it away for free” (as quoted in Arthur, 2013). The mode of production and distribution of software drastically changed since late 1970s; “the majority of available commercial software” became proprietary -which is “software that is supplied without source code, usually under restricted licen[s]e terms” (Berry, 2008, p. 15) - and had to compete with open- source and/ or free software -which set their source code available under open license terms. In an internal memo of 1991 by Bill Gates of Microsoft it was stated:

“If people had understood how patents would be granted when most of today's ideas were invented, and had taken out patents, the industry would be at a complete standstill today. The solution is patenting as much as we can. A future startup with no patents of its own will be forced to pay whatever price the giants choose to impose. That price might be high. Established companies have an interest in excluding future competitors.” (as quoted in Curtis, 2010, p. 100)<sup>1</sup>

Patentability of software and its implications are a worthy terrain for research, not only in economic terms but also in light of its societal role; as Berry (2011) notes

---

<sup>1</sup> Since the 80's, Microsoft traditionally holds a leading position in patent portfolio rankings, along with IBM who is top of the list, for instance, with 6478 patents for 2012 (Toor, 2012). Although Microsoft owns a smaller number of 2613 patents (IFI CLAIMS Patent Services, 2013) it focuses on the economic value of its patent portfolio (LeVine, 2010).

software “constructs the relationship we have with technology” which makes “questions of ownership, through patents [...] key issues” (p. 61). In this frame of reference, the aim of this study is to map the different discourses in Europe about the role of software and the perceived implications of software patents. In order to do so, two views on the specific topic of the unitary patent (the newly introduced regulation for the European patent system) will be further examined. Before explaining in depth the project itself, more information on software patents, patent law systems, the unitary patent regulation and the role of software in the contemporary world will be briefly presented.

### **1.1 Over software patents**

Lately, huge multinational corporations are in favour of software patents as a more secure option of ownership over their software products (Curtis, 2010) making patents “the protection of choice” (Guntersdorfer, 2003, p.1) over copyright- “the best-known type of intellectual property” (Boyle, 1996, p.18). Nieh (2010) explains that this is the case as software patents are perceived so to “prevent market failure, promote progress, and spur innovation” which is justified as they are seen in terms of “economic incentives” for software developers (p.308). Otherwise, it is argued that “software development would come to a halt and there would be fewer software products on the market” (Nieh, 2010, p. 308). However, Nieh (2010) also explains that eventually software patents “restrict software development” since “[a] software patent is a legal monopoly that gives a software inventor a limited time to exclude others from making, using, or selling their claimed software without some prior, agreed- upon consideration” (p. 309- 310). That way, he argues, software patents are used as “defensive (or strategic) patents” and complement research and development (R&D) investments as it is “more cost- effective to generate revenue from existing inventions by building up and exploiting [...] patent portfolios” (Nieh, 2010, p. 311). On top of that, Nieh (2010) argues that “the existence of software patents increases litigation and the risk of infringement claims” (p. 312), while “the annual litigation cost for software patents is much higher than the profits that these patents generate” (p. 313). Also what he finds important is the consideration that research shows that “software patents causing increased litigation and risks [...] is

truly a circular cycle” (Nieh, 2010, p. 313); more patents lead to more litigation and risk; and more litigation and risk environments lead to more patenting. There, a constant moulding of software (and its development) resolves which could possibly also define the role of software and its importance in the contemporary world.

## **1.2 Patent law systems: US, EU & software patents**

Software patents howbeit are approached differently by different (patent) law systems. The differences between the U.S and EU law and specifically their patent law systems have been subject to academic and professional studies. From the market perspective, Chetan Sharma (2012), a strategist in the mobile industry, notices the different continuation of the number of patents between U.S and Europe over the years. The underlying reason for this, he explains is the fact that a great number of mobile patents are basically software patents and since EU law was always more hostile to software patents, over the years less mobile patents were actually granted in the EU than in the U.S (Sharma, 2012). From the law perspective, Guntersdorfer (2003) in his comparison of the software patent law in the U.S and the EU argues that “Europeans, accustomed to clear statutory law, simply assumed that computer programs weren’t patentable [...], while Americans, weren’t discouraged that easily” (p.7). Likewise, in their comparative analysis of the treatment of software patents and business methods by the U.S and the EU systems, Marsnik & Thomas (2011) are very critical towards both as they identify “the absence of any significant policy guidance in a highly politicized arena” (Marsnik & Thomas, 2011, p. 323). Right now, they argue, it seems like according to the U.S patent law system more or less everything can be patented, while according to the EU exclusions exist - such as those of business methods and computer programs- but still oracular patents can and are granted (Marsnik & Thomas, 2011). Guntersdorfer (2003) explains that U.S companies have been strategically challenging other companies in European courts to create case law that could be used in future trials and at the same time could put some pressure towards the reform of the European patent system. At last, he concludes that:

“[i]nternational efforts have been largely successful in creating a level playing field between the U.S and Europe. While some

differences in the application process and the granted rights remain, patentability is nearly uniform” (Guntersdorfer, 2003, p. 11).

Arguably following such international pressure, in 2005 a directive for software patentability was introduced to the European Parliament, but after strong criticism it got rejected. Blind et al. (2005) in their empirical research of the topic conclusively pointed out that “fundamental and far-reaching changes in the patent system [...] require a deeper understanding of the economic and social impact of various patent regulations in the software area” (Blind et al., 2005, p. 176). In 2005, it was nevertheless noted that the “software patents conflict in Europe was clearly an example of increasingly politicised disputes about intellectual property rights worldwide” (Leifeld & Haunss, 2012, p. 382).

### **1.3 Towards a European patent law reform: the unitary patent**

Even though, discussions and negotiations over a European or Community patent has been on EU round tables since the 70s, in 2011 “[a] granted European patent can only be validated at national level”; one can have a European patent granted – as in approved- from the European Patent Office (EPO), but for it to be valid in all the Member States, dealing with each National Patent Office (NPO) separately is as well required (Rodriquez, 2011). Therefore, there is a required procedure that needs to be followed in all the countries of interest which apart from time consuming is as well considered expensive (Rodriquez, 2011). A reform of this system has been discussed and theoretically developed by many different stakeholders including the European Commission over the years, but it was never accepted in the European Parliament before 11<sup>th</sup> December 2012. The European Commission states at its website on the 20<sup>th</sup> February 2013 that “[i]n 2012 Member States and the European Parliament agreed on the ‘patent package’” that is “a legislative initiative consisting of two Regulations and an international Agreement” namely the unitary patent (European Commission, 2013).

Italy and Spain blocked the unitary patent package based on language issues (Rodriquez, 2011). The unitary patent procedures and applications will be required

to be issued in only one of the following languages- English, German and French<sup>2</sup>, whereas Spain and Italy decided not to compromise to such specific language arrangements<sup>3</sup>. They, thus, both challenged the invocation of “enhanced cooperation”<sup>4</sup> in the Court of Justice of the European Union in terms of its justification. Here, it needs to be noted that as a result of the previous the unitary patent is based on an agreement and not a treaty, since not all 27 Member states chose to participate. The European Commission in their website present the unitary patent’s ratification process<sup>5</sup>, since the unitary patent package can be considered as fully accepted and ready to be implemented after 3 steps; the first step being the one just described. According to this process, the second step took place on 19<sup>th</sup> February 2013 and concerns the agreement and initialization of a Unified Patent Court (UPC). At this stage, Italy did sign this agreement while Spain still didn’t; Poland didn’t sign either the agreement despite signing the first step. The third step which is the ratification of the agreement through the creation of the Unified Patent Court (UPC) is not yet finalized.

#### **1.4 Why do software patents matter?**

In relevance to software, the unitary patent has evoked great concern and opposition by the supporters of the free/libre software movement, as they translate the unitary patent as more software patents in the EU (Meyer, 2012). For instance, Richard Stallman, founder of the Free Software Foundation and one of the most recognizable figures of the free software movement titled his article in *The Guardian*

---

<sup>2</sup>More information as published from the European Council can be accessed through this link <http://www.european-council.europa.eu/home-page/highlights/eu-unitary-patent-%E2%80%93-a-historical-breakthrough?lang=en>

<sup>3</sup>For more information on Spain’s and Italy’s challenging see <http://www.jakemp.com/en/knowledge-centre/european-unitary-patent-protection/spain-italys-challenge-to-unitary-patent-protection>

<sup>4</sup>More information on the procedure of the enhanced cooperation here: [http://europa.eu/legislation\\_summaries/glossary/enhanced\\_cooperation\\_en.htm](http://europa.eu/legislation_summaries/glossary/enhanced_cooperation_en.htm)

<sup>5</sup>[http://ec.europa.eu/internal\\_market/indprop/patent/ratification/index\\_en.htm](http://ec.europa.eu/internal_market/indprop/patent/ratification/index_en.htm)

as *Beware: Europe's 'unitary patent' could mean unlimited software patents*, with the subtitle note: “[t]he battles seen in the US over software patents could spread to the UK and the rest of Europe if the unitary patent is allowed to come into force” (Stallman, 2011). There, he suggests that the pro software patents alliance has been working for all these years (for a favourable to software patents reform of the European patent system) and he predicts that they are now succeeding in their mission (which is more software patents); while he as well worries about the unlimited and decisive power given to the EPO (Stallman, 2011).

Generally, the technology of software has been steadily gaining attention of various authors and fields, because of its perceived importance in the contemporary world and thus the cruciality of its understanding (see Berry, 2011; Howey, 2002; Nieh, 2010). Howey (2002) characterizes software technology as “difficult” and “troublesome” declaring that “it just doesn’t fit the same mold as other, more physical, technologies” because “its existence is abstract” (p. 70). Berry (2011) in his explanatory work on software -or more accurately in its less commercial name- “code” defines it as “a tangle, a knot, which ties together the physical and the ephemeral, the material and the ethereal, into a multi-linear ensemble that can be controlled and directed” (p. 3). Nieh (2010) accordingly talks about software as “the driving force behind [...] machines, providing the instructions that are necessary to make our computers and the applications on which we depend run” (p.296). Hence, taking into account the technological complexity through which this world functions, software’s mediating role is extremely substantial to be realized and understood (Berry, 2011).

Furthermore, exactly because of its significance and role; control and ownership of software has evolved into a lively power terrain, both introducing and implying political issues (Berry, 2011). Questions concerning the context in which code is produced, transformed, owned and distributed “highlights why the political economy of software cannot be ignored” (Berry, 2011, p. 61). In the sense that software is regarded as a product/commodity, it is ought to be protected by Intellectual Property (IP) regulations (whether copyright or patent); and thus “justified on utilitarian grounds” (Nieh, 2010, p. 307). Over the last decade, an increased level of unease has been noticed inside IP regulatory systems worldwide

as agendas for more linear and centralized regulations are proposed by the global North to be afterwards networked- or lobbied- worldwide (Berry, 2011). In this instance, software is affected directly first as a product protected accordingly to IPR, but furthermore as a continuously developing technology.

Contextually in the realm of the 21st century, discussions in the contemporary world have been focusing on the impact of rapid and intense globalization as central to both philosophical thinking and scientific research; and consequently to some extent into “the public sphere” (Habermas, 1991). Debates evolving around topics such as the environmental crisis (Klein, 2011; Zizek, 2011) or capitalism and its crises (Gilpin, 2000; Zizek, 2010) have dependently appeared to justify or criticize perceived images of the contemporary world. Simultaneously, continuous technological advances- in Gilpin’s (2000) words “the ultimate driving force of capitalism” (p. 3)- and more specifically the increased involvement of computers, information technologies and the internet into everyday life- integrates “more and more economies into the global economic system in a process now familiarly known as ‘globalization’” (p. 7). Gilpin (2000), nonetheless, argues that:

“[a]lthough technological advance and the interplay of market forces provide sufficient causes for increasing integration of the world economy, the supportive policies of powerful states and cooperative relationships among these states constitute the necessary political foundations for a stable and unified world economy” (p. 13).

In the context of globalization, many authors have discussed the importance of knowledge and information. In 1950s, Peter Drucker argued that “modern societies were transitioning from economies based mainly on material goods to ones based mostly on knowledge” and opened the discussion on the *knowledge economy* (Ignatow, 2012, p. 1). In the 1970s, Bell “described the social patterns associated with an emerging form of capitalist society that was based economically on services rather than industrial production” namely the *post- industrial society* (Ignatow, 2012, p. 1). Later, Manuel Castells described thoroughly the *Information Age* (Castells, 1996, 1997, 1998) and the substantial role that networks, digital information and communications technology play in post- industrial societies (Castells, 1996). *Information Age* describes the mode of the world since the 1970s; a continuous flow

of information distributed through the numerous channels of technological achievements (Castells, 1996, 1997, 1998). Arguably, technology is there more or less perceived as *an information system* or a puzzle of *information systems*; technology is “the system in operation as [both] a creation and definition of our relationship to the environment” (Wagner, 1979, p. 726). The entire are closely related to the idea of *information capitalism* which “refers to the increasing importance of information within capitalism under conditions of globalization and rapid technological development” (Ignatow, 2012, p. 1); which Wark (2004) also describes as a “transition from the domination of capital as property to the domination of information as property” (pp. 387). So then, software plays a very central role in the contemporary world, since “knowledge is transformed into a form of information that can be controlled and made scarce through computer-code-controlled locks and fences” (Berry, 2008, p. 33). As previously indicated, the interest of this thesis lies in mapping the debate evolving around the implications that the unitary patent as a new regulation might have on software development:

***RQ: What are the consequences of the unitary patent for code/ software development?***

To answer this research question, the methodology chosen consists of a discourse analytical framework which is created by the combination of Critical Discourse Analysis (CDA) and Laclau and Mouffe’s Discourse Theory (LMDT), using the works of Fairclough (2010); Torfing (1999); and Jorgensen and Phillips (2002). Two main discourses have been identified and considered as fundamentally opposite; they also represent those for and against software patents. It is already known that the two discourses obtain different perceptions on the matter, but the aim of this thesis is to discover the internal and inherent reasoning that leads to different discursive practices. Besides, such an analysis is expected to dismantle the identified debate over the unitary patent in the field of software. Both software patents and the unitary patent are very timely and socially relevant issues to be examined, whilst the combination of the two enhances even more the scientific relevance of the study.

In what follows, first the theoretical framework will be presented (Chapter 2). The theoretical framework initially includes studies in relation to code, software and



software development and secondly theories of technology, more specifically the theories of the Social Shaping of Technology (SST) and the Critical Theory of Technology (CTT). After that, the *Discourse Analytical Framework* of this thesis will be built via the combination of CDA and LMDT (Chapter 3). With the framework present, the analysis will take place accordingly. Four exemplary texts – two from each discourse- will be analyzed and later supplemented by three interviews (Chapter 4). Following the analysis is the discussion, which will combine the findings with the theories of software and technology (Chapter 5). Conclusively, the research questions shall be answered through the presentation of the key points and findings of the project; where limitations of the research and suggestions over future research shall be indicated too (Chapter 6).

## Chapter 2: Theoretical framework

The relevant theoretical framework for this thesis is divided in three parts. Firstly, code/software is conceptualized; its critical importance in mediating and structuring modern technologies is emphasized. Secondly, two major theories, the *Social Shaping of Technology* and the *Critical Theory of Technology* are introduced in order to account for the broader context into which software as a technology is created and/ or produced. Last but not least, two of the most recognized theories of discourse- *Laclau and Mouffe's Discourse Theory* and *Critical Discourse Analysis*- are presented.

### 2.1 Conceptualizing software

In the first place, it is important to mention that software can be accurately called *code* and more precisely should be in any case analyzed as code or at its code level (s) (Berry, 2011). Henney (2004) summarizes some of the common definitions of software in relation to code and states: software is the final product of code; software is the commercial name of code; all software is written and designed in code; code is the more practical version of software; code is for those who understand coding and software for those who don't. Furthermore, all contemporary media objects- old and new- "are composed of digital code" (Manovich, 2001, p. 27) which makes media *programmable* and eventually "turns media into computer data" (p. 45); which makes software technology crucial for the contemporary world (Berry, 2011; Fitzgerald, 1999; Fuller, 2003; Manovich, 2008; Manovich, 2012). Several authors argue that insofar software and code have been discussed mostly superficially on technical, aesthetical and functional terms (Fitzgerald, 1999; Fuller, 2003; Manovich, 2008; Marino, 2006). Notwithstanding, it is time to explore in depth the technology, culture and political economy of software among others, as it is necessary to bring it "back into visibility"; in order to understand what it is, how it is created and what it is actually doing (Berry, 2011, p.4).

In essence, through understanding software and its mediating role, we better understand the contemporary world as it is "increasingly quantifying and measuring our social and everyday lives" (Berry, 2011, p.2). In Manovich's (2008) words one inherently lives in a *software society* that has a *software culture*, which is justifiable

“because today software plays a central role in shaping both the material elements and many of the immaterial structures which together make up ‘culture’” (emphasis in original, p. 15). Frankly, software is so deeply integrated in society (Berry, 2011; Fitzgerald, 1999) in the sense that it produces every human- machine interface, through which the communication between machines and humans becomes possible (Fuller, 2003). Fitzgerald (1999) enthusiastically describes that integration as follows:

“[s]oftware is now a key part of our social structure—we sense it in our cars, in our supermarkets, in our televisions, in our computers. We sense it everywhere: it is a ubiquitous, undulating, architectural, air-like, water-like commodity that infiltrates our daily lives.”(p. 338)

While discussing code, what finally ends up to appear on any *interface* consists of several levels of coding which are there to facilitate the human- machine communication and understanding (Fuller, 2003). The very basic code of any machine is written in combinations of 0s and 1s, which are combined step by step in several levels of computer languages in an attempt to speed up the programming procedures. “Every action must be transmogrified into a series of ons and offs held in hundreds of thousands of circuits” (Fuller, 2003, p. 13), so that the human- machine communication is established; software is there to –automatically- translate every single actions ours in a language that the machine can process. Practically, by transforming the human input -through several levels of translation- into the basic rows of 0s and 1s, the machine is able to somehow understand and produce the relevant output. Here, it is important to realize that the machine does not literally interpret the input or the output itself (Marino, 2006), but rather follows the designed logical paths that these define in order to then respond back on the machine’s behalf to a language that the human understands; and that by reversing the pre- mentioned procedure. All those languages are based on algorithms that follow the mathematical thought- logic- which resolves to the argument “software is math” (Curtis, 2010, p. 104).

## 2.2 Contextualizing software

Even though such an analytical declaration- “software is math” (Curtis, 2010, p.104)- would make the understanding of software simpler, researchers manifest that we must be very careful, since despite the general trend of humanizing technology in coding there is the tendency to “strip the code of its human significance” (Marino, 2006). Manovich (2012) explains that “with all data types now encoded as sets of numbers, they can only be efficiently accessed by users via software applications which [translate] these numbers into sensory representations” (p.12). Nonetheless, that doesn’t make software simply just another medium; as Berry (2011) suggests we need to be cautious at this point of the analytical process, because “[c]ode is not a medium that contains the other mediums, rather it is a medium that radically reshapes and transforms them into a new unitary form” (p.10). Software does not solely present content and data to the user but among its several and different functionalities, defines the way content and data ought to be presented; what users “experience as properties of media content come from software used to create, edit, present and access this content” (Manovich, 2012, p. 4). That makes code and software essential, if not powerful, for in order to comprehend it, we need to unpuzzle its context and environment (Berry, 2011). In the same sense, Manovich (2012) for instance explains that:

“the new ways of media access, distribution, analysis, generation and manipulation all come from software [...] they are the result of the particular choices made by individuals, companies, and consortiums who develop software” (p. 2)

At the same time, software itself is “deeply social” as “the techniques, the tools, and the conventions of media software applications” are both “intellectual ideas” for their creators and “products” for their apparent owners and users (whether those are companies, communities or individuals) (Manovich, 2012, p.3). Thus, “an explicitly wider notion of” understanding software needs to be obtained, so that it is made sure to “reinfuse the social, the dynamic, the networks, the political” among others into its concept (Fuller, 2003, p. 14). As Fuller (2003) writes it is time to think about how and why software becomes what it is as:

“[s]oftware is a place where many energies and formations meet. At the same time, it constantly slaps up against its limitations, but these are limitations of its own making, formulated by its own terms of composition” (Fuller, 2003, p. 15)

According to Fuller (2003) software always turns out to be “an unsolved problem” (p.15) that is explicitly vital not to be conceived as “a neutral tool”, but rather “software as culture” of its own (Fuller, 2003, p. 15). Nevertheless, “each piece of software constructs ways of seeing, knowing, and doing in the world” (Fuller, 2003, p. 19- 20).

In a similar sense, Berry (2011) explicitly discusses code and software through a philosophical approach, thus “the ontic and ontological dimensions of computer code” through “paying attention to the broader aspects of code and software, and connecting them to the materiality of this growing digital world” (Berry, 2011, p. 28). He, further emphasizes the political economy of software, throughout the whole process of its product development- from reading and writing code all the way to running it- and states that it is pivotal to think of code as “a complex set of materialities” which are processed in line and in turn one after the other. Nevertheless, Berry (2011) highlights and demonstrates that “the political economy of software cannot be ignored” as at the end code always “runs on private computer systems and networks” (p. 61); or else material devices -that he terms as *technical devices* (Berry, 2011, p. 63) and cannot be studied detached from their consideration.

Another important and relevant piece of work to understand software is that of Fitzgerald’s (1999), where he explains *software as discourse*:

“Software is a medium for communication, for representing meaning. No matter how embedded or hidden the function of software, it is simply to construct meaning- to make something obvious. That is discourse.” (Fitzgerald, 1999, p. 351)

Fitzgerald (1999) points out that “the intentions of the software creator and their accountability are crucial issues” (p. 354) as “by controlling code, one has the power to control thought processes” (p. 352). Since “software is now a key part of our social structure” (Fitzgerald, 1999, p.354) it cannot be seen solely as “just a passive text

that tells a computer what to do”, but rather as “an integral part of our lives that informs a process of knowledge and identity construction” (p. 355). Finally, Fitzgerald’s (1999) position is that software is “mediated by a blend of intellectual property law, contract law, competition law and privacy law” which he terms *informational law or informational constitutionalism*, to conclude to the fact that “[i]t is the development of the principles of these areas of law in their relation to software that will determine much about the way we live in the future (p. 358); which is another highly significant angle to consider while studying software.

### **2.3 Social Shaping of Technology**

Technological determinism has been a very popular approach towards technology over the years; where technology is perceived as something concrete and spontaneous with its own “autonomous functional logic that can be explained without reference to society” (Feenberg, 2010, p.8). According to technological determinism, technologies and technological changes are “unproblematic or pre-determined”, which at the same time always lead to social change (Williams & Edge, 1996, p.868). The Social Shaping of Technology (SST) was formed in opposition to the technological determinism (see Williams & Edge, 1996) and gradually emerged as an influential field of studies of technology. Williams and Edge (1996) neatly conceive SST “as a ‘broad church’ without any clear ‘orthodoxy’” (p.892) to point out different approaches within what is now called the SST field (p.201). The perspective maintains that “[o]ur technologies mirror our societies” (Bijker & Law, 1992, p.3) in the sense that “[t]he shaping of technology is also the shaping of society, a set of social and economic relations” (p.105). Such relations point at controversies and internal conflicts in the process of development of technological artefacts (Bijker & Law, 1992, p.105). Despite empirical works that have refuted technological determinism, this perspective is deeply engrained into societies through language; “[t]he idea that technologies have natural trajectories is deeply built into the way we talk” (Bijker & Law, 1992, p.17).

In line with the SST, within the framework of this thesis technology is perceived as a “social product” (Williams & Edge, 1996, p. 866), which means that the social context into which a technology is created gets incorporated into the

technology itself. During the process of design, development and usage of technologies choices are made “between different technical options” (Williams & Edge, 1996, p. 866). These choices, whether conscious or not, are affected by *social factors* and define both the *content of technology*, as well as its *social implications* (Williams & Edge, 1996, p. 866). The concept of choices is vital to the SST approach as it signifies that “[d]ifferent routes are available” (Williams & Edge, 1996, p. 866), hence “[t]echnologies might [actually] have been otherwise” (Bijker & Law, 1992, p.3). This baseline leads to acknowledging the *negotiability* of technology, where several values and interests of individuals and relevant groups define the *selection environment* in which certain *choices* are favoured over others (Williams & Edge, 1996). Furthermore, “questions about *irreversibility*”, to wit if and how certain choices are excluded, are raised; and the concept of *closure* is introduced; “the ways in which innovation may be stabilised [...] as well as the possibility of reversing earlier choices” (emphasis in original, Williams & Edge, 1996, p. 867). All those concepts have placed technology as the reproduction and embodiment of “the complex interplay of professional, technical, economic and political factors [...] the complex trade-offs that make up our societies” (Bijker & Law, 1992, p. 3) to highlight that technologies “are not neutral, but are fostered by groups to preserve or alter social relations” (Williams & Edge, 1996, p.867).

Criticism of SST stands at its focus with the design and production stages of technology and its indifference towards the consumption and usage ones (Williams & Edge, 1996). Mackay and Gillipsie (1992) specifically urge “to look at technology as a cultural phenomenon” (p. 709) in order to overcome what they perceive as SST’s drawback; the neglect of “the character and role of markets and culture/ ideology in shaping technologies” (Williams & Edge, 1996, p. 889). In order to also incorporate these cultural aspects, the Critical Theory of Technology will be discussed below; though it is to be considered as a necessary addition to this project.

## **2.4 Critical Theory of Technology**

Building upon SST and mostly its social constructivism branch, Feenberg (1991) introduced the Critical Theory of Technology (CTT), taking a more normative and critical approach. Even though the CTT and SST share much of a common ground,

CTT is not considered a part of SST, neither by Feenberg himself or the SST field (Kochan, 2006). Feenberg's (2010) CCT will be here presented based on his gathered essays in his book *Between Reason and Experience*.<sup>6</sup>

In particular, Feenberg (2010) places the birth of technology in between reason and experience processing it philosophically. The basis of his argument is that the world is described as the total of two abstract worlds; "a rational but meaningless nature and a human environment still rich in meaning but without rational foundations" (p.181). This paradoxical separation of the world in two, he argues, is what reasonably makes 'us' feel lost in it and is at the same time the source of many of 'our' perceived problems. In that sense, since everything lies between reason and experience, we are expected to include both worlds in every aspect of our thinking about technology, whereas only by bringing the world back together we will be able to actually understand it and its implications (Feenberg, 2010).

To support his argument Feenberg (2010) describes how even the most simple and 'innocent' parts of technology, as in technical standards are much more complicated than one could assume. For that reason, he introduces the concept of the *technical code*, which is there to guide- as in lead- technology through a certain pathway, while not incorporating much present experience in it (Feenberg, 2010, p. 21-23). A technical code is a rational set of already made choices mirroring a previous social change or an imposed ideology. In both cases, technical codes are understood as highly political in the sense that "one of [their] functions [...] is to obscure the social, political, and aesthetic dimensions of technical processes" (Melo-Martin et al., 2011, p. 205) and this is where Feenberg finds that the analytical distinction in merely technical and social attributes (that SST mostly proposes) is rather inadequate. However, social attributes are previously subsumed in any technical choice and/ or code. Therefore, CTT also introduces the *formal bias*, which is this extra bias next to the basic *substantive bias* that makes a technology unjust in specific contexts; a formal bias is what is left when any other recognizable biases have been handled (Feenberg, 2010, p.69). A *substantive bias* is considered intrinsic

---

<sup>6</sup>For an assessment on the book and some diverse views and critics replied also by Feenberg see the *Book Symposium on Andrew Feenberg's "Between Reason and Experience: Essays in Technology and Modernity"* (Melo-Martín, Ingram, Wyatt, & Arisaka, 2011)



and easily recognizable in “social and psychological attitude” (Feenberg, 2010, p. 163), while the *formal bias* is well- hidden and needs to be discovered and identified, so that the deeply rooted discriminations and inconsistencies of technology will emerge on the surface and be realized as such; that is to say that a “[f]ormal bias prevails wherever the structure or context [...] favors a particular social group” (Feenberg, 2010, p. 163). He, furthermore, defines two types of *formal biases*: the “constitutive bias” – which is described as the “values embodied in the nature or design of a theoretical system or artifact”; and the “implementation bias” – which are “the values realized through contextualizations” (Feenberg, 2010, p.163). Another key concept for Feenberg (2010) is the instrumentalization of technology and what he calls “primary instrumentalization”- the aspect of technology that actually makes it functional- and “secondary instrumentalization- the aspect of technology that makes it socially meaningful (p. 72-76); where basically, “[t]he primary level simplifies objects for incorporation into a device, while the secondary level integrates the simplified objects to a social environment” (p.73).

Feenberg’s (2010) main concern and proposal stems from these understandings. He argues that if we manage to conceptualize technology this way, it is possible that we can furthermore act upon democratizing it. “Today justice requires identifying and changing formally biased technical codes” (Feenberg, 2010, p.69), he states. In the contemporary world, technology is surrounded by politics and while both need democratization, a democratization of technology suggests one of the most radical and straight to the point transformations needed (Feenberg, 2010). In Callon’s (2010) words for Feenberg’s (2010) afterword:

“the democracy so dear to us can survive only by organizing itself around technological innovation; and, conversely, it could be that the rationalization ideal that we cherish has no meaning and future unless it relies on the formidable operator of democracy that technology might be” (p. 225- 226)

In this process, democratic movements are crucial in projecting technological injustice and/ or failure in the public sphere in the first place, but additionally participate in the transformation of what Feenberg (2010) refers to as “democratic rationalization”(p. 26-29). Thus far, “the path of development” and “the pursuit of

efficiency” have been the *rationalization of technology*; the “ideologies employed to justify restrictions on opportunities to participate in decision making in industrial society” (Feenberg, 2010, p.26). Feenberg (2010) strongly supports that direct participation in technology’s development is necessary to overthrow *technocratic hegemony*, whereas only from the inclusion of the needs and experiences of the individuals who resist to it, actual *democratization of technology* can be achieved (Feenberg, 2010, p. 26). Democratic rationalization stands for:

“[a] broader understanding of technology [that] suggests a very different notion of rationalization based on responsibility for the human and natural contexts of technical action [...] it requires technological advances that can be made only in opposition to the dominant hegemony” (Feenberg, 2010, p. 28).

Hence, according to Feenberg (2010) it is essential that we encourage democracy movements to be internalized in technology, as part of its very process of design and development, and in terms of democratic involvement and participation.

## **2.5 Discourse Theory**

Discourse Analysis is a highly fragmented, but at the same time cohesive field of studies. Fragmented in the sense that, as Schroder (2012, p. 113) plainly puts, many scholars “engage in discourse studies and label their work ‘discourse analysis’ [but] see themselves as metaphorically inhabiting different scientific continents, nations and sub- national regions”. Such fragmentation could be considered justified when in fact: “[d]iscourse constructs social reality, including discourse studies itself as a scholarly field” (Schroder, 2012, p. 113). On the other hand, despite this fragmentation, the combination of “elements from different discourse analytical perspectives and, if appropriate, [also] non-discourse analytical perspectives” can be completed into a cohesive framework for a research project which is “not only permissible but positively valued” as well according to Jorgensen and Phillips (2002, p. 4).

Jorgensen and Phillips (2002) define discourse as “a particular way of talking about and understanding the world (or an aspect of the world)” (p. 1); a broad definition that can be acceptable to all the different approaches. More precisely, all

approaches labelled under *Discourse Theory* share a common understanding of the construction of the social, the importance of language and its structure, and the way they are all intertwined (Jorgensen & Phillips, 2002; Torfing, 1999). More specifically, four significant premises are shared throughout the field and serve as a justification for its vivid socio-constructivism perspective (Jorgensen & Phillips, 2002). First, an objective truth or a per se reality cannot be distinguished as existent outside discourse, because what one understands and what one knows as truth and/or reality “are products of our ways of categorizing the world [...] products of discourse” (Jorgensen & Phillips, 2002, p. 5). From this very premise stems “a critical approach to taken-for-granted knowledge” for Discourse Theory (Jorgensen & Phillips, 2002, p. 5). The second premise deals with the historical and cultural specificity of discourse and points out the fact that “our worldviews and identities could have been different” and/ or are going to be different over time; affected as they are by the historical and cultural transformation of the social world around us (Jorgensen & Phillips, 2002, p. 5). As a third premise stands the awareness that knowledge is itself socially constructed into “common truths” through constant social competition over “what is true and false” and consequently- while forth but not least- if a common truth prevails, considerably relevant social actions become naturalized over others (Jorgensen & Phillips, 2002, p. 5-6). Consequently, it is recognized that “in every discursive practice, it is necessary to draw on earlier productions of meaning”, however some elements may also be rearticulated in a new light; making change in the discursive structures possible (Jorgensen & Phillips, 2002, p. 139).

### **2.5.1 Laclau and Mouffe’s discourse theory**

Laclau and Mouffe demarcate Discourse theory from other discourse theories by their explicit ambition to combine post-structuralism and post-Marxism “with a blend of Lacanian subject theory” (Torfing, 1999, p. 3). In accordance to these three distinct fields, Laclau and Mouffe discuss concepts of *structure*, *politics* and *conflict* and build upon them their definitions of *discourse*, *hegemony* and *social antagonism*. The ultimate contribution of the theory compared to other discourse theories is its emphasis on “the ambiguity of social and political phenomena, as well as the

primacy of politics” (Torfing, 1999, p. 7); that it incorporated into the idea of hegemony.

Traditionally, all discourse theories evolved from the field of linguistics and language studies, where the concept of discourse logically derived from; and where generally speaking, “our cognitions and speech- acts only become meaningful within a certain pre- established discourse” (Torfing, 1999, p. 84). For Laclau and Mouffe, the meaning given to discourse is that of “a differential ensemble of signifying sequences in which meaning is constantly renegotiated” whilst “in the absence of a fixed center, [discourse] fails to invoke a complete closure” (Torfing, 1999, p. 85- 86). Such a conception follows Derrida’s (1980) critique on structure and the deconstruction of totalizing structures, whereas “discursively systems of social relations [...] are often subject to change due to the impact of social conflict and political struggles” (Torfing, 1999, p. 89). In that sense “closed and centered totalities” should not be taken for granted, but rather questioned and challenged (Torfing, 1999, p. 89).

A distinct aspect of Laclau and Mouffe’s theory is that there is no distinction between non- discursive and discursive practices, as ultimately anything that is not discourse, is a *discursive articulation*; which is the practice of “establishing relations among elements such that their identity is modified as a result of the articulatory practice” (Laclau & Mouffe, 1985, p.105). Gramsci’s notion of hegemony is incorporated in Laclau and Mouffe’s discourse theory in the sense that hegemony is seen as:

“the expansion of a discourse, or a set of discourses, into a dominant horizon of social orientation and action by means of articulating unfixed elements into partially fixed moments in a context crisscrossed by antagonistic forces” (Torfing, 1999, p. 101).

In other words, hegemony is the expansion of discourse through the naturalization of some of its elements. The deconstruction of hegemony is one of the apparent roles of discourse analysis, where discourse is revealed, and articulation is realized. This is considered crucial in the contemporary world since “hegemony must be conceived as the general form of politics in modern capitalist societies” (Torfing, 1999, p. 110).

Last but not least, social antagonism describes the conflictual context in which hegemonic articulations take place; “antagonisms can be found where discourses collide” (Jorgensen & Phillips, 2002, p. 48). Different identities deriving from different discourses are all met in the field of discursivity. There, when a discourse or an identity confronts another in the sense that they are mutually exclusive, the “discourse’s existence and fixity of meaning” is threatened since the very same discourse is questioned and challenged (Jorgensen & Phillips, 2002, p. 48).

### **2.5.2 Critical Discourse Analysis (CDA)**

CDA emerged as a broad movement in the field of discourse studies; its development being largely attributed to Norman Fairclough (Jorgensen & Phillips, 2002). CDA, also combines three different traditions- *detailed textual analysis from linguistics, macro- sociological analysis of social practice* and *the micro- sociological, interpretive tradition from sociology* (Jorgensen & Phillips, 2002, p. 65- 66) which compose a *relational, dialectical* and *transdisciplinary* framework to work with empirically (Fairclough, 2010). Contrary to Discourse Theory, CDA differentiates between discursive and non-discursive practices and maintains that “every instance of language” should be analyzed and conceived as: a *text*- as in the cumulative product experienced through human senses, a *discursive practice*- as in the context of production and consumption of the text, and a *social practice*- as in the broader context (Jorgensen & Phillips, 2002, p. 68). This approach is justified by Fairclough through the aim of CDA, which is to potentially “shed light on the linguistic-discursive dimension of social and cultural phenomena and processes of change in late modernity” (Jorgensen & Phillips, 2002, p. 61). More precisely in CDA, discursive practices- “through which texts are produced (created) and consumed (received and interpreted)” – are very important when conceived as social practices that constitute “the social world [;] including social identities and social relations” (Jorgensen & Phillips, 2002, p. 61). Apparently, the CDA researcher through applying CDA methodology obtains a role of transforming “social forms and social life in ways which advance human well- being” (Fairclough, 2010, p. 14).

The concept of *ideology* has always been “a major concern throughout” CDA (2010, p. 25) and in 2006, Fairclough (2010) called for its critical conception. He

defined ideology as being *a way of representing (discourse), a way of acting (genre), a way of being (style)*, and part of *the material world* (Fairclough, 2010, p. 79). Then,

“[i]f ideology is, first, a relation between texts (in meaning-making) and power, it is second, a relation between orders of discourse and power, and even languages and power, because meanings achieve relative stability and durability in social practices and social structures” (Fairclough, 2010, p. 79)

As Fairclough (2010) stresses CDA is explicitly concerned to contribute to the study of social and cultural change, represented in the changes in *discursive practices* (p.131). Through CDA, he argues that “a political strategy and movement” is needed “to ensure that the social transformations which will result from it address the fundamental problems and dangers facing us” which are “poverty, gross inequality, injustice, insecurity, ecological hazard” (Fairclough, 2010, p. 21). The Gramscian notion of hegemony is incorporated in CDA as well. As Fairclough (2010) explains it is in the context of discursive practices that hegemony is build through the production, re-production, challenging and transformation of discourses (p. 130). More specifically, the naturalization of “particular relations and ideologies, practices which are largely discursive” and “the capacity to shape [those] discursive practices and orders of discourse” signify hegemony (Fairclough, 2010, p. 129- 130).

### **Chapter 3: Discourse Analytical Framework (Methodology)**

For this thesis, *Laclau and Mouffe's discourse theory* and *Fairclough's Critical Discourse analysis (CDA)* - two of the most popular discourse theories- will be combined and by "taking advantage of their respective strengths" (Jorgensen & Phillips, 2002, p. 138) developed into a theoretical framework relevant to this specific project. Both approaches share common ontological and epistemological premises which make their combination possible and according to Jorgensen and Phillips (2002) desirable too. Thus, in the Discourse Analytical Framework of this project Laclau and Mouffe's explanatory theory of how discourse works in the contemporary world will provide a general context, wherein Fairclough's CDA will add more practical tools. This study is contextualized in a contemporary world where discourses compete each other with the ultimate goal of achieving hegemony, while at the same time through this process become articulated. Hence, the aim of this analytical framework is to provide the terminology and the tools needed to understand the complexity of the established and/ or not yet established interrelations, which define the perceived *social wrong* (as in injustice, inequality, lack of freedom etc.) in the context of this project and discuss its impact and possible solutions (Fairclough, 2010, p. 231). Nevertheless, it is clear that this analytical framework shall address "the role of discourse in processes of social change" (Jorgensen & Phillips, 2002, p. 139).

#### **3.1 Social change, articulation and interdiscursivity**

Hereby, I will explain how this very matter - the role of discourse in the context of social change- will be addressed in this framework. Fairclough (2010) tackles the matter through two notions: *intertextuality* and *interdiscursivity*. Those notions explain how texts and their discourses are interconnected in a somehow historical change of meaning, and moreover how the discourses of texts are related to each other, with discourses of other texts and/ or reformulated into new ones. Essentially, *interdiscursivity* is termed as "[t]he constitution of a text from diverse discourses and genres" (Fairclough, 2010, p. 96). For Laclau and Mouffe a similar role is assigned to the concept of *articulation*. As already described, articulation deals with how a new identity is created through a certain combination of elements, and therefore signifies

change. Furthermore, “[e]very discursive practice is an articulation since no practice is an exact repetition of earlier structures” (Jorgensen & Phillips, 2002, p. 140). Consequently, in order to understand and further explain the substantiality of this project while addressing social change, articulation will serve the purpose of signifying change in social practice while interdiscursivity will be used as the analytical tool through which the very same change will be described and explained textually.

### **3.2 The context: the order of discourse**

Thereinafter, both approaches agree to the fact that any “practice should be analysed in the light of the structure to which it relates” (Jorgensen & Phillips, 2002, p. 140); and that is the *communicative event* and the *order of discourse* for CDA and *articulation* and *discourse* for Laclau and Mouffe. The order of discourse is termed as “different discourses that compete in a particular domain” (Jorgensen & Phillips, 2002, p. 141). The order of discourse is an important concept for CDA and this project as well as it can be used to, in the first place, imply the different discourses existent in a certain domain/ field, and in the second place define the arena in which they compete with each other aspiring to reach hegemony. In CDA, as an empirically oriented methodology, the recognized importance of the order of discourse is that as Fairclough declares “change occurs especially when discourses are transported interdiscursively *between* orders of discourse” (emphasis in original, Jorgensen & Phillips, 2002, p. 142). That makes the determination of the order of discourse very significant, as well as helpful, for the analytical tool of interdiscursivity as well, as its specified context can potentially shed light into very interesting interrelations of discourses.

### **3.3 Discourse, key signifiers & chains of meaning**

Notably, the way a discourse shall be analyzed is of prime importance. Following Laclau and Mouffe, the first step is the identification of the different *key signifiers* “in the social organisation of meaning”, which consist of three distinct types of signifiers: *nodal points*, *master signifiers* and *myths*:



“Generally speaking, nodal points organise discourses (for example, ‘liberal democracy’), master signifiers organise identity (for example, ‘man’), and myths organise a social space (for example, ‘the West’ or ‘society’).” (Jorgensen & Phillips, 2002, p. 50)

Those key signifiers can potentially reveal discourses, styles and genres which in turn can provide insight in ideologies, whereas after their identification in the empirical data the interpretation of “how discourses, identity and the social space respectively are organised discursively” (Jorgensen & Phillips, 2002, p. 50) can begin. Then again, the bigger picture surrounding the key signifiers and the web through which they are related and connected to other key signifiers or signs –objects- shall take place. Thus, “by investigating the chains of meaning that discourses bring together in this way, one can gradually identify discourses (and identities and social spaces)” (Jorgensen & Phillips, 2002, p. 50).

Nodal points, as already indicated, are directly connected with discourse and signify it. However, a nodal point – and any key signifier in general- can only obtain its meaning in relation to its context; there is no meaning in the signifier itself. This happens through *relations of difference* or *relations of equivalence* (Torfing, 1999, p. 96- 97), both attributed to Laclau and Mouffe, which are also incorporated in CDA. In essence, “discursive identities are inscribed both in signifying chains that stress their differential value, and in signifying chains that emphasize their equivalence” (Torfing, 1999, p. 97). In other words, the logic of difference highlights how one is different from the other while trying to fix meaning. On the contrary, the logic of equivalence tries to flatten meaning; in the sense that it gives a same meaning to what insofar had a different meaning (different identities) and therefore the previous meaning gets partially or wholly displaced, even deprived. The logics of difference and equivalence can be found in all different levels of analysis, e.g. social practice in terms of rearticulation and disarticulation, but they can be certainly found as well during the textual analysis in e.g. word choices, phrase construction etc.

More specifically, the chains of equivalence establish the two- way connection between discourse and the field of discursivity- or in this case the order of discourse- as described by Torfing (1999, p. 98- 99). Nodal points partially fix the meaning of *floating signifiers*- which are to be found in the field of discursivity as the

surplus of meaning. In return, it is possible that the floating signifiers give meaning to nodal points as well, through establishing chains of equivalence. Finally, a discourse can be analyzed through the identification of its nodal points –the rest of the key signifiers are equally important and can be very helpful contextually- and the realization of the chains of meaning connecting them with other signifiers.

### **3.4 Discursive practice, text and social practice**

As already indicated, Fairclough uses a three- dimensional model and distinguishes between *discursive practice*, *text* and *social practice* “as three levels that can be analytically separated” (Jorgensen & Phillips, 2002, p. 81). All three levels are examined linguistically. When analyzing the discursive practice the focus is “on how the text is produced and [...] consumed” (Jorgensen & Phillips, 2002, p. 81). When analyzing text some linguistic tools are considered important for textual analysis: *interactional control* – “the relationship between speakers, including the question of who sets the conversational agenda” (Jorgensen & Phillips, 2002, p. 83); *ethos* – “how identities are constructed through language and aspect of the body” (Jorgensen & Phillips, 2002, p. 83); *metaphors*; *wording*; and *grammar*. At the end, when analyzing social practice, “the relationship between the discursive practice and its order of discourse” need to be explored and “the wider context of the discursive practice – the social matrix of discourse” needs to be mapped (Jorgensen & Phillips, 2002, p. 86). This relationship is considered to be the apex of the analysis, where finally a more critical and political look is taken in order to pose “questions relating to change and ideological consequences” (Jorgensen & Phillips, 2002, p. 87).

### **3.5 Deconstruction, hegemony & hegemonic intervention**

Laclau and Mouffe drawing upon Derrida explain that in politics decision-making is of uttermost importance, as politics can be dismantled up until the level of different forms of interactions between the undecidable (field of discursivity) and the decidable (discourse) and conceived as such (Torfing, 1999, p. 67- 69). Through moving from undecidability to decidability (when a dominant discourse emerges), hegemony is achieved; while in response “deconstruction shows the contingent and constitutive character of decidable hegemonic articulations by revealing the

undecidability of the decision” (Torfing, 1999, p. 103). Undecidability and decidability- and therefore deconstruction and hegemony- presuppose each other and that, on the one hand, means one cannot exist without the other whilst, on the other hand, reveals the possibility of *hegemonic intervention* or *counter- hegemonic intervention*; disruption of hegemony through deconstruction.

### 3.6 Research Questions

The above presented discourse analytical framework will guide the study and contribute to answering the main research question, which as formulated in the introduction, aims to explore: *What are the consequences of the unitary patent for code/ software development?*

The primary research question will be dismantled in sub- questions and operationalized in relation to the analytical tools reviewed in the framework. Within the scope of this study the *field of discursivity* is considered to be software (or software patents) in relation to the unitary patent package, and the *order of discourse* - the domain of software; where the discussion of software takes place. Within that order of discourse two contrasting discourses have been identified: discourse attached to (a) the European Patent Office (EPO) and (b) April, a non-profit advocacy group for free/libre software. Two following sub-questions will explore the articulation and rearticulation of the unitary patent by these organizations respectively:

RQ<sub>1</sub>: How unitary patent is articulated by the EPO?

RQ<sub>2</sub>: How unitary patent is rearticulated by April?

After the clearer identification of the two discourses by looking at *key signifiers* and the *chains of meaning*, the differences between them shall be interpreted while answering the following question:

RQ<sub>3</sub>: What are the differences between the examined discourses?

## Chapter 4: Discourse analysis of exemplary texts

With the two contradicting discourses distinguished, first, the discursive practice of EPO and April will be presented to provide the context of production and consumption of the two discourses respectively. Second, the selected texts will be presented and their selection justified. Textual analysis will be complemented with three (expert) interviews – one from EPO’s official from the Department of System Software, Computer Architecture, Microprocessors, and Computer Security, one from April’s volunteer/advisor on patents, also responsible for the content of the campaign for the unitary patent and one from April’s Public Affairs Office.

In practice, as indicated through the *discourse analytical framework*, first to be identified are the *key signifiers (nodal points, master signifiers and myths)*, the *chains of difference and equivalence*; and the *interactional control, ethos, metaphors, wording and grammar (with a focus on modality and transitivity)*. Further, the theories of technology and studies of software, as presented in the analytical framework, as well as other relevant theories will be used in order to explain and discuss the findings. It is important to note here that the analysis will be build according to the researcher’s interpretation of the texts, intending for the final presentation of them to be concise and clear.

### 4.1 Context: The Discursive practice of the European Patent Office

The European Patent Office (EPO) is part of the European Patent Organisation, which was set up on 7 October of 1977 based on the European Patent Convention (EPC); signed in Munich in 1973. The EPC is the legal framework through which the European Patent Organisation and EPO were created. The other part of the European Patent Organisation is the Administrative Council which is among others responsible for supervising EPO. The EPC is a special agreement among the participating –or else contracting- states – 38 member states members of the European Union itself or not e.g. Turkey, Switzerland and Iceland- in the “spirit of international co- operation” and its strengthening; related to the “protection of inventions [...] by a single procedure for the grant of patents and by the establishment of certain standard rules governing patents so granted” (Office,

2013b). The EPO is located in Munich, with branch offices in The Hague and sub-offices in Berlin and Vienna. The legal personality of the European Patent Organisation is the President of the European Patent Office, Benoît Batistelli currently- since 2010. The EPO as the executive body of the European Patent Organisation grants European patents. It is responsible to search and examine each application in EPO's database, as well as examine complaints filed against granted European patents. EPO's mission is to "support innovation, competitiveness and economic growth across Europe through a commitment to high quality and efficient services delivered under the European Patent Convention" (Office, 2013c).

In this context, the European Patent Office (EPO) produces content – to be referred here as texts- that are produced and used as communication tools; and that are consumed both by external and internal audiences of the organisation. Those are regarded as tools of the general discursive practice of the EPO and are part of the "public relations communication" of the organisation which according to Parker (2008) is "a form of discourse" which is released in the public sphere to support "a particular world view, particular perspectives and interpretations of events, the promotion of particular institutions, social formations, viewpoints and/or products" (p. 132). Thus, "public relations communication is a competitive discourse process, akin to propaganda, whereby through formal, technical and creative processes, the objective is [...] to persuade and exert influence" (Parker, 2008, p. 133). From EPO's communication two exemplary texts will be analyzed, which are different communication tools, in terms of language, structure and purpose. In terms of *interactional control* (for definition see, p. 27), "the conversational agenda" (Jorgensen & Phillips, 2002, p. 83) in both texts is set by the EPO as a commentary and opinion on the events concerning the unitary patent at the European Parliament.

The first text constitutes a press release<sup>7</sup> of EPO (Text 1) (see Appendix A) issued on the 11th of December 2012, the day the unitary package parliamentary debate and voting took place in the European Parliament (EP). The specific press release was selected as it composes the immediate public reaction of the EPO to the

---

<sup>7</sup> The press release can be found through this link <http://www.epo.org/news-issues/press/releases/archive/2012/20121211.html>

voting of the unitary patent which also signifies the initiation of the current reformation procedure of the European patent system. According to Parker (2008), generally “[p]ublic relations press releases are essentially constructs in argumentation or rhetoric”; press releases intend to make a claim and rationalize it by presenting the grounds of its justification and support those through the selection and inclusion of specific relevant information (Parker, 2008; Skerlep, 2001). Respectively, a press release is more than the expression of an opinion or a discourse as at the very end its “purpose [is that] of ensuring that as much of the original copy, in as much of its original format, is retained in its final publication as news copy” (Parker, 2008, p.136).

The second text is taken from EPO’s official blog, to be found on EPO’s website (Text 2) (see appendix B). In contrast to press releases which constitute more traditional communication tool, blogs are considered as a social media platform for content creation (OECD, 2007) as they “are often associated with the notions of dialogue and information sharing” (Baxter et al., 2010, p. 518). EPO’s blog constitutes an “executive blog” (Baxter et al., 2010, p. 518) type as it is written and signed by the President of the EPO, who as indicated previously is generally the “legal personality” of the whole European Patent Organisation (Office, 2013a). According to Baxter et al. (2010), such blogs aim to “put forward company ideas and engage with members of the public through feedback” while they are “also be used internally in organisations to communicate company initiatives with staff” (p. 518). Hence, an “executive blog” purpose is to support both external and internal communication, in a more participatory way.

#### **4.2 EPO’s discourse**

Both texts (Text 1 & Text 2) draw upon the same *key signifiers* and thus as anticipated produce the same discourse in a slightly different way. The identified nodal points are *historical context, neoliberal economics, cost- benefit analysis and central control*. Its *master signifier* is EPO itself and its *myths* that of *Europe and globalization*; a *master signifier* of the *European* could as well be identified as an identity but it is farther analytically covered and incorporated in the *myth of Europe*. The discursive context in which the both texts are produced is the same but as

indicated the purpose of the texts is different, which supports the different level of incorporation of the *key signifiers* in each text i.e. in the blog post the master signifier of *EPO* is much more visible since it serves the organization's internal communication also. Further, the results of the analysis will be grouped under sections that present the key signifiers of EPO's discourse; as identified in the two texts- Office (2013a) and Battistelli (2013).

### **Master signifier of EPO**

In the title of Text 1, the "European Patent Office welcomes historic agreement on unitary patent" (Office, 2013a) where the EPO obtains its own identity which is "constructed through the language aspects of the body" (Jorgenson & Phillips, 2002, p. 83); to be perceived as a concrete and personalized totality, in the sense that it can perform and act like a person or more precisely as a representative of persons. Furthermore, an *ethos* which conceptualizes *EPO (master signifier)* as a solid identity is visible throughout the whole text. The title reveals even more if regarded on its *transitivity*; "how events and processes are connected (or not connected) with subjects and objects" (Jorgensen & Phillips, 2002, p. 83). EPO, as a subject, "welcomes" what it regards as a "historic agreement" (Office, 2013a) which is connected through a *chain of equivalence* with the event of the voting on the unitary patent; EPO obtains the power position of the subject through which it obtains its identity to perform the act of welcoming in active voice.

In the same text (Text 1), the unitary patent is also explained as equivalent to "[t]he European patent with unitary effect" whereas *EPO (master signifier)* is "entrusted [...] to deliver and administer" such patents (Office, 2013a). Its legal status is explained as being "based on two regulations, one creating the instrument, and one on the applicable language regime for the new patent" accompanied by "the creation of a unified patent litigation system [...] the Unified Patent Court (UPC)" (Office, 2013a). An "international convention" will support the court's legal status which is explained as "a specialized court with a first and an appeal instance with exclusive jurisdiction concerning infringement and validity questions related to unitary patents" (Office, 2013a). The unitary patent and the Unified Patent Court, for EPO, in some way ensure "the completion of the unitary patent system in Europe"

which is considered to be in line with “[t]he vision of the founding fathers of the EPO” (Office, 2013a). The reference to the founding fathers- as well as their existence- strengthens the organization’s identity through *interdiscursivity* (*for definition see p. 24*); enhances *EPO’s master signifier*. Also, such a “completion” is marked as an anticipated event and in the words of EPO’s president as an event “we have been waiting for in Europe for 40 years” (Office, 2013a); another strengthening of the *EPO (master signifier)* which appears both through interdiscursivity and the inclusiveness of “we” itself. Generally, information concerning procedural explanations are presented in detail to support the legal framework inside which the unitary patent is to be set up, taking a defensive attitude towards possible questioning of its legal status; its legitimacy. Burgess (2002) explains that the “legal system” constitutes “hard law”, while “cultural norms and standards” constitute “soft law” (p. 470); and “[l]egitimacy is the movement or the tension between pure norms- tacit or even unconscious- and pure legality, pure hard law” (p. 471); the perceived and ever changing distance between hard and soft law. Legitimacy of the unitary patent and EPO’s practices in general is very important for EPO’s identity; if any organization is questioned in terms of legitimacy, then its very own identity is to be questioned also.

Also in Text 1, “[t]he unitary patent now has to be formally adopted by the EU Council and the European Parliament” (Office, 2013a) passive voice is used whereas the unitary patent in the power position of the subject and its adoption – as the action- are the most important parts of this construction. In terms of *wording*, the use of the adverb “formally” in relation to the time reference of “now” indicates also that the current status of the unitary patent is informal. However, its transition to a formal status “is expected soon” (Office, 2013a); EPO is assumed to be positioned as the implied subject. The *modality* here shows necessity as it “has to be formally adopted” and high probability as that “is expected soon”. *Modality* is defined by Jorgensen and Phillips (2002) as expressing “the speaker’s degree of affinity with or affiliation to her or his statement” (p.83). This particular *modality* can be seen as mostly *teleological* which “concerns what means are possible or necessary for achieving a particular goal” (von Fintel, 2006, p. 2). As noted by von Fintel (2006), *modality* is analyzed in terms of possible worlds and is related to their



quantifications; “[d]ifferent kinds of modal meaning correspond to different choices of sets of possible worlds as the domain of quantification” (von Stechow, 2006, p. 3). Fundamentally, a modal expression will be regarded as true only in the possible worlds that can relate to it- only there where it can be quantified- and this is how it becomes possible for a single expression to simultaneously express more than one or all modal meanings (von Stechow, 2006). In Text 2, *modality* is comparatively much more often. For example, the “EU institutions” are to be praised implicitly by the author “for this landmark result” (Battistelli, 2013) - the agreement they managed- because he considers they “deserve” it. The perceived *modality* of the sentence “[t]hey deserve all praise for this landmark result” (Battistelli, 2013), focuses on the necessity of an appraisal -which is subliminally included in the verb “deserve”- while at the same time it is a statement that is being actualized while written and consequently read. This type of *modality* can be regarded as *circumstantial* or *dynamic modality* which “concerns what is possible or necessary, given a particular set of circumstances” (von Stechow, 2006, p. 2); given the fact that the decision has been evaluated by the author as a “landmark result”, the necessity for an appraisal appears. At the same time, it is to be considered as a “landmark result” for “what is known and what the available evidence is” – *epistemic modality*- ; as well as “given the person’s desires” – *bouletic modality* (von Stechow, 2006, p. 2). Those three types of *modality* are also recognized in other instances of the Text 2. Battistelli (2013) writes conclusively that “this is not a time to rest on our laurels. I think, however, that we can and should take a moment to celebrate the major advance that has now materialised, which will greatly benefit the cause of Europe”. Summed up in this extract, Battistelli (2013) addresses his opinion in a direct and personal way- “I”- while at the same time it is also EPO’s (*master signifier*) opinion – as expressed through “we”; what becomes visible are first, the utility of the blog post to enhance the identity of EPO (*master signifier*) -mostly internally to the organisation- and second, the importance of the *myth of Europe* in this enhancing.

### **Myth of Europe**

The *myth of Europe* and the existence of a *European identity* need much discussion in general, let alone since they are considered essential and central to EPO’s

discourse, where they are used in support of, on the one hand, the discourse itself and on the other hand, the legitimacy of the discursive practice and the identity of the *EPO (master signifier)* as a European organisation. Primarily, one needs to understand the basis on which the *myth of Europe* is constructed which is described by Burgess (2002) as:

“Whatever concrete consequences the ‘construction’ of Europe may have for individual Europeans, business, and other groups and interests, the principled motivation has always been the assumed or perceived existence of the European” (p. 476).

Throughout the discourse, Europe, Asia and the US are identified as competing with each other in Text 1, and the unitary patent agreement as a decision putting “Europe on a par with [...] [these] competitors” (Office, 2013a). According to this, the social space of *Europe (myth)* is now competing with Asia and the US in terms of the attractiveness “for innovation and investors from Europe and around the globe” (Office, 2013a). Initially, while all three are social spaces as in geographical territories, Europe and Asia are traditionally continents while the US is a nation-state, still all framed to be competing on innovation and investment that are to be extracted from the broader global social space; built around the *myth of globalization (for definition, see further p. 36)*. Despite differences, the three are conceived here as contingent enough to be equally measured and hence able to compete each other. In this context, Burgess (2002) states that first, “[t]he project of European construction is carried out in the name of Europe” (p. 476), and second that “it is a transcendental European solidarity that ‘binds’ Europe in the global community” (p.478). In other words, without the *myth of Europe* there is neither Europe’s competitiveness nor anything European to talk about; nevertheless, there is no reason for a European Patent Office to exist and thus ground to build its discursive practice upon.

In the title of Text 2 “The unitary patent – Europe gives a boost to innovation”, the chain of equivalence connects the unitary patent with “a boost to innovation” (Battistelli, 2013). The selection of the *wording* refers to a positively drastic and energetic action which is as well supported by the *transitivity* of the sentence;

Europe receives the power position of the subject in active voice, whereas its implicit decision on the unitary patent is regarded as positive energy for innovation; in Europe (*myth*), which is highlighted here in the subject position. Importantly, the occupation of the subject position is not random but rather can be considered as a naturalized discourse. In that respect for Jorgensen and Phillips (2002) lies the assumption that “[b]y accepting the role as addressees of the text, we affiliate ourselves to the subject position that the interpellation has created” (p. 15); in this case the identification with the *myth* of *Europe* happens in the sense that “[n]obody will deny that something like ‘Europe’ exists [...] this concept has a meaningful and universally understood content” (Burgess, 2002, p. 476). No matter what though, Burgess (2002) considers fundamental to keep in mind when talking about Europe that “[k]nowledge about Europe is also produced by Europe” (p. 479).

### **Myth of globalization**

US and Asia are to be considered as the Others-“that which one identifies oneself” (Jorgensen & Phillips, 2002, p. 44)- through which the *myth* of *Europe* gains its meaning; in the context of the *myth* of *globalization*. Hay and Rasamond (2002) draw our attention to what they consider as a fact that “[w]hether the globalization thesis is ‘true’ or not may matter far less than whether it is deemed to be true (or, quite possibly, just useful) by those employing it” (p. 148). According to Hay and Rasamond (2002), globalization “has become a key referent of contemporary political discourse and, increasingly, a lens through which policy-makers view the context in which they find themselves” (p. 148). In both texts, the *myth* of *globalization* appears closely related to and in order to enhance the *myth* of *Europe*.

### **Nodal point of historical context**

In relation to the previous, the *nodal point of historical context* is constructed. According to Sassatelli (2009), “Europe is given a historical continuity which, although created through the juxtaposition of discrete and heterogeneous elements, results in a teleological tension leading to modern European institutions” (p. 20). The importance and complexity of the *myth* of *Europe* highlights the essence of the

*historical context* as a *nodal point*. For instance, the unitary patent is characterized as a “historic agreement” (Office, 2013a) that signifies the importance given to the event in the course of history; a historical continuity is considered to be relevant and important to the event. The agreement is now achieved in difference to the disagreements and conflicts existent thus far; an element that makes this agreement of historic significance. The event of the voting of the unitary patent is further regarded as the outcome of successive events taking place throughout the years.

At the beginning of Text 1, EPO in the power position of the subject performs the act of welcoming- this time in the past tense- EPO “welcomed the adoption by the European Parliament [...] today [...], hailing it as a historic achievement” (Office, 2013a). Previously, the unitary patent has been also characterized as a “historic agreement” (Office, 2013a). What seems important and highlighted here is that this event is “a historic achievement” (Office, 2013a), whereas EPO as the implicit subject performs the act of hailing; the *nodal point of historical context* is supported by the *master signifier* of the *EPO*. The created chains of equivalence through *wording* and the *historical context (nodal point)* referring to what was and what will be, imply that the unitary patent is to be regarded as a positive event, if not the best “decision”- “which clears the way”- to be made, since “[t]he European Union is to be congratulated on this” (Office, 2013a). In this case, even though the European Union takes the power position of the subject, the action performed by the speaker (the President of EPO who is quoted at that point) is highlighted; the act of congratulating the EU for its decision on the unitary patent. In relation to the EU, Burgess’ (2002) point that “[t]he European Union is not identical to Europe” (p. 469) seems very relevant, in the sense that the references to the EU and its institutions are not included in the *myth of Europe*, but rather connected to the *master signifier* of *EPO* through *transitivity*.

For example, the narrative of Text 2 begins with the adverb “[f]inally”, clearly showing the anticipation occurring for the outcome to be discussed; “the EU institutions managed to agree last week on the so-called patent package” which as explained are “the unitary patent and the Unified Patent Court”(Battistelli, 2013). The “EU institutions” in the subject position are broadly defined as such, eliminating

their power as less important than the fact that they “[f]inally [...] managed to agree”; the pre- mentioned anticipation is here focused on an implied indecisive environment, which is regarded as negative by the EPO. In contrast, through *chains of difference* the positively viewed “so- called patent package” is mentioned here as such to clarify the necessity to be viewed and understood as a whole of parts, as a “package”, but simultaneously regarded under the interdiscursivity prism mentions a discourse of unknown origins; as seen through the word choice of “so- called”. The central point of this reference can be seen in that for the unitary patent to even exist as a patenting option there are a number of regulatory steps to be taken, which include both decisions taken on the unitary patent as well as the unified patent court. Importantly for interdiscursivity, the sentence “EU institutions managed to agree last week on the so- called patent package” leads through a hyperlink to Text 1. The previous narrative is supportive to the *nodal point* of the historical context, which is more clear at another extract of the text in reference to the agreement whereas: “[l]ooking back at the interminable, fruitless debates on this dossier over the decades, one realises the scale of this very recent achievement” (Battistelli, 2013). The importance of the unitary patent agreement on the 11<sup>th</sup> of December 2012 is considered as important for the EPO in a twofold way: it is “not only a simple solution for innovators [...] but also [creates] a complete, dedicated litigation system with jurisdiction for so many countries with widely differing legal traditions” (Battistelli, 2013). In the author’s “view”- strong *bouletic modality*-, the decision on the unitary patent is “unparalleled” for “those who have been involved in [the] discussions on the harmonisation of legal systems”; as “those” can understand “how much effort” the decision presupposed; the decision is positively perceived in contrast to the past.

### **Nodal point of cost-benefit analysis**

Previously described as a “historic agreement” the unitary patent is also a “[d]ecision [that] clears the way”, if analysed in terms of cost-effectiveness, for it is “patent protection in Europe” that becomes “less expensive and less cumbersome” – which is to be considered as less costly, in terms of time and money- and as a result “most SME and research centres” will be “profiting”- which is to be presented as effective

(Office, 2013a). At this point, there are *chains of difference* drawn between the current status of “patent protection in Europe” (Office, 2013a) and the one proposed with this agreement- decision that apart from its historical reference is regarded as beneficial in a *cost- benefit analysis* terms of thinking. The cost- benefit analysis is a popular term in economics used for decision making on “whether a project brings a net gain to society” by setting out “all the costs and benefits associated with a given project in money terms” (Williams, 2008, p. 67). First described as a method already in the 1930s, the cost- benefits analysis is referred by Feenberg (2010, p. 31-34) as the trade-offs approach and argued to have deep ideological roots; playing a major role in politics and policy decision-making process. In this context, EPO expects a clearance in the way of the European patent system is enhanced by considering the agreement on the unitary patent as “the completion of the European patent system with a unitary patent and a Unified Patent Court”, whereas it supports cuts in “the costs of patenting inventions in Europe” (Office, 2013a). According to the EPO, such a lower cost system “will strongly benefit European enterprises, especially research centres and SMEs”, as explained (Office, 2013a); the *cost- benefit analysis (nodal point)* is clearly stated in the very *wording* of the sentence. Feenberg (2010) criticizes this type of analysis in the context of environmental politics, which he perceives as considerably and closely related to technological change (p. 31- 45). He states that “when the boundaries of the economy shift, so many cultural and technical consequences follow that it makes no sense to look back with an eye to costs and benefits” (Feenberg, 2010, p. 44), meaning that a cost and benefits analysis is seen as inadequate, especially if it is to be seeing as defined by Williams’ (2008) as different entities that can be translated into countable units, while “all other things must remain equal” (Feenberg, 2010, p.35). Important to be noticed is that, as argued by Feenberg (2010) a *cost- benefits analysis (nodal point)* is nevertheless in contradiction to any *historical context* since it can only take into account a certain instant and neglects any continuity (p.35).

However, in Text 2 for example those two *nodal points* are relatively used. In order for the EPO to be able to “deliver the first unitary patent”, the UPC needs to be established and ratified (Battistelli, 2013). Text 1 explains that “Unified Patent Court [is] to be created by an international treaty” (Office, 2013a). In terms of *transitivity*,

passive voice is used here to elevate the fact that a “Unified Patent Court [is] to be created”. The actor is not referred, only the process through which the court is going to be created (through an “international treaty”) is highlighted. In continuation to this, the “international treaty” is elevated as well through another passive voice, which indicates that it is “to be signed early 2013” (Office, 2013a). Through *chains of equivalence*, it can be therefore assumed that the Unified Patent Court will “be created” at “early 2013” (Office, 2013a). This reference to the international treaty is important for the EPO to justify its legitimacy. To make sure that this will be the case Battistelli (2013) “strongly [urges] the national decision-makers to be active in moving this process forward”. This, he declares, will “enable the users to benefit soon from the new system” (Battistelli, 2013), where through the *chains of difference* drawn it is assumed that the old or current system (*nodal point of historical context*) does not provide such benefit (*nodal point of cost- benefit analysis*). The expressed *modality* here is highly *epistemic, bouletic* and *dynamic* this time focusing not only on necessity but possibility also. The “new system” is first beneficial – certainty- and therefore it is necessary that the process is “moving [...] forward”.

### **Nodal point of neoliberal economics**

Through chains of difference, it is hinted that until now Europe hasn’t been innovative (enough) and therefore attractive for investors and failed to compete with Asia and the US; who in contrast are considered as innovative and attractive for investors by the EPO. Hereby notions of competitiveness vis-à-vis innovation and economic growth need to be contextualized. According to Llewellyn (1996) “good economic performance” of the European socioeconomic system can only be achieved through enhancing “competitiveness” (p. 96). According to the Commission also, a key drive to achieve competitive advantage in the global knowledge-based economy is considered to be innovation (Commission of the European Communities, 2008). Best (1990) uses the term “new competition” to describe one focused on innovation. In this sense, the support of innovation with the aim to increase Europe’s competitiveness is important in the realm of economic progress and growth. At the first place, that is strongly present in the vision of EPO’s founding fathers which is “to

equip the European economy with a truly supranational patent system” which aims in the “strengthening [of] Europe's competitiveness” (Office, 2013a).

Burgess (2002) notes that Europe and more specifically the EU as a unitary space has been built in “relation to the rest of the world within the matrix of economic globalization” (p. 479); the *myth of Europe* in the context of the *myth of globalization*, whereas Hay and Rasamond (2002) recognize an “essentially neoliberal and market-conforming conception of globalization as an external economic constraint” as the dominant rhetoric of globalization (p. 151). Hence, the sequel innovation - competitiveness - economic growth constitutes through strong chains of equivalence the *nodal point of neoliberal economics*; within the neoliberal discourse. Neoliberalism as such is defined as:

“a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong property rights, free markets, and free trade” (quoted in Orłowski, 2011, p.175).

Diez (2001) examines Europe as a discursive battleground and identifies different discursive *nodal points* of how Europe is perceived. As the dominant discursive *nodal point* since the 1970s, he as well identifies that of the “Liberal Economic Community” which perceives economy as “a market following quasi- natural laws, the manipulation of which needs to be prevented. All that governance can do is uncover these laws and then help reinforce them” (Diez, 2001, p. 22). Relationally, in this discourse history is conceptualized as a “continuous technological and economic modernization” (Diez, 2001, p. 22); the *nodal point of historical context*, whereas national identity is as important as the European one; the European identity is constituted of the many national identities which are to be considered European; the construction of the *myth of Europe* in the neoliberal context. According to Burgess (2002), at the beginning the European identity on the 1972 Declaration of European Identity is defined as some “common heritage, interests and special obligations within the community” (p.479); “the ‘dynamic nature’ of European unification” (p.479); and whether “the Nine” at that time were “acting together in relation to the



rest of the world"(p.479). Then, he continues that the 1992 Treaty of Maastricht eliminates the European identity to "common security and foreign policy" with the purpose "to reinforce European identity and its independence in order to promote peace, security and progress in Europe and in the world" (Burgess, 2002, p.479).

In Text 2, the reasons why the appraisal of the unitary patent agreement is considered necessary are explained as what has been decided is considered in line with "Europe's continuous efforts to raise its competitiveness and attractiveness" (Battistelli, 2013). The *myth of Europe* in competition to other economic spaces in the global context (*myth of globalization*) is used to support economic growth that is regarded as necessary as part of *neoliberal economics (nodal point)*.

### **Nodal point of central control**

Another key point of the discourse are declaration's as "EPO [has been] entrusted by 25 EU member states to deliver and administer unitary patents" (Office, 2013a). EPO again in the power position of the subject will be responsible "to deliver and administer unitary patents" (Office, 2013a). This responsibility is given to EPO "by 25 EU member states", who are eliminated through the use of passive voice from their subject position they would have in active voice. Generally, as the passive voice is known for drawing attention to the subject and the recipient of the action; the actor, the "25 EU member states" (Office, 2013a), is not as important as the subject and the fact that it receives "entrustment" for the unitary patents (Office, 2013a); even though they are the agent of the action of entrustment, their identity and role here – which would be more visible in active voice- becomes less important, even underdetermined while taken for granted. Jorgensen and Phillips (2002) explain that "[f]or Laclau and Mouffe, the subject is always overdetermined because the discourses are always contingent; there is no objective logic that points to a single subject position" (p. 4) and that is why analyzing *transitivity* is crucial; it explains "how events and processes are connected (or not connected) with subjects and objects [...] investigating the ideological consequences that different forms can have" (p. 83). In this specific case, EPO's position is overdetermined while in contrast the EU member states' position is underdetermined. In relation to the *nodal point* of *neoliberal economics*, described above, this over determination for Diez (2001)

means that “there is no ‘political’ choice in economic governance, and thus government needs to be limited” (p. 22). EPO will be the administrator of the unitary patents whereas the European patent system is an example of “harmonisation of legal systems” (Battistelli, 2013). The word choice of “harmonisation” through the positive coloration of the word harmony indicates the beneficial essence of the new system. That is to be named as the *nodal point of central control*, where the *chains of equivalence* are translated as the unitary patent centralizing the European patents legal system.

Moreover as soon as, “the legal provisions for both the unitary patent and the UPC have entered into force” the interested parties will be able to file their “[r]equest for unitary patents” (Office, 2013a). More specifically, the agreement on the UPC “is expected to be signed on 18 February 2013 and will enter into force” when ratified by the required number of member states; thirteen including France, Germany and the UK (Office, 2013a). Regarding that it is stated in the text that “EPO expects to validate the first unitary patent in 2014” (Office, 2013a). After all the legal issues are to be surpassed, EPO predicts when “the first unitary patent” (Office, 2013a) will be ready to be granted, stretching EPO’s role in that procedure through *transitivity*. Such a unitary patent is described by the EPO as to “provide legal protection for inventors [...] through one single administrative step” (Office, 2013a). According to EPO, as already discussed the current status is too complex in terms of time and money- which both equal cost- and a procedure of “one single administrative step” is desirable to solve this complexity (Office, 2013a). In order to receive benefits from the European patent system, the press release suggests that *central administration (and control)* of the system is required. In relation to that Diez (2001) supports that if one examines Europe as a discursive battleground will realize that:

“the main struggle is not between competing interests in the narrow, ‘economic’ or ‘national’ sense, but between competing discourses of European governance. ‘Europe’ becomes a discursive battleground with ramifications [...] for the wider political debate” (p. 6)

Thus, in this case *central control (nodal point)* is the solution for better European governance concerning patents.

In order for that to become possible, according to Text 2 the unitary patent and the Court “require a technical preparation phase”, which means certain preparations for the EPO since it “is to take charge of administering the unitary patent”; which have “already begun” as declared; and moreover EPO “is ready to take various initiatives to speed up the implementation of the system” (Battistelli, 2013). These declarations further imply the urge the EPO feels in relation to the unitary patent and the consideration that this urge needs to be shared by others as well, such as “the national decision- makers” in order to “speed up the implementation of the system” (Battistelli, 2013). In Text 1, the reader is as well reassured that the unitary patent “will co-exist with” the current European patent system- “national patents and the classical European patent” sharing “the legal basis and the procedure for grant” in accordance to the EPC and differing “only in the post-grant phase” (Office, 2013a). *Chains of difference* and *equivalence* are both drawn in this case to describe the unitary patent in reference to what is currently available and known as the European patent system. The “unitary patent scheme” as named, is presented as being the same before the granting and being different “only” after, where “EPO will also be in charge of centrally administering the patent, levying the annual renewal fees and distributing them to the participating EU member states” (Office, 2013a); therefore, what changes are the role of the *EPO (master signifier)* and the responsibilities it has. Thus, *central control* of the European patent system by the EPO and not the national patent offices. As a matter of fact, EPO argues that “unitary patents will be treated as a single patent” with no complex procedures of validations and administration “nationally in each and every state”, which is considered as positive as it “will lead to massive savings in terms of time and costs”. In a *cost- benefit analysis (nodal point)*, *central control (nodal point)* is considered by the EPO to ensure the best balance of costs and benefits; the “net gain to society” (Williams, 2008, p. 67). That is again positive as it “should make Europe more attractive for innovation and investors and bring it on a par with its competitors in Asia and the US” (Office, 2013a); nodal point of *neoliberal economics*.

### 4.3 Context: The Discursive Practice of April

Since 1996 *April* promotes and protects free/libre software in Europe. It is located in Paris and produces its discursive practice through advocacy mostly for French speaking world. *April* explicitly distinguishes advocacy from lobbying in order to position itself as a protector of the common good (*April*, 2013). With some 5000 members ranging from individuals to diverse types of (e.g. educational, civic) organizations *April* positions itself as “a major player in the democratization and the spread of free software and open standards” as well as “a watchdog on digital freedoms” (*April*, 2013). Through participation in software relevant politics, *April*, according to Karanovic (2008) has “a reputation of being a ‘political’ association” (p. 82). In accordance with its goal to support free software, *April* positions itself against software patents. Its discursive practice consists of i.e. “writing press releases, participating in public and political debates, organizing talks and workshops about free software, helping organizing conventions” (Karanovic, 2008, p. 82).

In the thesis, two exemplary texts from *April*’s discursive practice are chosen to be analyzed as part of its practice. The first is a press release (Text 3) (Appendix C) issued by *April* on 11th December 2012; the same day as exemplary Text 1 from EPO. As a press release, Text 3 is similarly to Text 1, since it is also part of the public relations communication. As Freeman (2009) argues “working in an agency, a major conflict of interest that threatens ethical communications is the direct need to serve their client’s interests versus their indirect responsibilities to serve the public’s interests” (p. 272- 273). *April* openly claims to support the public’s interests, by differentiating between advocacy and lobbying; lobbying as “a tool to gain maximum influence over the regulatory changes” (Hang & Koppang, 1997), and advocacy as a “counteractive lobbying” (Austen- Smith & Wright, 1994, p. 25).

The second text is to be found in a website dedicated<sup>8</sup> to the unitary patent, coordinated by a volunteer in *April* and aiming to provide an in-depth analysis on unitary patent. It is a video slideshow<sup>9</sup> (Text 4) (Appendix D) created in 2011, when

---

<sup>8</sup> [www.unitary-patent.eu](http://www.unitary-patent.eu)

<sup>9</sup>The discussed text can be found in the following link in video format or slideshow format <http://unitary-patent.eu/content/presentation-about-unitary-patent>. It can be viewed online or downloaded and it is produced under the Creative Commons license.

the Commission made a proposal on Unitary Patent and aims to briefly inform on the matters concerning this topic. The video can be downloaded, viewed on Youtube and Dailymotion or browsed as a slideshow. For this analysis, the slideshow version of the video will be used. A video slideshow according to Couldry (2008), is a form of online narrative; more specifically it makes “a visual presentation out of narrative, over and above its textual content”; “to limit the length of narrative”; to use some level of “standardization” in respect to the audience; and “to take account of the possibility that any narrative when posted online may have unintended and undesired audiences” (p.382). The slide show consists of textual, visual and audio part, from which analysis will be confined to the textual and visual parts<sup>10</sup>.

#### **4.4 April’s discourse**

Even though, the unitary patent is assessed in different timing by Text 3 and Text 4 the main key signifiers that appear remain the same; *nodal points: democracy, justice, and deontological ethics; myth of the EU; master signifiers of April* and inherent to the *myth of EU, the European identity*. Text 4 also has two more *nodal points* that of the *innovative economy* and the *fundamental rights & freedoms* and the *master signifier* of the *free software community* to support its deconstruction of the unitary patent. Further, Text 4 to a greater extent draws upon other discourses, i.e. quoting and referencing- *interdiscursivity*, by deconstructing and re- articulating them. Further, the results of the analysis will be grouped under sections that present the key signifiers of April’s discourse; as identified in the two texts- April (2013) and Sédrati- Dinet (2011).

#### **Master signifiers of April & the free software community**

*April* as a *master signifier* is part of the *free software community* which is recognized as a *master signifier* too; *April’s* identity is defined along with the identity of all the members of the *free software community*. According to Berry (2008) the *free software community* “intentionally and unintentionally constructs shared meanings (their common world)” and uses “identity as a means of establishing [its] authenticity” (p.27). The community draws upon the “the principles of sharing and

---

<sup>10</sup> The audio part is a voice over following the text.

mutual support” internal to it, “but when dealing with outside agencies and actors, who are presumed to be less likely to share in the morality implicit in these practices, then a proselytising approach is taken, to convince them to join the community”(Berry, 2008, p. 163). If that redounds unsuccessful, they “are considered to be outside the circle of friends, and therefore outside of the community” (p. 163). In exemplary Text 3 *April* as an identity is more dominant, whereas the *free software community* is only implied through it and not separately. Through *transitivity* April - in the power position of the subject “denounces the message sent by the European Parliament to deliberately abandon its power on patent issues” (April, 2013). A direct link (*interdiscursivity*) to April’s testified warning –a document<sup>11</sup> of April’s amendments suggested in replacement of the ones on the voted “text”- brought in the EP by the Greens/ EFA group is also given to indicate April’s participation in the democratic process (see p.). However, since April’s concerns on the unitary patent are considered as *alethic* (see below: *modality*) their beyond neglect by “them”, drives April to express its complete disagreement to the decision. Relatively, *April’s master signifier* appears here as a “discursive group formation” wherein “‘the other’ – that which one identifies oneself is excluded, and the differences within the group are ignored” (Jorgensen & Phillips, 2002, p. 44). The collaboration with the Greens/ European Free Alliance (Greens/ EFA)<sup>12</sup> which are a political group of 58 members in the EP is an example of ignored differences. Nevertheless, common ideals and a respectively similar ethical position seem to be engaging enough for the Greens/ EFA on side with April on the unitary patent debate, which is recognized by April as: “above all [MEPs] the Greens/EFA group, fought for an improvement of the text” (April, 2013).

The title of exemplary Text 4 is “Everything You Always Wanted to Know About The Unitary Patent (But Were Afraid to Ask)” (Sédration- Dinet, 2011). In the same text, an image illustration is allocated using symbolism (visual *metaphor*) to state that “[a]ctually, the vast majority of software professionals are opposed to

---

<sup>11</sup>The exact document can be found through this link [https://www.unitary-patent.eu/sites/www.unitary-patent.eu/files/intergroup\\_compromise\\_amendments\\_unitary\\_patent\\_eu.pdf](https://www.unitary-patent.eu/sites/www.unitary-patent.eu/files/intergroup_compromise_amendments_unitary_patent_eu.pdf)

<sup>12</sup> More information on the Greens/ EFA can be found through this link <http://www.greens-efa.eu/about-us/48-who-we-are.html>

software patents” (Sédrati- Dinet, 2011) (see slide #2, Appendix D). The chosen type of *modality* here- as well as throughout both April’s texts- is that of *truth*, where “[t]he speaker commits herself completely to the statement” (Jorgensen & Phillips, 2002, p. 84), in a way that April’s stands are presented as the only true and ethical conception of the matter. Von Fintel (2006) claims that the *modality* of *truth*, or else the *alethic modality*, is hard to find confidently “in natural language” (p.2), but in the field of Discourse Analysis, “truth [...] is, at least to a large extent, created discursively” (Jorgensen & Phillips, 2002, p. 13), which means that is also naturalised into texts. Visually, a man in suit connected to EPO, holds a dressed more casually – supposingly software developer- literally from a hanging rope, which is there to represent software patents. The man in suit is pictured as restricting the enthusiastic software developer from accessing “patented property” (Sédrati- Dinet, 2011) even though his chair, literally (visually) again, is Article 52 of the European Patent Convention (EPC). The relationship of those who identify themselves with the *free software community (master signifier)* and the EPO is thus illustrated, to reinforce the identity of the software developer by showing the context s/he works in, through mostly the visualization of *chains of difference*; the EPO agent is depicted as constraining the software developer from working as freely as he wishes. Moreover, the *free software community (master signifier)* has “[a] shared concern”. Building on fear of being accused of providing a strong opposition to software patents without enough justification, the Senior Vice President & General Counsel of Google (*interdiscursivity*) is quoted here to support that “[w]e are not the only ones to say this” (Sédrati- Dinet, 2011). The quotations support patent is not innovation but rather in the contrary; “the right to block someone else from innovating” even if this is not intended to be their role (Sédrati- Dinet, 2011). In essence, the above *wording* works as an enhancement of *April* and *free software community master signifiers*; adding through inclusiveness value to their existence; with the use of passive voice, “the vast majority of software professionals”, in the power position of the subject, “are opposed to software patents” and therefore agree with *April (master signifier)*. Also, through chains of difference large firms are confronted with the rest of software firms, which might be part of or in the considerable circle of friends of the *free software community* and which April supports as they gather around the

discourse of “[m]ost software firms [who] still do not patent” (Sédrați- Dinet, 2011). According to April only large firms with money are able to “obtain software patents”, while the rest whether can’t – as in they are economically incapable- or don’t want to- as in do not support software patents generally.

### **Myth of the EU**

Central to April’s discourse is the *myth* of the *EU* and the legitimacy of EPO’s practice in relation to it. As already mentioned, according to Burgess (2002) EU is different from Europe, but nevertheless they are interrelated. The EU could be defined as “a transnational institutional structure” (Burgess, 2002, p. 468), whereas “the essence of the European Union requires reams of documents and a complex system of self-interpretation in order to constitute itself” (p. 476); meaning that any questions on the *European identity* and the *myth of Europe* are also relevant to the *myth of the EU*. As Sassatelli (2009) describes the “European identity is more about a sense of ‘becoming’, something nobody is simply by birth, because it is permanently in evolution, drawing from this, and not from specific contents, its specificity” (p. 198). In the same sense, the legitimacy of EU institutions as Burgess (2002) suggests:

“can neither assure their legitimacy by mirroring the cultural norms of European reality, nor by abstracting themselves from it. The legitimacy of legal institutions emerges from tension between the concrete cultural identity and the formalized, universal ideals of correctness” (p. 471).

In that sense, in exemplary Text 4 chains of meaning are drawn that describe the above: EPC is the governor of patent law, “not a European Union law” but rather “a multilateral treaty”; that is important because this treaty created EPO which is “not a European Union agency” (Sédrați- Dinet, 2011). The chains of difference drawn are explicit – supported by negations- and question the legitimacy of EPO. The fact that software patents are granted in the *EU (myth)* and is explained as “[a] sophistry” the EPO has made in order to grant software patents already since the 80’s. In Article 52 of EPC -also quoted- programs for computers are not to be patentable and “shall not be regarded as inventions” which is considered as



“software [being] explicitly excluded from patentability” (Sédrați- Dinet, 2011). According to the provided extract from EPO’s website however, software can be patented if it is to “be recognized as providing a technical solution to a technical problem”, which is regarded by April as a type of manipulation of law; while it is seen as “against the spirit and the letter of this law” too (Sédrați- Dinet, 2011). The “spirit and the letter of the law” according to Burgess (2002) are equivalent to “soft law” and “hard law”; “cultural norms and standards” and the “legal system” (p. 470) (see also p.). So, apart from the perceived distance of EPO’s practices from “soft law”, which is to be expressed by the *master signifiers* of April and the *free software community*; EPO does not comply with the “legal system” itself, but rather chooses to interpret it in a way that eventually enables it to grant software patents. As presented by April, EPO seems to argue “that the law does only prevent patentability of software as such” but the technical aspect of software is not part of software as such (Sédrați- Dinet, 2011). The argument of EPO is presented as not irrational per se, but for sure opportunistic based on the assumption that software should not be patented which is also supported by law. EPO’s practice it is argued results to a “minefield” of software patents- *metaphor*; software patents seen as dangerous mines which might explode in the future and visualized as numerous and widespread (see Slide #8, Appendix D), which emphasises a perceived urgency to the matter, while the created chains of equivalence reinforce a negative view of software patents. EPO practices are characterized as “dubious” and are blamed for why there are “now, in Europe, tens of thousands very strong monopoly rights” (Sédrați- Dinet, 2011). Monopoly rights are not considered a good thing for April, even more when they are strong, for the *innovative economy* (see p.), which shall be diverse; where everyone shall have equal *rights* and chances; and where *freedoms* shall not be constrained (*for nodal point of fundamental rights & freedoms, see further p. 54*).

Similarly, in the title of exemplary Text 3 “Unitary Patent: Keys for European Patent Office and Door to European Parliament” it is indicated (through *metaphors*) that the unitary patent has different implications for the European Patent Office (EPO) and the European Parliament (EP). Since EPO takes to “controversial practices on granting software patents in disregard with European law” (April, 2013), April translates the unitary patent as an opportunity for EPO to continue granting

software patents, in agreement with Stallman (2011) here, who draws our attention to what he considers a threat: “Europe’s ‘unitary patent’ could mean unlimited software patents”. Simultaneously, the situation is translated as “a missed opportunity for the European Parliament to finally create a genuine patent of the European Union” (April, 2013). On April’s point of view, since insofar EPO has been granting software patents irrespectively to the European Law, it is assumed that this will be the case with the unitary patent as well, and much more to an even greater extent since power relations are regarded as changing; given the fact that with the approval of the unitary patent the European Parliament is considered, for April, to “deliberately abandon its power on patent issues” (April, 2013). Also supportive to the *myth* of *EU* is the chain of difference drawn with the U.S experience; the example of which appears to claim that software patents are regarded as negative; since the evidence show that software patents do not “encourage more innovation” as it is generally claimed and expected, and thus the EU should not follow the same pathway (Sédrati- Dinet, 2011).

Exemplary Text 4 suggests that all this constitute a “systemic issue”. EPO is described to decide “for the sole interest of a ‘patent microcosm’” which includes “patent lawyers and patent departments of some — mainly non-EU – big firms” (Sédrati- Dinet, 2011). The stressing of the non- EU firms is there to enhance an *European identity* as part of the *EU (myth)*, while the invention of the “patent microcosm” is there to accuse EPO of narrow thinking and acting, which is not taking into account *EU* citizens, economy and society but rather in some sense betraying them. This “patent microcosm” is also characterized as a “bubble” (for the visual see slide #11, Appendix D). EPO is naturally interested to the “unlimited expansion of its bubble [...] [t]he more patents it grants, the wealthier the EPO” while April identifies “a need to refocus the European patent system in the interests of the European economy and society as a whole” (Sédrati- Dinet, 2011). In order to do so, April calls for legislators to act and solve this situation- to be as well considered “[a] systemic issue”, problem-, whereas the problem is the “judiciary- driven legal development”. Then, in connection to Fitzgerald’s (1999) informational law development, April sees that its pathway- development- leans towards the “patent microcosm” ‘s wishes and not its own. It is stated as an apparent fact that “EU has being working for decades

to reform the patent system” and April would agree to such a reform if that would be *just and democratic (for nodal points of justice and democracy see p. 55)*.

### **Nodal point of innovative economy**

A distinguishable *nodal point* is supported by innovation in the economy; whereas innovation is perceived as positive to the economy; the nodal point of the *innovative economy (nodal point)*. In the context of the *innovative economy (nodal point)*, the text argues that patent policy is fragile and needs to be handled “with care” (Sédrati-Dinet, 2011). A *chain of difference* is created between patents and innovation, by using the mathematical symbol ( $\neq$ ) that stands for being not equal/ different; meaning that “[p]atents do not always equal innovation” (Sédrati-Dinet, 2011). In other words, the existence of patents does not necessarily mean that innovation is reinforced, the opposite of which is characterized as a “common belief” (Sédrati-Dinet, 2011). The aim of the slide show is to deconstruct that common belief by being an attempted re- articulation. Hence, a difference is drawn on the one hand between patents and innovation; and on the other hand between what is commonly believed and what is this presentation about; the *truth (see p.)*. The argument is then supported by the situation “in the field of software”, where patents are “weapons of economic war”, “hinder innovation” and are “a potential threat” to businesses, software developers and users of software (Sédrati-Dinet, 2011). April is generally against software patents, but here the argumentation is presented according to experience; what “we have experienced” (Sédrati-Dinet, 2011). The *master signifier* of April is at this point directly connected to the “vendor, developer and user of software” indicating a community that opposes to software patents. In more detail, the previously indicated U.S experience with software patents is presented to claim that software patents are “detrimental” to the “economy”, because only “a few large firms” actually have them and “the risk of litigation from software patents continues to increase dramatically” (Sédrati-Dinet, 2011). April supports that software patents shall be regarded as negative because they don’t really support innovation- which is generally considered as good for the economy- but rather “[i]n comparison to many other innovation policy instruments, patents might be rather costly” (Bessen & Meurer, 2008, p. 217) regardless the different case

of software patents (p. 201- 203); all firms are in danger to spend great amounts of money in courts to defend themselves whether they hold patents or not.

“The bottom line is that the regulation on the unitary patent is all about the degree of autonomy the EU wants to leave to the EPO”; it’s a question of what the EU wants; the proposal of the Commission is considered “too much EPO- centric” and gets along with the expansion of “the patent bubble”; on the contrary, April’s proposed amendments want and aim to “give back to the EU the necessary democratic control over its innovation policy” (Sédrati- Dinet, 2011). A Threat Level<sup>13</sup> image is created by the author to signify this (see slide #27, Appendix D). Using *athletic modality*, the degree of autonomy of EPO is examined (degrees: low, moderated, elevated, high or complete). Distancing themselves from a low degree of autonomy where the EU innovation policy is fully independent, the presented amendments refer to a moderated degree of autonomy, where EU innovation policy is democratically managed (visually placing the EU flag over EPO’s logo to explain the relations of power in such a case). At an elevated degree of autonomy, tension among EPO and EU is to be found concerning the EU innovation policy (*nodal point of innovative economy*). The current Commission’s proposal is at the degree of high autonomy, whereas the EU innovation policy is practically driven by EPO (visually the EPO logo covers the map of Europe to again explain the different relations of power). At the complete degree of autonomy, there is a risk for a patent bubble.

According to April, the EU needs an independent innovation policy; a chain of equivalence between innovation policy and patent policy is drawn that goes as far as tautology. Previously, patents were discussed as not equal to innovation at the case of software equivalent to “a bad patent policy”, while “[a] good patent policy has to be shaped to encourage innovation” which presupposes independent innovation policy kept away from the influence of the “patent microcosm” (Sédrati- Dinet, 2011); good patent policy leads to innovation, whilst bad patent policy leads to more patents which does not equal innovation. At the same time, a chain of difference is drawn to support the same argument. As long as, EU does not have “the full decisional power” about patent issues- as in “what should be excluded from

---

<sup>13</sup><http://www.personalthreatlevel.com/>

patentability, what conversely can be patented and under which requirements”- “a bad patent policy” coming from the “patent microcosm” will be the outcome (Sédrati- Dinet, 2011).

### **Nodal point of fundamental rights & freedoms**

For April, a “bad patent policy could be disastrous” for, first, *the innovative economy (nodal point)* and second, for “fundamental rights and freedoms” which appears as a nodal point in Text 4. This *nodal point* has been slantingly mentioned in the image illustration discussed previously which depicted the constrained software developer (slide #2, Appendix D), while it is also hinted through the *master signifier* of the *free software community*. The *nodal point of fundamental rights and freedoms* is also closely related to the *nodal points of democracy and justice*, where *rights and freedoms* are ought to be protected. In exemplary Text 4, it is argued that a good patent policy should also consider “other legal areas” such as competition law, for instance (Sédrati- Dinet, 2011). Competition law is presented as the secure pillow of the *fundamental rights and freedoms* in a free market environment and at a business scale. Competition law is mentioned here in the sense of the discourse that laws and ultimately *justice (nodal point)* make sure that the *innovative economy (nodal point)* is led through *democratic control (nodal point)* while treating with respect *fundamental rights and freedoms (nodal point)*.

### **Nodal points of justice & democracy**

“The EU Patent and The Unified Patent Jurisdiction” are discussed visually (see slide #15, Appendix D) as only one jury to be labelled as part of the EU court through the inclusion of the EU logo. The European patent, or else as presented visually by April the EPO patent, is to become a unified patent (papyrus with the logo of EU); or else be equivalent to (*chain of equivalence*) such a unified patent governed under “a unified patent court” (Sédrati- Dinet, 2011). That unified patent will then be “a new patent title that would have unitary effect throughout the whole Union”, but the *truth* presented by April is that it is going to be the “traditional patent granted by the EPO” with a “special ‘unitary’ flag” (Sédrati- Dinet, 2011). This is where three problems of legitimacy are identified by April, respectively presenting the unitary

patent's "[i]ffy legal basis" (Sédrați- Dinet, 2011). First, the required "[u]nanimity" and the invocation of the "enhanced cooperation" that "has been decided" is to be put under question as it is regarded by April as a procedure to subsidize the EP; that neglects the *EU society* – as not everybody shall necessarily participate and thus has an exclusive role; and conclusively a decisive procedure that seems rather *less democratic*. Since the *EU (myth)* as such is subsidized, it is at the same time appointed that *democratic control and power* need to necessarily stay in the hands of the *EU* and its internal straightforward procedures; rather than anywhere else. Second is the "Compliance with EU Treaties", whereas the unitary patent is understood as displaying several *legal issues (nodal point of justice)* with conforming to the *EU (myth)* treaties. As in Text 3 also, the European Court of Justice (ECJ) is quoted extensively to be made clear that a Unified patent court is illegal (*nodal point of justice*)- in the sense of not complying to the EU treaties- as it takes the decisive power from the national courts to interpret, apply and question patent issues; apply their democratic rights (*nodal point of democratic control*); currently ensured by the EU treaties- "which are indispensable to the preservation of the very nature of European Union law" (Sédrați- Dinet, 2011). For these reasons the ECJ previously "smashed the project of a unified patent jurisdiction [...] sending the European Commission back to the drawing board". The enthusiastic *wording* shows its respects and support to the decision of ECJ and meanwhile, the reference to the EU distinct levels (Commission, drawing board) shows respect to the EU *democratic procedures* too. And thirdly, the Court of Appeal for the Federal Circuit (CAFC) in the U.S is presented as a bad example of such a court. Through the presented graph- taken from Bessen (2011) - one can see an increase of the "[n]umber of patent lawsuit filings involving software patents" starting from 1984 until 2009. CAFC is a bad example as it "behave[s] in an excessively pro-patent direction" first by "broadening the scope of patentable subject matter" and second by "endowing patentees with unwarranted power" (Sédrați- Dinet, 2011). It is crucial for April that the ECJ will supervise any such system; "[a]ctually [...] there is no other choice", in contrast to the proposed package which does not guarantee an independent court; an independent court "able to weight proportionally conflicts between patent law and

other legal areas” is necessary in order to offer *justice (nodal point)* and ensure *democracy (nodal point)*.

In exemplary Text 3, it is also strongly stated that the approval of the text of the unitary patent by the European Parliament hinders *justice (nodal point)* and *democracy (nodal point)* in the *EU (myth)*. This is why, the rest of the MEPs (i.e. excluding the Greens/ EFA group and perhaps the Polish MEPs who expressed some concerns) voting behaviour is explained as to have “blindly followed the deceiving talk of a rapporteur Rapkay incensed by the critics voiced, and voted in support of a problematic text” (April, 2013). His discourse<sup>14</sup> – that April founds misleading is at the same time reported as winning the debate occurred in the European Parliament on the 11<sup>th</sup> of December 2012, as proven by the acceptance of the unitary patent. For April though, not the rightful winner so to say, merely because of the legal questions raised around the very same “text” of the unitary patent and what is considered a fact that moving forward on an *illegal basis* raises questions on *democracy*. For April, the *truth* is that the text is “illegal” even though it is labelled and assessed as otherwise; and the “text” will remain “illegal” for as long as it doesn’t become *legal (nodal point of justice)*. Central to this press release is “the text”<sup>15</sup> and what happens to it. More specifically, they (“them”) “eventually accepted the text” as it was, even though April tried for its “improvement” which considers more than necessary as sees its current status as “problematic” (April, 2013). Taking into consideration the placement of the “text” to the front as a distant and depersonalized entity, one could argue that a neutralization of the depictions given at that moment takes place; which is not the case with exemplary Text 4. For example, the text is characterized as “illegal” and “problematic”, but in hand with its material passivity -taken for granted, hence it is understood that the text is not directly recognized as a discourse but as a neutral terrain into or over which the debate takes place. An explanation to this is that April understands the *myth of EU* as the expression of *democracy (nodal point)*

---

<sup>14</sup> More information on this discourse can be found in the personal page of Bernhard Rapkay at the official website of the European Parliament through this link [http://www.europarl.europa.eu/meps/en/1906/BERNHARD\\_RAPKAY\\_activities.html](http://www.europarl.europa.eu/meps/en/1906/BERNHARD_RAPKAY_activities.html). Transcripts of the referred speech (discourse) can be as well found there, however the researcher is unable to talk about them here due to language limitations.

<sup>15</sup> The text can be accessed through this link <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2012-0475+0+DOC+XML+V0//EN&language=EN>

at a European level and therefore focuses on the outcome of its choices, the “text”, in order to avoid an insult to democracy; strong indication of *deontological ethics* (*nodal point*). The goal and ambition of April is to somehow participate in the creation or transformation of that “text” that will eventually regulate patents- and software patents in the interest of April- in legal terms with the aim to exclude software patents. This “text” can be seen as an example of what Fitzgerald (1999) defines as *informational law* which apparently mediates software. According to Fitzgerald (1999) the development of informational law “will determine much about the way we live in the future” (p. 358). In that sense, April understands the unitary patent text as part of the future of software (patents) regulation and considers it a threat to free software and software development.

As already indicated, the enhanced cooperation procedure in relation to the unitary patent is perceived as illegal. According to April, a unitary patent should be accepted by the European Union and not only by the Member States, as it is the case with such enhanced cooperation. Further, the Advocate General of the Court of Justice of the European Union (CJEU) is mentioned (and referenced) here as having “warned that unitary patent cannot be achieved by the Member States, but only by the Union” (April, 2013) earlier in 2011, but recently also concluded that the enhanced cooperation procedure is not illegal. The Advocate General is argued by April, concluded that the “procedure was not affected by illegality” without examining it thoroughly; “without assessing the merits of the implementing regulations” (April, 2013). Therefore, even though the procedure has been labelled as legal by the Court of Justice, April strongly supports that it is not any less illegal as such conclusion is rather rough and therefore false; as in untrue. On the other hand, neither “[t]he next steps” which are concerning questions over legality in front of the Council and European Court of Justice (ECJ) “are [...] expected to reverse the trend” (April, 2013). At this point, the fact that unitary patent is considered as legal (by the others) is eliminated into a “trend”, something that on the one hand is occasional and reversible, but apparently not in this specific case. At the same time, there are planned steps to be taken further, but they are already projected as at the end not fruitful. Despite this pessimism, expressed in *modality* with low possibility hope for April lies to the belief that what might “highlight new objections” is the issue of a



unified patent jurisdiction; *modality* here expresses medium possibility- “may however” (April, 2013). The *modality* here is all *epistemic*, *deontic* and *dynamic*. For April, if a Member State was to come before ECJ regarding the unitary patent court, it possibly “could finally sack the entire text for its illegality”, even though the Advocate General seems to imply some uncertainty towards such a statement; as well *epistemic*, *deontic* and *dynamic modality*.

Burgess (2002) sees a tension as in “between the ideal and the real” or else between Montesquieu (1793) and Weber (1972). April would agree with Montesquieu in that *democracy (nodal point)* should “[foresee] the legitimacy of the state based on the will of the people” and this is how it builds its discursive practice in order to counter act the taken for granted conception of “contemporary democracy” which “foresees the legitimacy of the state based on the correct execution of a set of valid procedures” (Burgess, 2002, p. 472). Furthermore, “[d]emocracy as a purveyor of political meaning is culturally determined, shaped and organized in relation to the cultural, social, moral particularities whose ambition is to erect institutions of democratic representation”; *nodal point of democracy or democratic control*. From this derives that “institutions of legal representation cannot be emptied of cultural or spiritual reference” (Burgess, 2002, p. 473) whereas laws should have spirit- soft law-, in order to be just; *nodal point of justice*.

April’s amendments are therefore presented as being required for the unitary patent to proceed and support *democracy (nodal point)* and *justice (nodal point)* in the *EU (myth)*. The first amendment proposes that a true unitary patent should be created returning back to the main concern of April where “it should be made clear that the unitary patent is a patent title of the EU, as stated by the legal basis in the EU Treaties” (Sédrați- Dinet, 2011). The second amendment is that if the unitary patent eventually goes further, any references to the EPC should be deleted as they are just “used to flag the usual EPO patent” and are therefore misleading (Sédrați- Dinet, 2011). And the third amendment is for clear delegation of the EPO and making the EPC rules part of the EU law. EPO’s powers concerning the unitary patent, if they are to be held, need to be “explicitly” defined by EU, while at the same time EPC ruling should be transformed in a way that are equivalent to the exercises “by an EU

agency” (Sédrati- Dinet, 2011). Nevertheless, what the author suggests is to make in some sense the role of EPO official, in order for it to be an internal part of the EU and be accountable to *justice (nodal point)* as such, a way that is regarded as further supporting *democracy (nodal point)* in the *EU (myth)*. Last but not least is the amendment of the substantive patent law, where it should be explicitly again stated “what should be excluded from patentability, what conversely can be patented and under which requirements” (Sédrati- Dinet, 2011); “by stating directly” what is to be excluded such as in “the special issue of software patents” which shall “be excluded” in plain words, so that no window for their patentability can be opened (Sédrati- Dinet, 2011).

### **Nodal point of deontological ethics**

All of the above are coloured with a strong ethical stand. As already indicated two central *nodal points* of *April's* discourse are those based on the ideals of *democracy or democratic control* and *justice* within the context of the *EU (myth)*. According to these values, “April denounces the message sent by the European Parliament” because, among others, it considers the accepted text to have “legal, economic and political concerns over which we have warned them” (April, 2013). The *chain of difference* drawn here between “we” and “them” is strong and describes an intense relationship based on *April's ethos*. The *deontological ethics (nodal point)* of *April* are strongly visible at this point. Deontology is defined by Alexander and Moore (2012) as “one of those kinds of normative theories regarding which choices are morally required, forbidden, or permitted”. *Deontological ethics (nodal point)* therefore uncover moral issues in certain choices, which presumably point out directions that are to be followed. In this case, the unitary patent is regarded through such prism; as having also implications for software freedom. *Deontological ethics* have been as well recognized throughout the *free software community (master signifier)* along with the “community-shared processes for the production of social goods” (Berry, 2008, p. 185). According to Berry (2008), those need to be eventually elevated to “a wider discourse of democracy” in order to not “betray its own underpinnings within an ‘engineering philosophy of technology’”; to raise “awareness [to] the nontechnological” (p. 185).

## Chapter 5: Discussion

In this section, the two discourses and their key signifiers will be discussed in comparison by being contextualized in the vis-à-vis rationale that supports them (5.1) and discussed in the light of theories on technology (5.2).

### 5.1 Social Practice: Comparative Analysis

#### 5.1.1 Differences in conceiving *innovation vis-à-vis* global economic order

Let's begin with discussing the identified *nodal points* of the discourses on the unitary patent. EPO articulates the unitary patent as being an improvement of the current patent system, due to the provision of central administration to the EPO (*nodal point of central control*), which is re-articulated by April as a more powerful EPO and a threat to *democratic control (nodal point)*. EPO frames the unitary patent as an important step towards innovation in Europe, important in turn for Europe's competitiveness in the global environment which is regarded as beneficial for the European economy (*see also: p. 40*). As Fagerberg (1999) argues that "Europe's performance relative to that of the United States and countries in Asia is a topic that greatly preoccupies policymakers who are concerned that the European Union (EU) is losing ground compared to other, more dynamic parts of the world" ( p. 63). In this process, technological competitiveness is considered as more important than the more commonly established traditional influences upon competitiveness e.g. price (Cantwell, 2003). Many have commented on Europe's lack of competitive strength in relation to ICT technologies and discussed its unsatisfactory performance and as Fagerberg (1999) writes "Europe has lost ground in the technologically most progressive industries" while most "European firms have not kept pace with their American and Asian competitors in the markets for ICT hardware, software, and services" (p. 72); that is an "uncomfortable trend" which can only be reversed with policymaking (p. 72).

Similar stance is voiced in 2002 by the European Commission's Community Research and Development Information Service (CORDIS), which stressed the importance of innovation in relation to economic performance:

“Economic competitiveness depends to a far larger extent today than in the past on the ability [...] to meet fast-changing market needs as quickly and efficiently as possible through the application of new technology. This capacity [...] relies on scientific inventiveness and entrepreneurial flair. But it is also affected fundamentally by the conditions which permit, encourage and sustain innovative creativity and investment, or those which impede or limit it.” (CORDIS, 2002, p.2)

This rationale is crucial in understanding the context through which the unitary patent is conceived by the EPO as a decision that empowers innovation and Europe’s competitive position in the globe. As already indicated, the *myth of globalization* plays an important role in this conception. Orłowski (2011) argues that “globalization today demands that societies should be governed by the rules of trade and understood only in terms of its economic rationality”(p. 183); such as “neoliberalism is an economic rationality” (p. 176) which has been identified already as the *nodal point of neoliberal economics* in EPO’s discourse. On the other hand, April maintains that the unitary patent is not the solution for an *innovative economy (nodal point)* in the EU. Although innovation is considered as positive from both discourses, there is a disagreement on the applied policy, which is in this case the unitary patent.

### **5.1.2 Differences in the conception of the contemporary globalized world**

The *nodal point of democracy* identified in April’s discourse can be understood as being embedded in the social democracy discourse, in its more traditional sense (Bailey, 2009). According to Bailey (2009), “‘traditional’ social democracy [...] accepted the ongoing existence of both the capitalist economy and the liberal democratic state” (p. 6), but stayed intact with society in order to guarantee that social demands were met. Evolutionary, Bailey (2009) supports that “‘new’ social democracy” replaced “‘traditional’ social democracy” the difference between which is seen at the –to a greater extent- acceptance of neoliberalism by the most recent version. As “[n]eoliberalism is only concerned with economic strategies, not social issues” (Orłowski , 2011, p. 175) the two versions of social democracy diverged. In this case, this divergence can possibly explain how the two discourses differentiate

themselves even though they both consider innovation as positive for the European economy. For April, the social aspects and implications of policies are fundamental, which is also supported by the *nodal point* of *deontological ethics*. April understands that individuals have *fundamental rights and freedoms (nodal point)* which need to be protected.

Hay and Rosamond (2011) identified a “particularly influential [rhetoric] in contemporary French political debate” which views globalization “as a contingent and potentially fragile project [...] promoted by certain sectoral interests” and particularly in the expense to “the ‘European social model’” (p. 156). Such rhetoric supports that “European integration” should be promoted “as a means of preserving the distinctiveness of the European social model from the neoliberalizing imperatives which would come from an open embrace of globalization” (Hay & Rosamond, 2011, p. 156). Such conception of globalization resonates views also expressed in April’s discourse. EPO’s rhetoric on the other hand is different as it relates the globe to a global free market where economies compete with each other. Such “locational competitiveness” is then “secured principally on the basis of cost and reductions” (Hay & Rosamond, 2011, p. 152). This view is strongly supported by the *cost- benefit analysis nodal point* in EPO’s discourse. Respectively the *myth of globalization* is considered in an “essentially neoliberal and market-conforming conception [...] as an external economic constraint” (Hay & Rosamond, 2011, p. 151); a constraint that has to be considered. Through this rhetoric globalization is expressed merely in economical terms meaning “a rapidly changing global economy characterized by intensifying competition, exclusive regional arrangements, and an unstable international financial system” (Giplin, 2000, p.7). Further, Giplin (2000) maintains that in order to ensure the continued existence of a global economy - increased economic integration of national economies is necessary by modification of older rules by new ones (p. 9).

## 5.2 Social Practice: Further Discussion

### 5.2.1 Perceptions on software/ code

For April, code is mathematics and software is abstract, similarly as in Curtis (2010) writings. However, as indicated in the theoretical framework Berry (2010), Fuller (2003) and Manovich (2012) argue that it is important to study software in its essence in order to comprehend it and position it in the contemporary world. Respondent 1 (see Appendix E) from April talks about the importance of software “for most economical and social interaction today and in the future” which obliges one to “really understand what software does” otherwise “your basic fundamental freedom -and I don’t talk about software freedom, but human freedom- are going to be captured by software writers and software companies.” This explains what Berry (2010) refers to as the political economy of software, bringing the attention to private ownership and control. The later given example illustrates better the perceived restriction of freedom – censorship- as a result of ownership and control:

“This is already the case stuff like, with I- stuff: I-Phone, I-Pad, I- Tunes, I- what you want; people don’t realize that any software they are using and their phone has to be approved by Apple to be sell on the I-store and this means, for example, that Apple has the right to censor what it wants; it has censored, for example sexual application. You can say what you want you cannot be interested by this but what is the right of Apple to do that; who are they to decide what is convenient to use and not to use.” (Respondent 1, Appendix E)

Further, he expresses the view that it is essential that everybody should use and write code in an attempt to better understand it. He gives as example that he teaches his 8 years old son how to code and justifies this potential with the evolution of programming itself, which started as something “not easy understandable” to become “more and more [...] simplified [...] almost as you speak in natural language”

So according to this, software is not only becoming more important, but it becomes easier to understand also. The complexity of software is not to be found in

software itself but in the context it is used, created and distributed; its political economy; and in the words of Berry (2010):

“Code is a complex set of materialities that we need to think carefully about in turn. From the material experience of the user of code, both programmer and consumer, to the reading and writing of code, and then finally to the execution and experience of code as it runs, we need to bring to the fore how code is computational logic located within material devices [...] technical devices” (p. 63)

The view on complexity is expressed by Respondent 2 (Appendix F) from the EPO too. Software and patents as well “are notions and concepts that are not easy and are not simple; they are complicated; and they have different abstraction levels”. If you want to analyze them “you have to speak in different terms, you have to go down the abstraction levels; to speak about concrete things”; which is supported as an analytically important procedure by Berry (2010) as previously indicated and Fuller (2003) too. Hence, both Respondent 1 and 2 understand and approach software from a common starting point, despite that the eventual discourses are completely different. Respondent 2 believes that “[t]here is a lot of math in algorithms, [and that] some algorithms are more mathematical than others”. That is explained by another example, that of “an algorithm that calculates in a very efficient way prime numbers”. Now, the algorithm per se could not be patented, but if it was implemented in a cryptographic method then that implementation can be patented, but that would not exclude anyone else from using the same algorithm elsewhere. Respondent 2, while commenting Respondent 1’s approach indicates:

"So, I tried to approach- let's say- this argument that software is math, because I can understand the argument; the fact is a lot of mathematics in the foundations of software for instance there is a lot of mathematics in the foundation of software algorithms, but software eventually is not pure math, it can go further than that based on what you do with software" (Respondent 2, Appendix F)

So, Respondent 2 could agree with Respondent 1 that software is math but “not pure math” but rather much more than simply math. This point is essential as well for the support and opposition to software patents accordingly. They both agree that you cannot possibly patent math, but the view of software as “pure math” or not, eventually differentiate their perception on software patents also.

### **5.2.2 Perceptions on software patents and innovation**

Respondent 1 supports that software patents do not support innovation at last and also threaten *fundamental rights and freedoms (nodal point)*. Respondent 2 expressed that he understands that argument too but at the end “it is the decision of the creator of the source code to put it in the public domain or to exclude it from the public domain [...] it's up to you as the creator it's your human right to allow people to copy it or not to allow people to copy it, it's your creation". Thus, despite the right to express oneself through creation, Respondent 2 also sees the right of its intellectual ownership. He further states that nevertheless whichever way you chose, you just support innovation – only in a different way. Both Respondent 1 and Respondent 2 talk about rights, innovation and software patents in relation to each other but connect it, and contextualize it in a completely different way. There is a “corrosive effect of [...] patents on freedom of expression” (Berry, 2006, p. 72) for Respondent 1 which is fundamental and should not be limited for and by anyone, whereas for Respondent 2 the right over a creation – an expression- and how this is eventually covered is one's own choice and decision. Between the discourses, there is an evident difference on the perception of ownership and control.

### **5.2.3 Software patents and SST**

From the perspective of SST, Bowker (1992) examines *What's in a Patent*, by “looking at patents as texts” and recognizes two key features: one is that they describe and present technologies in a specific way, and second as legal instruments which “attempt to impose that interpretation on the material world” (p.53). According to this, Bowker (1992) differentiates three different levels of patent discourse: *the courtroom*, *the company* and *the field*. He suggests that those are the analytical levels upon which patents shall be discussed and contextualized. In this



thesis, the concentration is on discourses from *the field* of software. However, *interdiscursivity* from the three different levels has been visible. Generally, software patents seen under the SST prism can be interpreted as affecting *choices* of the software developer, in the sense of (re-) defining her/ his *selection environment*. For instance, in a *selection environment* without software patents, the developer could possibly have more *choices*, than the *selection environment* with software patents were some *choices* might be favored over others or even excluded (foreclosed) from the *selection environment* (e.g. because of the risk of patent infringement). April stands against software patents as it experiences them as forcibly eliminating the developers' *choices*; its activity and practice therefore interpreted as a certain stand in the context of the *negotiability* of software technology. EPO, on the other hand, supports that software can be patented, if it solves a technical problem. As derived from the interview with Respondent 2 in practice software can be patented "if the software implemented invention has a technical effect, solves a technical problem, not a commercial problem or not an actuarial problem". In explanation to the meaning of this rationale it was supported that "the best way to approach this is with examples [...] because you cannot give a dogmatic definition of what is technology, what is technical". The source of such examples would be the existent case law and patents granted in contrast to patents rejected, which can be expressed as "positive and negative examples". Below, two of the given examples are presented.

First, this is an example of a software implemented invention that cannot be patented:

"Imagine that you have a software that will minimize the amount of money you owe to the tax office, because of your assets - of paying taxes for your assets- that is a typical let's say economic application to call actuarial application; the implementation of an actuarial method to minimize the taxes that you owe to the tax office; this cannot be patented because it doesn't solve a technical problem, it solves a kind of commercial or actuarial problem." (Respondent 2, Appendix F)

Then, a “counter- example” of software that can be patented:

“Imagine that you have a software that controls the braking system of a car, you know the ABS system that regulates the pressure of the breaks of a car so that the wheels don’t block during breaking; taking into consideration many different parameters like, the speed of the vehicle and maybe the temperature of the brakes and whether the road is wet or dry and so on and so on. And this can be controlled by software; eventually. It’s an algorithm. So, you use software for this; and it may be that everything is already known but the software is new; just the software; that makes the control more efficient, so that the car can stop in a shorter distance under the given circumstances. Now, this is a technical; this is a typical example of a technical application of software” (Respondent 2, Appendix F)

It is very interesting to regard these passages under the SST prism. The “commercial” and the “actuarial” that Respondent 2 refers to constitute the economic, which is here contrasted to the technical in order to grant or not a software patent. The social aspect is not touched upon- at least not precisely-, whereas the technical is narrowly defined; an issue that has been problematized within the SST paradigm (Williams & Edge, 1996). On the contrary, Respondent 1 considers that the difference is in purpose “not understandable” in order “to cover as many things as it can”. He refers to a transcribed patent as something completely strange to him and his work; which can be considered as the result of the attempted distinction of solely technical aspects.

Software patents can be interpreted as strongly supporting *closure*, in the sense that patentee can restricts access and control how her/his protected software can possibly evolve, while the rest can only obtain partial access to it under different licenses. Therefore, a patented software technology achieves forcibly a partial *closure* for all those who don’t have access to its ownership for any reasons, i.e. patent infringement and inability to pay for its license. On the other hand, there are several requirements enforced by law in terms of e.g. a number of licenses to be given trying to eliminate the very same *closure*.

#### 5.2.4 Software patents and CTT

To further deepen on the role of software patents, Feenberg's (2010) notion of the *technical code* can be very helpful. As he writes technologies are comparable with laws, since "both shape and represent those who live under their sway through privileging certain dimensions of their human nature. Laws of property represent the interest in ownership and control" (p. 80). In that sense, laws of property such as patent laws- which specifically refer to properties on technology- can be reasonably considered as a very special and interesting case as they also refer to ownership and control of the technology itself. The state of such laws is in essence constantly interacting with the technology itself (Fitzgerald, 1999). If software patents are to be conceived as *technical codes*, then in essence they "[mediate] the process" (Feenberg, 2010, p.22) of software development too. Taking the example of design standards, Feenberg (2010) explains that they basically are "[r]esolved conflicts over technology" which got eventually "embodied in a stable code and form the background against which economic actors manipulate unstabilized aspects of technology in the pursuit of efficiency" (p.23). More essentially and in relevance to SST's *closure*, Feenberg (2010) suggests that "[t]echnological closure is eventually consolidated in a technical code. Technical codes define the object in strictly technical terms in accordance with the social meanings it has acquired" (p. 95).

A *cost- benefit analysis (nodal point)* approach such as EPO's would treat a *technical code* as "a fixed input" which can be translated as that "[t]he economic significance of technical change [...] pales beside its wider human implications in framing a way of life" (p. 23). In contrast, Feenberg (2010) would argue that the unitary patent is a "regulation [that] defines the cultural framework of the economy; it is not just an act *in* the economy" (emphasis in original, Feenberg, 2010, p. 23). A *cost- benefit analysis (nodal point)* conception, is explained by Feenberg (2010) as building upon "technological determinism and the neutrality thesis" which "support the idea that progress along the one and only possible line of advance depends exclusively on rational judgments about efficiency"; cost- efficiency and *cost- benefit analysis (nodal point)* are examples of such rational judgment systems; which derived as a naturalized expert- based matrix from a past 'historic bloc': "an alliance

system of dominant subject positions stable throughout a certain period” (Buckel & Fischer- Lescano, 2009, p. 442). The naturalisation of a rational judgement system is “the heritage of past struggles” that becomes “a structurally inscribed strategic selectivity that favours some struggles over others” (p. 443); a discourse that has achieved hegemony.

Feenberg (2010) argues that in rational judgement systems objects get isolated “from their original context in order to [be incorporated] [...] into a theoretical system” (p. 18); making them not socially relative. “Once introduced, technology offers a material validation of the social order to which it has been performed” (p. 18) and which according to Feenberg (2010) signifies technological hegemony, strictly supported by rationalization. “[T]echnological rationality is not merely a belief, an ideology, but is effectively incorporated into the structure of machines” (Feenberg, 2010, p. 17) whereas “[t]he legitimating effectiveness of technology depends on unconsciousness of the cultural horizon under which it was designed” (p. 18). Feenberg (2010) defines hegemony as “a form of domination so deeply rooted in social life that it seems natural to those it dominates” (p. 16). In other words, technical codes- software patents- and their ownership and control through the manifestation of technological rationality indicate also technological hegemony. Hence, as Feenberg (2010) explains it is important in the contemporary world to identify the *formal biases* of *technical codes* in order to democratize technology. Subsequently, if software patents are to be conceived as a *technical code*, in a broader context the unitary patent is to be conceived as a regulation over *technical codes*- in the sense of covering many different technologies- and its deconstruction is necessary for the *democratization of the technology* of interest, which in this case is software.

April can be conceived as doing such a deconstruction, aspiring to participate more directly into the democratization of software (technology), which is ultimately regarded to be free software as made clear by Respondent 3 (Appendix G) from April. For April, democratization of software means that “you can access to software, you own the software, like really; it’s not a black box [...] you can actually, you know, meddle with it, redistribute it, share it” which is perceived as being “much more

democratic because it's not a company that decide what you what you can or cannot do; you are just free to do whatever you want". Free software is also contrasted with proprietary software (*for definition see p.2*). Software development is "a process" negotiated among various social groups "that ultimately defines a specific product adapted to a specific mix of social demands. This process ends in 'closure'; it produces a stable 'black box', an artifact that can be treated as a finished whole"; where a "black box" is a technical code (Feenberg, 2010, p. 93). Looking inside the "black box" is what *democratization of technology* means for Feenberg (2010) nowadays and what April attempts through its social practice. April makes visible the injustice it perceives on the unitary patent, promotes its opposition to software patents and ultimately shows its interest to participate in democratization processes. April can be seen as a part of social movements which resist the dominant discourse, being according to Feenberg (2010) very important agents in the process of *democratic rationalization*. This is also how members of April construct identity of the advocacy group; being a representative organization of members and supporters of a non-dominant view, in contrast and in respond to a hegemonic discourse. April is embedded in a broader *free software community (master signifier)*, which draws discourse on the *nodal points* such as *democracy* and *justice*. April understands the unitary patent as "serving the interests and concerns of some better than" of public in general and act in the same sense that a social movement does, in the aspiration to secure *democracy* and *justice* (Feenberg, 2010, p.57). April's social practice seen as it may as a *democratic intervention* for both legislation and technology, in accordance to Feenberg's (2010, p. 57- 58), aims to potentially democratize the legislation of the unitary patent which is connected to software patents in order to democratize software in the end. In Feenberg's (2010) words "[I]legal forms may eventually routinize claims that are asserted informally at first" but their legitimacy will have to "emerge from the experience and needs of individuals resisting [such] technocratic hegemony" (p. 26).

What needs to be further discussed and clarified is what are the *formal biases* identified in the *technical code* of software patents and how they are constructed; in relevance to the unitary patent. In other words, what are needed to be revealed are the inherent values of software patents (*constitutive bias*) and the

accompanying values that support them (*implementation bias*). April insofar fails to account for those biases. For anyone to do that, the concept of *instrumentalizations of technology- primary and secondary instrumentalization*; the instrumentalizations of software need to be discussed and unraveled. This is where the studies of software become extremely helpful.

### 5.2.5 Discussion on ideology

In the case of the unitary patent, April driven from its consideration of software patents as culturally irrelevant- basing their arguments on democratic values, rights and freedoms- objects to the unitary patent while questioning the legitimacy of the text, EPO and the procedures followed. EPO taking a more Weberian stand supports both software patents and the unitary patent through (instrumental) rationality. Feenberg (2010) argues that “[r]ationality is not an alternative to culture that can stand alone as the principle of a social order for better or worse” but it rather through its dominance “mediates cultural expression in ways that can in principle realize a wide range of values” (p. 156). Thus, according to Feenberg (2010):

“The fact that capitalism is rationally legitimated has important implications for the development of ideology in modern liberal societies. It sets a pattern in which all modern institutions emphasize the rational character of their activities” (Feenberg, 2010, p. 160)

As indicated previously the discourses meet each other in liberalism; neoliberalism is liberalism that “insists on the market economy” (*market liberalism*) whereas the concentration of deontological rights can be seen as liberalism which “insists on the defense of human rights” (*political liberalism*) and “[a]lthough tension between these two aspects of liberalism is irreducible, they are nonetheless inextricably linked, like the two sides of the same coin” (Zizek, 2010, p. 37). Orłowski (2011) identifies two concepts as “the progeny of liberalism”; “the concepts of *emancipation* and *democracy*” (emphasis in original, Orłowski, 2011, p. 24); whereas socialism is regarded “as a spin- off ideology from liberalism, another attempt to realize the goal of emancipation” (Orłowski, 2011, p. 26); and social democracy, “a hybrid of socialism and liberalism [merged] together”.

The perceptions of ideology and more specifically the perceptions of ideology on the discourse analysis field vary, but nevertheless its importance is manifested (see Jorgensen & Phillips, 2002, p.179- 185). In this thesis, an appraisal of social democracy in opposition to neoliberal economics were recognized, which are both regarded as related to the ideology of liberalism. Orłowski (2011) describes that an “ideology has a response to the prevailing social conditions, either favorable or not, depending on how an individual’s perspective agrees with the dominant ideology [...] an articulation of the ideal society” (p. 174); or else “ideology is ‘an intermediary phase between philosophy and day-to- day practice’” (Schwarzmantel, 2010, p. 89). Therefore, liberalism is the ideology rooted deeply in both discourses that needs to be discussed in such a way. According to Schwarzmantel (2010):

“[L]iberalism is hegemonic as an ideology, because it percolates down to the masses in a vulgarized form, and animates people’s actions in ways which they might not be aware themselves. However, the dominance of liberalism as an ideology has been purchased at the expense of its theoretical sophistication and intellectual depth. The practical effectiveness of liberalism is made possible because liberalism has been diluted and simplified. What passes for liberalism in contemporary politics is a crude ideology of consumer choice, individual rights and an uncritical view of ‘market-driven politics’” (p. 89).

Discussion on ideology and the questioning of the ideological sphere are important to take place in order to recognize technological hegemony as such and in this case specifically the attributed biases in the technology of software. Thus, a very delegate matter to be discussed is the possible implications of this one single ideology of liberalism prevalent in both discourses. The created inter- ideological scheme is rather complex, as described by Schwarzmantel (2010): “[l]iberalism has lost out as a critical philosophy and triumphed as a contemporary ‘common sense’ [...] This then gives rise to a very impoverished spectrum of ideological and political debate, which becomes self- reinforcing” (p. 90). In order to avoid the self-reinforcing ideological scheme Schwarzmantel (2010) proposes the emergence of a

counter- ideology which should nevertheless “meet certain criteria” such as “to mobilize a mass constituency, to have an emotive element, and to have forward-looking orientation” in order to “[reinvigorate] the ideological sphere and extend the range of political perspectives present in political life” (p. 96). Advocacy groups such as April could possibly apply to such criteria, but not to the extent necessary to create the counter- ideology needed to overthrow hegemony, considering that the unitary patent is a social struggle “transformed into [a] legal [one] in the course of processes in which juridical intellectuals are organizing hegemony under the special conditions of the legal system” (Bucker & Fischer- Lescano, 2009, p. 437).



## Chapter 6: Conclusions

The aim of the thesis was to examine the implications of the newly introduced Unitary Patent (the reform of the European patent system towards a more unified construction) for code/ software development. In order to achieve that research questions inquired into how two opposing discourses (by the Free/ Libre Software advocacy group April and by the European Patent Office) (re) articulate the unitary patent in relation to software (RQ1, 2) and what are the key differences between their discourses (articulations) (RQ3). The Discourse Analytical Framework consisted of Critical Discourse Analysis (Fairclough, 2010), Laclau and Mouffe's Discourse Theory (Torfing, 1999) and selected theories from Science and Technology Studies, Critical Theory of Technology and Studies on Code/ Software, which were used to engage in discussing the possible implications of the unitary patent. Four exemplary texts (two press releases, one blog post/ one slideshow) and three (expert) interviews from the above mentioned organizations comprised the empirical part of this thesis. The textual analysis consisted of the identification of *chains of difference* and *equivalence*, the identification of *key signifiers (nodal points, master signifiers and myths)*, the investigation of *interactional control, ethos, metaphors, wording and grammar (with a focus on modality and transitivity)*.

To discuss implications of the unitary patent for code/ software development, first the articulation (RQ1) and re- articulation of the unitary patent (RQ2) was addressed. The EPO's discourse (RQ1) allures the position of Europe in the globalized world market and economy and assesses it by considering economic growth and competitiveness as main measures. In order for Europe's position to be advanced further, through this discourse it is conceived that (a) European systems should be centralized, so that they are better administrated and controlled; and that (b) innovation should be further encouraged. In this discourse, patents are considered a key to innovation, thus a reform of the European patent system towards centralization also improves Europe's position; and that is why the unitary patent package is also expressed as a historically important and anticipated achievement. At the same time, unitary patent is promoted as a more beneficial system for all the interested parties, in contrast to the current system which is

perceived as highly costly; a main argument is that with the unitary patent, applicants and patentees are expected to save money from the pre and post-granting patent procedures.

April's re-articulation of the unitary patent (RQ2) on the other hand, is more concerned with the role of the European Union in the process, which is perceived as losing its power. The Members of the Parliament are regarded as being affected and misled by an opposite discourse (expressed by a few Members of the Parliament) that resulted in the dominance of this discourse in the European Parliament and the acceptance of the unitary patent. April strongly stands for democratic and just control in the European Union by the European Parliament and only. This discourse, cannot accept the central administration of the European patent system by the EPO, as it does not accept the EPO in its current status as a legitimate European organ. For April's ethics, if fundamental rights and freedoms are overridden then democracy and justice are threatened; fundamental rights and freedoms are not secured when the European Parliament loses power; and regarding software patents the issue is addressed as it is considered as potentially dreadful towards free software. Additionally, in the specific case of software it is argued that innovation is not supported through patenting, but rather endangered.

Discursively, there are some fundamental differences between the two (RQ3). First of all, there is a different perception and given importance on globalization, Europe and the EU. For EPO, globalization is used to justify external (economic) pressure on the European region to increase its competitiveness by decreasing costs of producing patents (which is seen as encouraging innovation) in relation to the United States and Asia. For April, it is more important to focus on the success of the European Union as a democratic and just control system, disregarding such perceived pressures. Nevertheless, a strong European Union can only be constructed under the consideration of what is internal to its European (unitary) space and not to what is external to it. That is, to some extent, also ideologically connected. EPO's discourse supports liberalism with a focus on the markets (neoliberalism), whereas April supports liberalism with focus on individual rights and freedoms (social democracy). Due to those different understandings, the argumentation core is elaborated very differently in the opposing discourses. EPO,

on the one hand relies on cost- benefit analysis to justify the need for a unitary procedure for patents in the European Union, whilst April emphasizes its stance based on deontological ethics and the protection of fundamental rights and freedoms in democracies over a strictly economical (cost- effectiveness) justification. Thus, the two discourses also differ in their perception of control. Central control of the European patent system and its procedures is regarded by EPO as necessary and beneficial. April, on the other hand, questions whether EPO is legitimized for such a role in the European Union, as EPO is not attached to the European Parliament which is considered as the core of European democracy and justice.

Conclusively, all of the above lead to different stands on software patents and the unitary patent. Even though, at least a mutual understanding and conceptualization of software is possible, view on patentability of software differ radically. The EPO emphasizes the right to own and patent, whereas April argues for the right to express yourself and work freely. Regarding software development, then, EPO sees the software developer as a creator who owns and decides when in fact April sees the software developer as a creator who shares his / her ideas to contribute to the community.

In retrospective, the common ground of liberalism should not be neglected. As previously discussed, this “common sense liberalism [...] gives rise to a very impoverished spectrum of ideological and political debate, which becomes self-reinforcing” (Schwarzemantel, 2005, p.90). According to Schwarzemantel (2005) hope lies in some “different agencies and movements whose collective presence forms a bloc of opposition to market- dominated politics” (p. 96). In the case of the unitary patent, however there is no such bloc of opposition while the pro unitary patent project seems to have achieved hegemony. Although further procedure is needed to ratify the unitary patent, EPO’s discourse seems to be succeeding in discursive closure<sup>16</sup>. According to Torfing (1999) a hegemonic intervention is achieved when the undecidable becomes decidable; when some elements from the field of discursivity get fixed into a concrete discourse. That happened, it can be

---

<sup>16</sup> A unitary patent cannot be operationalized in the EU without the Unified Patent Court which has to be taken up in its full function. The unitary patent, the UPC and their legitimacy are questioned and negotiated constantly throughout the procedure itself, not through “a bloc opposition” necessarily but through various legal obstacles to be set for many different reasons e.g. Spain/ Italy

argued, on 11<sup>th</sup> December 2012, when the unitary patent was voted in the European Parliament. The initiate discourse that achieved hegemony might not be EPO's discourse per se, but a (broader) discourse that EPO fully supports, incorporates and further distributes. On the contrary, April's discourse remains as a counter-hegemonic project that attempts to deconstruct hegemony (i.e. the dominant discourse) in the quest of achieving a counter-hegemonic intervention. Nevertheless, both sides with different levels of confidence maintain that when and how the unitary patent will be valid in the EU, remains yet to be seen.

The case of the software patents is a critical topic due to implications on the technology of code/software and its development. Discussed under SST's prism software patents promote closure by supporting ownership and control of code (through intellectual property rights). Simultaneously, regarding technology as merely technical and in terms of a rational trade-offs model (cost-effectiveness analysis) as argued by Feenberg (2010) is inadequate as technology is "not merely a means to an end", but rather an open discussion within society and culture (p.23). In that sense, the supporters of the free/libre software community, who challenge commodification of code (which happens through the extending of the intellectual property regime on software), have been opposing software patents throughout past years. In this struggle, April sees a threat to software (through software patents) in the unitary patent since it considers software development as to be negatively affected by it, but lacks wide support in order to effectively challenge it. Contextually, this can be described in the words of Berry (2004) as he argues that "without some form of democratic accountability the code based regulation of human behavior will continue to lack legitimacy" (p. 83). As long as, the conception of technology (as well as law) in general, and code specifically is stripped off its cultural reference without being the outcome of an inclusively democratic procedure, the result will be by definition not legitimized. At the same time, the very same "growth of a technical public sphere" is to be regarded as the anticipated opportunity "for democratic interventions into technical development" (Feenberg, 2010, p. 124); the persistence on the control of software shall open the discussion to its democratization as a technology.

Last but not least, this research, in accordance to the basic epistemological premise of discourse analysis, is not presented as ultimately 'objective'. The study is based on the researcher's interpretation(s) and is influenced by her own judgements and choices. In order to reduce subjectivity in researcher's interpretations of findings (a) a normative theoretical framework created from highly influential theories of discourse, technology and software were used to critically engage with findings and (b) two contradicting discourses were selected for comparison. The researcher is aware that other discourses are present within the order of discourse on software patents, but for this project decided to engage in a comparison of the two most opposing (to each other) ones. Future studies could, more specifically, assess the unitary patent and its implications to software development through a different methodology e.g. conducting interviews with software developers inquiring how their work could be modified by the unitary patent.

## References

- Alexander, L., & Moore, M. (2012). Deontological Ethics. Retrieved from <http://www.science.uva.nl/~seop/entries/ethics-deontological/>
- April (2013a). Unitary Patent: Keys for European Patent Office and Door to European Parliament [Press Release]. Retrieved from: [http://www.april.org/en/unitary-patent-keys-european-patent-office-and-door-european-parliament#footnote1\\_xt3nxh0](http://www.april.org/en/unitary-patent-keys-european-patent-office-and-door-european-parliament#footnote1_xt3nxh0)
- Arthur, C. (2013, Jan. 24). Software patents 'a bit of a mess' says Martin Goetz, the first man to get one. *The Guardian*. Retrieved from: <http://www.guardian.co.uk/technology/2013/jan/24/smartphone-patent-wars-intellectual-property>
- Austen-Smith, D., & Wright, J. R. (1994). Counteractive lobbying. *American Journal of Political Science*, 25–44.
- Bailey, D. J. (2009). *The political economy of European social democracy*. Routledge.
- Battistelli, B. (2013, December, 18). The unitary patent - Europe gives a boost to innovation [Web log post]. Retrieved from <http://blog.epo.org/unitary-patent-2/the-unitary-patent-europe-gives-a-boost-to-innovation/>
- Baxter, G. J., Connolly, T. M., & Stansfield, M. H. (2010). Organisational blogs: benefits and challenges of implementation. *The Learning Organization*, 17(6), 515–528.
- Berry, D. (2004). The contestation of code. *Critical Discourse Studies*, 1(1), 65–89. doi:10.1080/17405900410001674524
- Berry, D. (2008). *Copy, Rip, Burn: The Politics of Copyleft and Open Source*. Retrieved from: [http://tovarna.org/files0/active/2/8454-copy\\_rip\\_burn\\_the.pdf](http://tovarna.org/files0/active/2/8454-copy_rip_burn_the.pdf)
- Berry, D. M. (2011). *The philosophy of software*. Retrieved from: <https://s3.amazonaws.com/scaredcrow-pdf/The%20Philosophy%20of%20Software.pdf>
- Bessen, J. E. (2011). *A Generation of Software Patents* (SSRN Scholarly Paper No. ID 1868979). Rochester, NY: Social Science Research Network. Retrieved from: <http://papers.ssrn.com/abstract=1868979>
- Bessen, J., & Meurer, M. J. (2008). *Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk*. Princeton University Press
- Best, M. H. (1990). *The new competition*. Polity Press.
- Bijker, Wiebe E., & Law, J. (1992). *Shaping Technology/Building Society: Studies in Socio-Technical Change*. MIT Press.

- Blind, K., Edler, J., & Friedewald, M. (2005). *Software Patents: Economic Impacts and Policy Implications*. Cheltenham: Edward Elgar
- Boyle, J. (1996). *Shamans, software, and spleens*. Cambridge, MA: Harvard University Press.
- Bracha, O. (2004). Commodification of Patents 1600-1836: How Patents Became Rights and Why We Should Care. *Loyola of Los Angeles Law Review*, 38, 177- 244.
- Buckel, S., & Fischer- Lescano, A. (2009). Gramsci Reconsidered: Hegemony in Global Law. *Leiden Journal of International Law*, 22(3), 437.  
doi:10.1017/S0922156509990033
- Burgess, J. P. (2002). What 's so European about the European Union? Legitimacy between institution and identity. *European Journal of Social Theory*, 5, 467–482.
- Callon, M. (2010). Afterword. In A. Feenberg (Ed.), *Between Reason and Experience: Essays in Technology and Modernity* (pp. 219-226). Cambridge, MA: The MIT Press
- Cantwell, J. (2003). *Innovation and competitiveness*. Oxford University Press, Oxford.  
Retrieved from [http://globalbusiness.rutgers.edu/Working\\_papers/jc\\_ohib.pdf](http://globalbusiness.rutgers.edu/Working_papers/jc_ohib.pdf)
- Castells, M. (1996). *The Rise of The Network Society: The Information Age: Economy, Society and Culture*. Wiley.
- Castells, M. (1997). *End of Millennium: The Information Age: Economy, Society, and Culture*. John Wiley & Sons.
- Castells, M. (1998). *The Power of Identity: The Information Age: Economy, Society, and Culture*. John Wiley & Sons.
- Commission of the European Communities (2008). *An Industrial Property Rights Strategy for Europe* (COM ( 2008) 465 final). Retrieved from:  
[http://ec.europa.eu/internal\\_market/indprop/docs/rights/2008\\_0465\\_en.pdf](http://ec.europa.eu/internal_market/indprop/docs/rights/2008_0465_en.pdf)
- CORDIS (2002). Innovation Policy Background. Retrieved from:  
[ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies\\_status\\_report.pdf](ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies_status_report.pdf)
- Couldry, N. (2008). Mediatization or mediation? Alternative understandings of the emergent space of digital storytelling. *New Media & Society*, 10(3), 373–391.  
doi:10.1177/1461444808089414
- Curtis, K. (2010). *After the Software Wars*. Retrieved from  
[http://keithcu.com/wordpress/?page\\_id=407](http://keithcu.com/wordpress/?page_id=407)

- De Montesquieu, C. de S. (1793). *The spirit of laws*. T. Ruddiman. Retrieved from [http://ib-hdnp.org/Sarver/AP\\_Government/Documents/Montesquieu,%20Spirit%20of%20the%20Laws%20excerpts.pdf](http://ib-hdnp.org/Sarver/AP_Government/Documents/Montesquieu,%20Spirit%20of%20the%20Laws%20excerpts.pdf)
- Derrida, J. (1980). *Writing and difference*. University of Chicago Press. Retrieved from [http://books.google.com/books?hl=en&lr=&id=eolGLbsWZEIC&oi=fnd&pg=PA3&dq=derrida+writing+and+difference&ots=UiXYJCYsuj&sig=i8R4KvVKAcZyhH\\_rEY-LQEHnYbk](http://books.google.com/books?hl=en&lr=&id=eolGLbsWZEIC&oi=fnd&pg=PA3&dq=derrida+writing+and+difference&ots=UiXYJCYsuj&sig=i8R4KvVKAcZyhH_rEY-LQEHnYbk)
- Diez, T. (2001). Europe as a discursive battleground: discourse analysis and European integration studies. *Cooperation and conflict*, 36(1), 5–38.
- Fagerberg, J. (1999). The need for innovation-based growth in Europe. *Challenge*, 42-5, 63–79.
- Fairclough, N. (2010). *Critical Discourse Analysis: The Critical Study of Language*. Malaysia: Pearson Education Limited.
- Feenberg, A. (2010). *Between Reason and Experience: Essays in Technology and Modernity*. Cambridge, MA: MIT Press.
- Fitzgerald, B. (1999). Software as discourse? The challenge for information law. *EIPR: European Intellectual Property Review*, 22(2), 47.
- Freeman, C. P. (2009). A greater means to the greater good: Ethical guidelines to meet social movement organization advocacy challenges. *Journal of Mass Media Ethics*, 24(4), 269–288.
- Fuller, M. (2003). Behind the blip: Essays on the culture of software. Retrieved from [http://www.multimedialab.be/doc/citations/matthew\\_fuller\\_blip.pdf](http://www.multimedialab.be/doc/citations/matthew_fuller_blip.pdf)
- Garling, C. (2013, Feb. 23). Monsanto seed suit and software patents. *SFGate*. Retrieved from: <http://www.sfgate.com/technology/article/Monsanto-seed-suit-and-software-patents-4303103.php#src=fb>
- Gilpin, R. (2000). *The challenge of global capitalism: the world economy in the 21st century*. Retrieved from: <http://press.princeton.edu/chapters/i6778.html>
- Guntersdorfer, M. (2003). Software patent law: United States and Europe compared. *Duke Law & Technology Review*, 2(1), 1–12.
- Habermas, Jurgen. (1991). *The structural transformation of the public sphere: an inquiry into a category of bourgeois society*. MIT Press.
- Haug, M., & Koppang, H. (1997). Lobbying and public relations in a European context. *Public Relations Review*, 23(3), 233–247.



- Hay, C., & Rosamond, B. (2002). Globalization, European integration and the discursive construction of economic imperatives. *Journal of European public policy*, 9(2), 147–167.
- Henney, K. (2004, Aug. 25). Code versus software. *Artima developer*. Retrieved from: <http://www.artima.com/weblogs/viewpost.jsp?thread=67178>
- Howey, R. A. (2002). Understanding software technology. *Knowledge, Technology & Policy*, 15(3), 70–81. doi:10.1007/s12130-002-1006-0
- IFI CLAIMS Patent Services. (2013). IFI CLAIMS® 2012 Top 50 US Patent Assignees. *IFI CLAIMS® Patent Services*. Comcode page. Retrieved from: [http://ificlaims.com/index.php?page=misc\\_top\\_50\\_2012](http://ificlaims.com/index.php?page=misc_top_50_2012)
- Ignatow, G. (2012). Information capitalism. *The Wiley-Blackwell Encyclopedia of Globalization*. Blackwell Publishing Ltd. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/9780470670590.wbeog299/abstract>
- Jorgensen, M. W., & Phillips, L. (2002). *Discourse analysis as Theory and Method*. London: Sage.
- Karanovic, J. (2008). *Sharing Publics: Democracy, Cooperation, and Free Software Advocacy in France*. ProQuest.
- Klein, N. (2011, November 28). Capitalism vs. the Climate. *Nation*, 11-21. Retrieved from <http://www.thenation.com/article/164497/capitalism-vs-climate>
- Kochan, J. (2006). Feenberg and STS: counter-reflections on bridging the gap. *Studies in History and Philosophy of Science*, 37(4), 702–720.
- Laclau, E., & Mouffe, C. (1985). *Hegemony and socialist strategy: towards a radical democratic politics*. London: Verso.
- Leifeld, P., & Haunss, S. (2012). Political discourse networks and the conflict over software patents in Europe. *European Journal of Political Research*, 51(3), 382–409. doi:10.1111/j.1475-6765.2011.02003.x
- LeVine, S. (2010, January 13). IBM May Not Be the Patent King After All. *BusinessWeek: magazine*. Retrieved from [http://www.businessweek.com/magazine/content/10\\_04/b4164051608050.htm](http://www.businessweek.com/magazine/content/10_04/b4164051608050.htm)
- Llewellyn, J. (1996). Tackling Europe's competitiveness. *Oxford Review of Economic Policy*, 12(3), 87–96.
- Mackay, H., & Gillespie, G. (1992). Extending the social shaping of technology approach: ideology and appropriation. *Social Studies of Science*, 22(4), 685–716.

- Mahne, K. P. (2012). A unitary patent and Unified Patent Court for the European Union: an analysis of Europe's long standing attempt to create a supranational patent system. *Journal of the Patent and Trademark Office Society*, 94(2), 162.
- Manovich, L. (2001). *The language of new media*. Retrieved from: <http://www.manovich.net/LNM/Manovich.pdf>
- Manovich, L. (2008). *Software takes command*. Retrieved from: [http://black2.fri.uni-lj.si/humbug/files/doktorat-vaupotic/zotero/storage/D22GEWS3/manovich\\_softbook\\_11\\_20\\_2008.pdf](http://black2.fri.uni-lj.si/humbug/files/doktorat-vaupotic/zotero/storage/D22GEWS3/manovich_softbook_11_20_2008.pdf)
- Manovich, L. (2012). *Media After Software*. Retrieved from: [http://softwarestudies.com/cultural\\_analytics/Manovich.Media\\_after\\_software.2012.pdf](http://softwarestudies.com/cultural_analytics/Manovich.Media_after_software.2012.pdf)
- Marino, M. C. (2006). Critical code studies. *Electronic book review*, 4. Retrieved from <http://electronicbookreview.com/thread/electropoetics/codology>
- Marsnik, S. J., & Thomas, R. E. (2011). Drawing a line in the patent subject-matter sands: does Europe provide a solution to the software and business method patent problem? *Boston College International and Comparative Law Review*, 34(2), 227.
- McLeod, K. (2001). *Owning Culture: authorship, ownership, and intellectual property law*. US: Popular culture and everyday life
- Melo-Martín, I. de, Ingram, D. B., Wyatt, S., & Arisaka, Y. (2011). Book Symposium on Andrew Feenberg's *Between Reason and Experience: Essays in Technology and Modernity*. *Philosophy & Technology*, 24(2), 203. doi:10.1007/s13347-011-0017-8
- Meyer, D. (2013, Dec. 12). 'Troll' warning as EU gets unitary patent scheme, after decades of failure. *ZDNet*. Retrieved from <http://www.zdnet.com/troll-warning-as-eu-gets-unitary-patent-scheme-after-decades-of-failure-7000008672/>
- Nieh, A. (2010). Software wars: the patent menace. *New York Law School Law Review*, 55(1), 295.
- OECD (2007). *Participative web: User created content*. Paris: OECD (a selection: pp. 4-20) Retrieved from: <http://www.oecd.org/dataoecd/57/14/38393115.pdf>
- Office, E. P. (2013a). European Patent Office welcomes historic agreement on unitary patent [Press Release]. Retrieved at 17 June 2013, from <http://www.epo.org/news-issues/press/releases/archive/2012/20121211.html>
- Office, E. P. (2013b). Legal foundations. Retrieved at 17 June 2013, from <http://www.epo.org/about-us/organisation/foundation.html>

- Office, E. P. (2013c). Mission and vision. Retrieved at 17 June 2013, from <http://www.epo.org/about-us/office/mission.html>
- Orlowski, P. (2011). *Teaching about hegemony: Race, class and democracy in the 21st century*. Retrieved from: [http://link.springer.com/content/pdf/10.1007%2F978-94-007-1418-2\\_9.pdf](http://link.springer.com/content/pdf/10.1007%2F978-94-007-1418-2_9.pdf)
- Parker, W. (2008). Plagiarism, public relations and press releases: The case of the hidden author. *Critical Arts: A Journal of South-North Cultural Studies*, 20(1), 132–143.
- Rodriguez, V. (2011). Constructing a unitary title regime for the European Patent System. *Journal of Intellectual Property Law & Practice*. Oxford University Press.
- Sassatelli, M. (2009). *Becoming Europeans*. doi:10.1057/9780230250437
- Schroder, K., C. (2012). Discourses of fact. In Klaus Bruhn Jensen (Ed.). *A Handbook of Media and Communication Research: Qualitative and Quantitative Methodologies*. London: Routledge.
- Schwarzmantel, J. (2005). Challenging neoliberal hegemony. *Contemporary Politics*, 11(2-3), 85–98. doi:10.1080/13569770500275072
- Sédrați- Dinet, G. (2011). Unitary Patent Presentation [Slideshow]. Retrieved from: <http://media.unitary-patent.eu/presentation/embedder.html>
- Sharma, C. (2012). Mobile Patents Landscape An In-depth Quantitative Analysis. *Chetan Sharma Consulting*. Retrieved from: [http://ipcloseup.files.wordpress.com/2012/06/mobile\\_patents\\_landscape\\_chetan\\_sharma\\_consulting.pdf](http://ipcloseup.files.wordpress.com/2012/06/mobile_patents_landscape_chetan_sharma_consulting.pdf)
- Stallman, R. (2011, August 22). Beware: Europe’s ‘unitary patent’ could mean unlimited software patents. *The Guardian*. Retrieved from <http://www.guardian.co.uk/technology/2011/aug/22/european-unitary-patent-software-warning/print>
- Toor, A. (2012, Jan. 11). IBM maintains top spot in global patent rankings, Canon overtakes Microsoft. *Engadget*. Retrieved from: <http://www.engadget.com/2012/01/11/ibm-maintains-top-spot-in-global-patent-rankings-canon-overtake/>
- Torring, J. (1999). *New theories of discourse*. UK: Blackwell.
- Von Fintel, K. (2006). Modality and language. *Encyclopaedia of philosophy*, 2, 20–27.
- Wagner, J. (1979). Defining Technology: Political Implications of Hardware, Software, Power, and Information. *Human Relations*, 32(8), 719.

- Wark, M. (2004). *A hacker manifesto*. Retrieved from: [http://www.cui-zy.cn/Recommended/Linux/ebooksclub%5B1%5D.org\\_A\\_Hacker\\_Manifesto.pdf](http://www.cui-zy.cn/Recommended/Linux/ebooksclub%5B1%5D.org_A_Hacker_Manifesto.pdf)
- Weber, M. (1972) *Wirtschaft und Gesellschaft*. Tübingen: Mohr.
- Williams, B. (2008). Cost-benefit analysis. *Economic and Labour Market Review*, 2(12), 67-70.
- Williams, R., & Edge, D. (1996). The social shaping of technology. *Research policy*, 25(6), 865–899.
- Žižek, S. (2010). *Living in the end times*. London: Verso.
- Žižek, S. (2011, November 4). “The Situation is Catastrophic, but Not Serious.” [Video file]. Retrieved from [http://fora.tv/2011/04/04/Slavoj\\_Zizek\\_Catastrophic\\_But\\_Not\\_Serious](http://fora.tv/2011/04/04/Slavoj_Zizek_Catastrophic_But_Not_Serious)

### Appendix A (Exemplary Text 1)

#### **European Patent Office welcomes historic agreement on unitary patent**

- **EPO entrusted by 25 EU member states to deliver and administer unitary patents**
- **Decision clears the way for less expensive and less cumbersome patent protection in Europe profiting most SME and research centres**
- **Puts Europe on a par with its competitors in Asia and the US, making it more attractive for innovation and investors from Europe and around the globe**
- **Unified Patent Court to be created by an international treaty to be signed in early 2013**

**Munich, 11 December 2012** -- The European Patent Office (EPO) welcomed the adoption by the European Parliament in Strasbourg today of two draft regulations on the creation of the unitary patent, hailing it as a historic achievement. "The European Union is to be congratulated on this decision, which clears the way for the completion of the European patent system with a unitary patent and a Unified Patent Court, which we have been waiting for in Europe for 40 years," said EPO President Benoît Battistelli. "Cutting the costs of patenting inventions in Europe will strongly benefit European enterprises, especially research centres and SMEs. The vision of the founding fathers of the EPO to equip the European economy with a truly supranational patent system can now become a reality, strengthening Europe's competitiveness."

The European patent with unitary effect (unitary patent) in the 25 participating states is based on two regulations, one creating the instrument, and one on the applicable language regime for the new patent. The EPO has been entrusted by 25 EU member states to deliver and administer unitary patents. The third element of the package is the creation of a unified patent litigation system set up under an international convention establishing the Unified Patent Court (UPC), a specialised court with a first and an appeal instance with exclusive jurisdiction concerning infringement and validity questions related to unitary patents. The positive vote in the Parliament became possible after the EU member states endorsed the regulations in their Competitiveness Council meeting on Monday. The unitary patent now has to be formally adopted by the EU Council and the European Parliament, which is expected soon.

Request for unitary patents may be filed once the legal provisions for both the unitary patent and the UPC have entered into force. The agreement establishing the UPC is expected to be signed on 18 February 2013 and will enter into force once thirteen EU member states have ratified the package, including France, Germany and the UK. The EPO expects to validate the first unitary patent in 2014.

The unitary patent will provide legal protection for inventors in 25 EU member states through one single administrative step. It will co-exist with national patents and the classical European patent with which it shares the legal basis and the procedure for grant (as laid out in the European Patent Convention), and from which it differs only in the post-grant phase: Under the unitary patent scheme, the EPO will also be in charge of centrally administering the patent, levying the annual renewal fees and distributing them to the participating EU member states. The fact that unitary patents will be treated as a single patent no longer requiring to be validated (including translation) and administered nationally in each and every state, will lead to massive savings in terms of time and costs. This should make Europe more attractive for innovation and investors and bring it on a par with its competitors in Asia and the US.

## **Appendix B (Exemplary Text 2)**

### **The unitary patent – Europe gives a boost to innovation**

18 December 2012

Finally, the EU institutions managed to agree last week on the so-called patent package, including the unitary patent and the Unified Patent Court. They deserve all praise for this landmark result. The decision is in keeping with Europe's continuous efforts to raise its competitiveness and attractiveness. Looking back at the interminable, fruitless debates on this dossier over the decades, one realises the scale of this very recent achievement, establishing not only a simple solution for innovators – covering, for the moment, 25 European countries – but also creating a complete, dedicated litigation system with jurisdiction for so many countries with widely differing legal traditions. This, in my view, is unparalleled, and those who have been involved in discussions on the harmonisation of legal systems will appreciate just how much effort has gone into last week's decision. I would like to congratulate the past Presidencies and the EU Commission, and, more specifically, Commissioner Barnier, as well as the rapporteurs Bernhard Rapkay, Klaus-Heiner Lehne and Raffaele Baldassarre from the European Parliament, on their hard work and their skill in reaching a fair and balanced compromise among so many stakeholders.

A number of steps remain to be taken before the EPO will be in a position to deliver the first unitary patent. First, the entry into effect of the Regulation on the unitary patent depends on the setting up of the Unified Court, by an international agreement which is to be signed early next year and must then be ratified by at least 13 participant member states (including France, Germany, and the UK). I would strongly urge the national decision-makers to be active in moving this process forward, and enable the users to benefit soon from the new system. The unitary patent and the Court will also require a technical preparation phase, addressing matters such as the budget, IT provisions and procedural arrangements. The EPO, which is to take charge of administering the unitary patent, has already begun its preparations and is ready to take various initiatives to speed up the implementation of the system.

So, this is a not a time to rest on our laurels. I think, however, that we can and should take a moment to celebrate the major advance that has now materialised, which will greatly benefit the cause of Europe, and of patents and innovation.

Benoît  
President

Battistelli

## **Appendix C (Exemplary Text 3)**

### **Unitary Patent: Keys for European Patent Office and Door to European Parliament**

*Paris, December 11th, 2012. Press Release.*

**On Tuesday December 11th, 2012, the European Parliament voted for the regulation on the unitary patent: Members of the European Parliament (MEPs) have eventually accepted the text despite all legal, economic and political concerns over which we had warned them<sup>1</sup>.**

Furthermore, the Advocate General of the Court of Justice of the European Union (CJEU) has concluded that the Enhanced Cooperation procedure was not affected by illegality without assessing the merits of the implementing regulations. However, he has warned that unitary patent cannot be achieved by the Member States, but only by the Union<sup>2</sup>, which does not match the procedure exactly. April regrets a missed opportunity for the European Parliament to finally create a genuine patent of the European Union. *“Even if some MEPs, and above all the Greens/EFA group, fought for an improvement of the text, and despite concerns expressed by Polish MEPs, the majority blindly followed the deceiving talk of a rapporteur Rapkay incensed by the critics voiced, and voted in support of a problematic text.”*

The next steps, a formal adoption in the Council and the decision of the ECJ, are not expected to reverse the trend. The adoption of the international agreement which sets up a unified patent jurisdiction by the Member States may however highlight new objections. A possible recourse by a Member State before the ECJ could finally sack the entire text for its illegality: the opinion of the Advocate general alludes to the result of such action is far from being certain.

*“There is still the issue whether companies will actually use this instrument, as many have already said that they prefer the current system rather than the legal uncertainties of the unitary patent”,* explains Jeanne Tadeusz, Public Affairs officer at April.

April denounces the message sent by the European Parliament to deliberately abandon its power on patent issues, and the glowing report given to the European Patent Office, despite controversial practices on granting software patents in disregard with European law.

## Appendix D (Visual Parts of Exemplary Text 4)

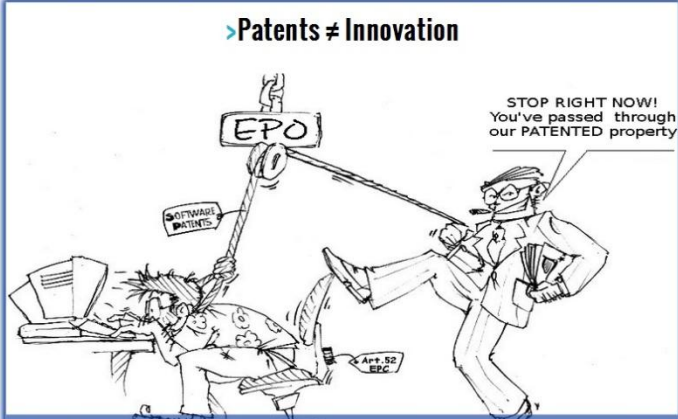
For Slide credits follow this link: <http://media.unitary-patent.eu/presentation/credits.html>

### Slide #2

Unitary Patent Presentation

media.unitary-patent.eu/presentation/embedder.html

### > Patents ≠ Innovation



▼ Λεητομέρεια  
Let us start by deconstructing a common belief about patents. Patents do not always equal innovation. In the field of software, we have experienced that patents are actually used as weapons of economic war, they hinder innovation, and create a potential threat on every vendor, developer and user of software.


2 / 27

### Slide #8

Unitary Patent Presentation

media.unitary-patent.eu/presentation/embedder.html

### > A Resulting Minefield



▼ Λεητομέρεια  
The result of these dubious practices is that we have now, in Europe, tens of thousands very strong monopoly rights. Not covering the source code of software – that is what copyright is for. But over the very functionalities of software, over algorithms – that is mathematics –, over data processing ideas.

8 / 27



Slide #11

Unitary Patent Presentation

### >A Systemic Issue



Λεπτομέρεια  
These failures have highlighted that the issue is actually systemic. The EPO is functioning inside some kind of a bubble for the sole interest of a "patent microcosm", composed by patent lawyers and patent departments of some — mainly non-EU — big firms. And as usual with bubbles, the EPO is geared toward an unlimited expansion of its bubble. The more patents it grants, the wealthier the EPO.

11 / 27

Slide #15

Unitary Patent Presentation

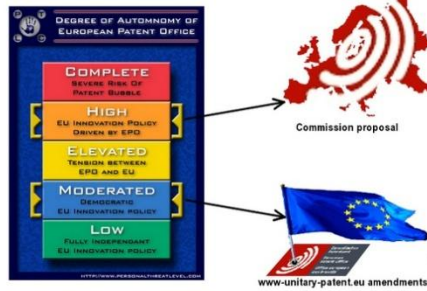
### >The EU Patent and The Unified Patent Jurisdiction



Λεπτομέρεια  
So the EU wants to set up a new patent title that would have unitary effect throughout the whole Union and that would be enforceable before a unified patent court.

15 / 27

### > Conclusion: Adopt [www.unitary-patent.eu](http://www.unitary-patent.eu) Amendments



Λεπτομέρειες

The bottom line is that the regulation on the unitary patent is all about the degree of autonomy the EU wants to leave to the EPO. The Commission's proposal is obviously too much EPO-centric, expanding the patent bubble. We have proposed a set of amendments that would give back to the EU the necessary democratic control over its innovation policy. **Support these amendments!**

## **Appendix E (Partly Interview Transcription Respondent 1)**

R for Researcher, SD for Respondent 1

R: So, I have questions her, it is about to take more or less about 40 minutes and feel free to talk about whatever you think is important or more important. So, in the beginning I'd like to ask you about some background information, what would you consider as your profession or what is your profession if you see any difference.

SD: Well, I'm a graduate in computing engineering and so I've been developing some software for 20 years. And I think it was in 1997, I was working for [...] a big French computer company, and we were pushed to patent the software we were developing and we would receive some money for this. So, my first approach was well good some money, some supplementary money for what I'm working on, that's good. And just after this, before that when I patented the software I was developing for [...], I've been in contact with a patent lawyer who transcribes in patent terms the thoughts I'm developing and I didn't recognize what I was doing, so it was something curious. And just after that, I've seen a talk by Richard Stallman who was in a tour in Europe to warn people of the danger of software patents.

R: That was when?

SD: It was in 1998- 1999 something like that. And he was very convincing. When Richard talked I recognized exactly what I was doing. That I was developing some software like [...] years before, and then it was transcribed in a patent in something really, not understandable, with a purpose. The purpose was to cover as many things as it can. And then, I've changed my job for a small company where we had a presentation by a patent lawyer to encourage us to patent things. This time [...] with rewards for employees. A small company. But this time I was very aware of the danger of software patent and it was just the beginning of the European battle for the software patent directive. It was in 2003. And as usual the presentation by patent lawyers it's a metaphor that [...] as used, the presentation of patent lawyers when they talk about patent, is like someone who wants to sell you a luxury ticket, they talk to you about the winner where patent is [...] you can protect your invention and then sell some license and prevent someone to steal your idea, it's wonderful and in the end you win. But, like a lottery there are a small number of winners and a majority of losers. And I were aware of that at this time and I have proposed to my employer to make a counter presentation; to present the other side of the software patent. My presentation was entitled the dark side of patents. And then,

R: Which year are we now?

SD: 2003, still 2003, spring 2003 and I was refused to do this presentation. My employer says "this is controversial, this is like some religion war, I don't want this in my firm so maybe I shouldn't have this patent lawyer to do this presentation at the first place, but I want to stop here". But I prepared some presentation and I published it on the web publicly, I received some comments from people that at this time were fighting against the software patent directive. I have, from this presentation I've written a short paper and published it, took some comments, got in touch with the activists who were fighting at this time and in September 2003 there were a lot of, the [...] of the European Parliament in first [...] of this directive and there was an emergency call by an activist who says we have to translate justification of amendments that were proposed, it was just a [...] of the vote, so I've translate in French some amendments, some justification like [...] to convince MEP, MEP is Member of European Parliament, to convince MEP and this was I've entered in contact with FFII, which was the main organisation leading the battle.

R: Where is it from?

SD: It was a kind of European organisation implemented in practice in Germany, founded by a German guy [...] and little by little I've worked with them on translation into French and to give a database with all version of the directive when it was passed in the parliament, the committee and the first reading plenary and in the council etc and all the amendment that was proposed at each

stage. We've enter it into some database to make some comparison and it was a great tool actually to see what each institution was doing and which version by which institution was going in the worst side or the best side and to compare this. And very quickly, as I was deeply involved in this the FFII has asked me if I want to become Vice president and that was in April 2004.

R: What exactly the FFII does? Is it an organisation?

SD: It's an organisation, German organisation actually but

R: Is it like April specified in software?

SD: It was specifically on software patents at this time. And it was really the hub for every activist in this topic. And it was a hot topic actually in September 2003, until 2005. And I've been working hard on this territory. (09:46)

[...]

SD: Absolute, basically because is mathematics, so it is abstract so it is the implementation that counts and nobody would want to patent a source code, the system implementation that you want to cover all writable source code for one computer functionality; that's one reason. One other reason is the life cycle in software development which is very short about 2 years you have new software and the old one is obsolete, so having a patent lasting 20 years is just a non sense for software.

[...]

SD: Everybody can use software, in a way that everybody can also write software. I think that for most economical and social interaction today and in the future, software is becoming more and more important and that you have to really understand what software do; because if you don't your basic fundamental freedom and I don't talk about software freedom, but human freedom; are going to be captured by software writers and software companies. This is already the case stuff like, with I- stuff: I-Phone, I-Pad, I- Tunes, I- what you want; people don't realize that any software they are using and their phone has to be approved by Apple to be sell on the I-store and this means for example that Apple has the right to censor what it wants; it has censored for example sexual application. You can say what you want you can be interested by this but what is the right of Apple to do that who are they to decide what is convenient to use and not to use.

[...]

SD: As I've said Programming software is just like writing some mathematical and logical equation. You put one step after the one with some condition and some ..., but it is not different from...for example when you are at school and you teach to do a multiplication for example (showing in paper a multiplication) [...] this is some step in a logical operation, this is all software is doing; and more and more there are simplified ways to write software. When I started programming, I was writing software in language machine which is just: put this and this place in the memory take this and this place on the memory, do some basic computation; you cannot do an addition, but you have to make a logical ... between to octades to do an addition stuff. Not easy understandable. But more and more there are some simplified programming language Perl or Python is an example to write program almost as you speak in natural language and more and more there are simplified software.

## **Appendix F (Full Interview Transcription Respondent 2)**

R for Researcher, S for Respondent 2

R: So, I have some topics to discuss: Background information on you; the unitary patent and the European patent system; questions about some legal issues; patents generally and their relation to innovation; and software patents; and software and then conclusion. So, let's start with your job, profession, how you ended up here etc.

S: My first studies were in physics, but then during the military service in the air force I became acquainted with programming; and I was thrilled and therefore I decided to study computer science; and I had an opportunity to study it in Hamburg in Germany, so immediately after the service I went to Hamburg and I started new studies in computer science. And so, my background is physics and computer science. But honestly, I never dealt with physics. Okay, so I worked for a couple of years as a software analysts and a systems consultant with a big oil company, but then I wanted a change in my career; so after 5 years with the oil company I applied for the EPO in Munich. And I got the job as a patent examiner. So, I moved from Hamburg to Munich to work as a patent examiner which I did for 6 years. Now, working as a patent examiner you get special training as well in patent matters; also in legal matters; because you need it for the job. I was examining patent applications in the field of computer science, specifically computer architecture and neural networks. Neural networks were at that time quite a vogue, it was very topical because there were a lot of money spent for neural networks research and development; mainly in the USA and therefore there were a lot of patent applications; of course, as a result of the research. So, I worked for 6 years in the office in Munich and then there was an opportunity for me to transfer in The Hague, as a trainer for patent examiners. I took the opportunity and transferred here. I worked from 1995 until 2002 as an examiner and examiner's trainer and then in 2002 I came into management; into my present job. My present job is, I'm heading a directorate of 30 patent examiners and we are examining patent applications in the field of computer science in general, but specifically software engineering; not applications software but systems software; that is operating systems and everything that has to do with the control of the computer system by software. And that's more or less in a nutshell my profile. In the course of being an examiner, and later a director, I got also a lot of training also in legal matters; I need it for the job; examiners need it for the job; and I need it partly for the job partly because I'm interested in that. I followed 2 years of law studies in London, but I never finished the studies due to personal reasons. I followed the training for the European Qualifying Examination, to qualify as a patent attorney but I didn't take the examination. It was just quite useful knowledge for me. That's in a nutshell what I'm doing. Presently, I'm looking into quality matters in patent examination; I'm looking into the unitary patent and the unified patent court issue; I'm not involved in the work as such, but I'm looking as an interested observer because of course it is an interesting law. And that's it.

R: Okay. About the quality matter that you mention, can you elaborate a little bit about that, because I am not aware?

S: Yeah, It's interesting to think of what is quality of patents, because patents are not similar to other industrial products, like a car or a refrigerator, and different people have different perceptions about what is quality in a patent. So, if you speak to different people you get different views. But the main view is that quality is the legal validity of the patent. So, if the patent is sensed that it can survive a challenge in court then it is a strong patent and this is a first perception about quality. But other perceptions are that; have to do also with the quality of the process that eventually leads to patent; like predictability of the process, consistency, coherence, harmonization between different examiners; we are 4000 examiners here. You can imagine that we need to apply a harmonized common approach of patent application; of course depending on the level of technology; on the field of technology; but in general we have to have common standards. And, we can expand a lot about quality but for the time being, I think...

R: So, let's go to the unitary patent issue; the unitary patent package issue. So far there was not a

unitary patent in Europe, there was the European patent which is the EPO patent; but it doesn't have the unitary effect. That is the difference I get so far. Through reading, I realized that it's been many years that the unitary patent was in the process of being established...

S: There were different efforts to establish a unitary patent, but it appears that the efforts have come to fruition now, in the form of the unitary patent. The unitary patent is the, let's say, the coval name, the official name is unitary patent with unitary patent with unitary effect. And the main idea is that up to now we had a centralized granting of patents but after that, whatever happens in the life of a patent after the grant was a matter of national law and national courts. And, what we are aiming at now is to have a patent which even after grant for the subsequent life of the patent, it is subject only to the jurisdiction of one court; and it is dealt with as one patent, not as a bundle of national patents. That is the main difference.

R: Okay and that is important in what way? I mean that it is important that the unitary patent has a unitary effect and the national patent offices ...

S: Yeah, the main effect is that up to now, if you would like to go to litigation for your European patent, you could go into litigation in many different national courts and it could be that the outcome of litigation in different courts was different. So, the predictability of the litigation was relatively low and the legal certainty was suffering under that; because of the fragmentation of the life of the patent after grant. So, if you have only one court which will decide then this fragmentation goes away, the legal certainty is higher because it's only one court; whatever this court says, goes. And that is one of the main effects. There are other effects as well, but this is the main effect; and it is evident that legal certainty is a good thing because industry needs to have this legal certainty in order to know how to arrange their affairs; with regard either to their own patents or to the patents of their competitors which is equally important; and it's about legal certainty mainly.

R: Okay. So, how does the role of the EPO change before and after?

S: There will be some tasks that will be allocated to the EPO that have mainly to do with the administration of the unitary patent. The unitary patent starts as a granted European patent; nothing changes up to that point. The main idea is that the patentee, the right holder, can declare within one month after the mention of the grant European patent in the European patent bulletin; so the patentee can declare that he or she wants his or her patent to be transformed in a patent with unitary effect; and this means that it will be only one court that will decide in future about this patent if this patent goes before the court. There will be only one renewal fee. And there will not be the same complicated and costly procedure of translations as before. The EPO will be charged with the tasks of administering all this. The EPO will take the fees, the renewal fees and will have to distribute the renewal fees to the 25 participating Member States, according to a key that still needs to be defined. It will maintain the patent register; and the patent register is not only a list of who has which patent, but is also a recordation of the history of the patent; if the patent has been licensed; if it is offered to be licensed; if the rights are transferred to somebody. All this will be recorded in the European patent register, the new European patent register that will be maintained by the EPO. The EPO also will administer translations and such things to the point needed. This is in a nutshell the additional tasks that will be taken over by the EPO.

R: So, what I understand is that the granting procedure and the application and all this remain the same...

S: ...remains the same, because the whole thing with the unitary patent starts after the grant.

R: Okay. Now, moving to the legal issues; what I meant, is that we talk about the unitary patent, but it is not yet fully established. The Unified Patent Court needs to be ratified...

S: ...functional, needs to be functional.

R: So, how is that process evolving thus far and in the future?

S: Well, the legal instruments that define this whole mechanism are basically three texts; two regulations and one agreement about the court. It's a regulation about the patent itself; a regulation about the translation arrangements and an agreement- it's not a regulation, it's an agreement which

is a different thing in nature- about the Unified Patent Court. And there are of course other texts like there is the procedure for the court and so on and so on; that still needs to be defined. But, the two regulations and the agreement are there and they are already in their final form. The two regulations are already in force, but they are not yet applicable.

R: The two regulations are the regulations on the December 12<sup>th</sup> and the agreement is the one on February?

S: I think yes, there is a different a date but what is –later date- but what is important to understand is that the two regulations are already in force because they have been already published but they are not applicable; because their applicability depends on the entry into force of the agreement about the court. The agreement about the court will enter into force in the future and the condition for this is that at least 13 Member states ratify the agreement including the three states; the three big states which are UK, France and Germany. Once this has happened, then the agreement about the Unified Patent Court will enter into force and the side effect is that the two regulations will be applicable; will be applicable. And then the whole mechanism starts functioning.

R: So, when the UPC gets ratified, then it is possible for the EPO to grant the unitary patent right?

S: Once the court; the agreement about the court enters into force

R: Enters into force means...?

S: The court exists.

R: Okay, exists. So, there is a court with judges...

S: So, let's say these are complicated things and sometimes you cannot express them with a single sentence. But in broad terms, the entering into force of the agreement about the Unified Patent Court means also the starting point for the whole mechanism; and by that time of course we hope that we will have a functioning court itself; not just the paper agreement. But the court itself is also a complicated structure; it's not an easy thing.

R: In the press release of December, it was stated that the first unitary patent application could be received in 2014.

S: The application for transforming a European patent into a European patent with a unitary effect, we could expect it either in 2014 or in 2015. And we are a lot of insecure cause we do not know exactly when the conditions for the entering into force of the agreement of the Unified Patent Court will be met.

R: So, it's still...

S: It's still insecure. We don't have a final date; we cannot have a final date. Because ratification of course is a matter of the states; the member states; and we cannot influence that

R: But it is expected that...

S: It is expected that the latest on the 1<sup>st</sup> of January 2015, the patentees will be able to transform the European patents into European patents with unitary effect.

R: Okay, then the section about patents and innovation. I've been reading that patents are very closely related to innovation, in what way?

S: In more than one ways and in different ways.

R: which ways then?

S: For instance, patents codify the knowledge that results out of research and development which is in its self more or less synonym to innovation and patents are the- let's say- the outcome of human genius, which is related to innovation as well. So, you know that researchers somehow invest a lot of efforts into finding new solutions for existing problems, innovative solutions; meaning innovative in the sense that nobody had thought about it before; and solutions that have also some advantages, either because they are more efficient or because they solve problems that were, that humans were struggling through for years or because they are going to mean, they take a new path through technology; designs. And, in this sense it may be that in order to have a new idea and come up with a new solution to a known problem you have to invest a lot of effort and a lot of money as well. And, of course if you have invested a lot of money then you want a way of securing your investment;

otherwise your competitors will go and copy your solution itself without making the effort or spending the money. Therefore, they have an advantage against you which is not justified; because they will enter the market with the same product; a copy of your product but without having spent an investment. And in this case also a patent helps secure the investment and is an incentive as well. You know that you can protect your idea and you can bring it into the stream of cameras without having to be afraid of copies, and of competition that is –let’s say- that can damage your own business; then they have an incentive, they innovate; and to spend money for innovation.

R: And you said before something that I haven’t realized as such. Patent is not exactly a product, and maybe you could regard it as a special type of product?

S: It’s a very special type of product.

R: Because I wouldn’t think about it as a product, I don’t know how I would think of it but...

S: Yes, yes. But the basic idea is that if we speak about quality; that idea was in the course of speaking about quality. If we speak about quality of tangible products like cars or refrigerators, and I’m saying those two because they are very very accessible to us, then you have also an idea of what is quality of a car or a quality of a refrigerator, but if you speak about the quality of a patent you don’t have immediately an idea of what is the quality of a patent. So, instead of giving a –let’s say- a dogmatic definition of what is quality of a patent you might wish to think what are those factors that affect the quality in the sense that make a patent more useful. And, this is the starting point of thinking about what could influence the quality; the usefulness of a patent.

R: Okay. [...] You used the word product and the question in my mind; I don’t know how I have a patent in mind exactly, but it is something legal or maybe legal title.

S: Legal title, it’s a legal title; if you make an invention and you have a patent for this invention, then the basic idea is that you can exclude anybody else from commercially exploiting this invention, unless he or she has a license from you. That’s the basic idea; that’s the basic again

R: Okay, so again, we talked about patents and innovation, now let’s go elsewhere; how is innovation related to the unitary patent in terms that as I was reading, the unitary patent is good for innovation in Europe and the competitiveness of Europe...

S: First of all, it makes a patent cheaper; it is expected to make patenting cheaper. And you have to think how much does an inventor have to pay in the USA to get a patent, which is an invention in the USA or how much does he have to pay to get a patent in the Asiatic region- Japan or China- and how much does he have to pay to get a patent in Europe. And, of course you might say that Europe is a lot of different states and therefore it should be, it’s reasonable that in Europe is more expensive, because you get a patent that is valid in many different European states. But, you might think as well of Europe in terms of a unified economics space; and as a matter of fact this is the political, the current political thinking; we think of Europe as a unified economic commercial space and this ends protecting your products in Europe was much more expensive than protecting the same product in the USA or in Asia. And now, what we hope that will happen is that inventors will have to spend less money for unitary patent so that they get the protection in the European economic space for less money that they used to. This means that it is an incentive to protect your innovation; that is one thing. The other thing is, and this thing refers to the investment you have to make in order to get a patent. But then of course it may be that your patent is challenged at court or it may be that one of your competitors is infringing your patent because he offered the same product without getting a license from you. And up to now, also the litigation was much more expensive because you have to litigate different states, to pay a lot of different lawyers and maybe to expect the same outcome but be confronted with different outcomes. Now this, has been made more predictable, because it’s only one court- it will be- and at the end I hope it’s been made also cheaper. So, to enforce your patent or to challenge a patent will be cheaper in the future.

R: Okay, then let’s move to software patents specifically. I read in your article, I have a quote here, it’s from 2008 and it was talking about “the rejection of the proposed directive on the patentability of computer- implemented inventions in the European parliament in July 6<sup>th</sup> 2005, appeared to mark the



provisional end of this debate". That was about the directive on software patents, specifically. Can you explain the debate?

S: Oh, I'm afraid it's much, it's in the past. I followed the debate, but of course a lot of time has passed since then, but it was eventually a debate that was carried out under political terms and not under technical terms. At that time, there was a movement against the patenting of software which was quite influential and this influential movement eventually led to the failure of the efforts to have a directive about the patenting of software, because there was a lot of debate in the European parliament, in favor and against, and apparently the European parliament eventually decided that it was not mature; the time was not mature, in view of the debate and the contradictory views; the time was not mature to regulate on this. Eventually, the case was left to the courts and to the Board of Appeal of the European Patent Office, which functions [...] as a kind of court.

R: This directive was so that there would be on the European law a specific reference to the patentability of software; to be stated more clearly?

S: It would state that only technical implementations of software inventions could be patentable, but not software; not every software. So, the thrust, the main thrust of the directive was in line with the approach of the European Patent Office, which says that technical implementations, technical inventions that are implemented in software should not be excluded from patentability, simply because, and only because the means of implementing them is software. Software is also a means of implementing technological innovations and simply the fact that software is used should not exclude those innovations from patenting.

R: So, now does the unitary affects directly software patents, in any way?

S: I don't think so, because whatever happens to the European patent with unitary effect will happen after the grant. So, whatever we did up to now, up to and including the point of the grant, we do the same. So the European patent up to the point of being granted is not affected. Of course, what we do not know but we hope that this will be like that, is that the case law of the Unified Patent Court eventually will confirm the practice, the granting practice of the European Patent Office, this we hope. But, this remains to be seen of course, because the Unified Patent Court will be constituted by many different national judges and it still remains to be seen what will be their case law. We don't have it yet, when we have it we will know. Definitely we hope that the case law will be harmonized with the case law of the Board of Appeals and that it will not change the basic approach towards patenting of software implemented inventions, which is that if the software implemented invention has a technical effect, solves a technical problem, not a commercial problem and not an actuarial problem.

R: Can you give an example maybe?

S: Imagine that you have a software that will minimize the amount of money you owe to the tax office, because of your assets -of paying taxes for your assets- that is a typical let's say economic application to call actuarial application; the implementation of an actuarial method to minimize the taxes that you owe to the tax office; this cannot be patented because it doesn't solve a technical problem, it solves a kind of commercial or actuarial problem. I can give you another example, imagine that you have a lot of different assets in the bank, you have real estate, stocks and other assets, you have cash and so on and so on, in different ways and you would like to maximize the return of these assets; their rent through your real estate or the return that you get from your cash deposits and so on and so on. Then you device a software that will optimize the way and practically it will maximize the money that you get out of your different assets. And of course this you can solve with software, but it is also, its nature it is not a technical problem.

R: Can you give me a counter example?

S: Yes, I can give you a counter- example, imagine that you have a software that controls the braking system of a car, you know the ABS system that regulates the pressure of the breaks of a car so that the wheels don't block during breaking; taking into consideration many different parameters like, the speed of the vehicle and maybe the temperature of the brakes and whether the road is wet or dry

and so on and so on. And this can be controlled by software; eventually. It's an algorithm. So, you use software for this; and it may be that everything else is already known but the software is new; just the software; that makes the control more efficient, so that the car can stop in a shorter distance under the given circumstances. Now, this is a technical; this is a typical example of a technical application of software. I can give you another example, imagine an airplane that flies in a terrain which has also mountains and has a different relief and the airplane has a software- hardware and software of course- to calculate the exact position in the space and to compare the exact position with the surroundings; whether there are mountains ahead and such things. So that, this mechanism, this system which consists of both hardware and software gives an early warning if the airplane risks to fly against the mountain. Then, of course the various instruments that we use the GPS and the [...], they're all known, but it may be that the algorithms we use to exploit all this information and calculate the risk of flying into terrain is more efficient, cause it's simpler, it's simply software. Now, this is also; the difference is made by software but the outcome is to prevent the airplane to fly against the mountain; this is also thought of as a typical technical implementation.

R: Okay, I'm now inspired to ask if we take a smartphone because it's been very much in the news; what's going on in the smartphone industry concerning software patents. Could you give me an example in mobile phone? What would be a technical problem? Or what an application of a game would be?

S: Games are excluded from patentability by law. So, the method of playing a game or the rules of playing a game, be it in a computer or a smartphone could not be patented. Because games are explicitly excluded, or rules playing games are explicitly excluded from patentability in the European Patent Convention. But, what I can give you as an example is a particular screen of a smartphone, where the screen as such can be read under any lighting conditions. So, think of a particular construction of the screen, there are different technologies to manufacture screens, so think of a particular construction of a screen so that the screen can be read with no difficulty even if the light is... that is one thing and then this can be implemented, on the one hand by the technology of the screen itself and on the other hand it can be implemented, by the use of particular colors, when displaying information in the screen. Now, the technology of the screen itself of course is a technical thing, but the use of particular colors for the picture that is displayed or the text, which makes whatever is displayed much more visible under various condition; this is an example of solving a technical problem. Of course, the choice of the colors and the way; the choice of the way to present it on the screen is controlled by software. But it has a kind of synergy between the algorithm that does this and the technology of the screen.

R: So, when you say it has to solve a technical problem, "be an inventive technical contribution to a prior art"...

S: They emphasis is both in the inventive and on the technical.

R: So, it should be related to solving a problem from the technology itself and not like a general problem.

S: Well, the best way to approach this is with examples, that is exactly what we are doing now because you cannot give a dogmatic definition of what is technology, what is technical; for different reasons, but one evident reason is that different languages have/ understand different content under the word technical and so if you speak about technicalities for instance in the English language you don't really mean something which is related to technology, you mean something that is related to administrative processes so it is difficult to give a dogmatic definition because it is not a mathematical issue it's something much more complicated. And, therefore the best way to approach it is to look into examples. And one source of examples is the case law of Digi3 and another source is the patents that we grant contrasted to the patent applications that we refuse and this discussion now, giving positive and negative examples.

R: Okay. Now, let's go to the procedure followed for granting; from the application to the granting of a software patent specifically. I'm patentee and I bring the application

S: Then, you are an applicant, you hope to be a patentee. Because the patentee is the owner of the rights after you get the patent.

R: Okay, so I'm an applicant and I bring the application according to the standards that I need to and what happens in the office?

S: The first thing that we do is a formality check. Because the application has to fulfill some formal requirements and they are checked first; the formal requirements. An example of a formal requirement is that if you file a paper it has to be quite clear what you file. Another formal requirement is that you have to have claims in your patent application. Another formal requirement is to pay. So, all these things can be checked because they are either there or they are not there. Once the requirements have fulfilled then the patent application gets a classification according to which field of technology it belongs, because technology is quite a wide notion, and then comes to the directorate; to the patent examiners who are responsible for examining this part of technology. And then, the examiners will make a search in the databases to find out the so-called prior art; this is similar art that already existed and has been published in the past, before the filing date; I'm now speaking in broad terms of course not in legal terms. And then, the examiner will compile a so-called search report which lists all the documents that are relevant as well as a so-called written opinion, which is the first assessment of whether an application has patentable subject matter or not. In the light of [...] prior art; that is in broad terms. If it is about a software application, nothing much changes. A software application will be searched exactly as every other application and will have eventually a search report; the only difference is that if what you claim as your invention is very very known, let's say either usual practice or notorious technology then this will be stated in the search report and maybe that the search report doesn't cite specific documents but simply says that what you claim is very very known at the date of the file of the application and there is no need to cite specific documents. And, that is the first step so to speak, but the most important step is that; is when the examiner will proceed into searching the so-called inventive step; whether your application, your invention is really different from whatever existed and has enough difference to distinguish it from whatever existed in an inventive way. It is not a simple transformation, or simple trivial change of what existed, but involves something more than that. That is the so-called inventive step. Now, when we judge inventive step of course we have to analyze the claim of your invention and we analyze the claim we take into consideration only those parts of the claim that refer to technical invention. If your claim says that I do this very ingenious software implementation of a method which does this and this and this and eventually it costs less; then the fact that it is cheaper does not affect our assessment because it is not a technical part.

R: And then after that the patent is whether granted or not.

S: Well, there is a kind of ping pong between the inventor or his representative and the examining division- because we work in teams of three examiners; the examining division. It can be an exchange of letters, it can be amendments in the claims, it can be guidance by the examining division as to what the inventor should do to eventually get a patent and hopefully after this exchange of letters the whole application leads to a grant of a patent. However, this is not the only possible outcome; it can be that there is not patentable subject matter because the prior art is too close to whatever it has been invented and the application will be refused. But even in this case, the applicant has the possibility to go to a higher instance to the Board of Appeal and file an appeal against the refusal, so that the applicant will have a case judged in front of a different; of a second instance. Against negative decisions of the office there is always the possibility of appeal.

R: Now, a question relevant to the 2005 directive. Would it be preferable, would it change something- before you said, it was pretty similar to what EPO does- so, would it make any difference if the directive would have passed?

S: Well, in retrospective all depend; I cannot really say; I cannot say how things would have evolved, because it is pure speculation. However, I think that industry was equally well served by the decisions of the Board of Appeal which eventually gave a clear line as to what is patentable and what is not

patentable in Europe. And we have to say that what is patentable or what is not patentable in Europe, is not identical with what is patentable or not patentable in the USA, for instance. But this is to be expected because in the USA there is a different law. And yes, there is a different law.

R: Now, I'm taking you to the arguments against software patents. Are you aware of the argumentation?

S: In broad terms, in broad terms.

R: One, I've read in a book called Software Wars by Curtis which says that "software is math" so therefore it cannot be patent. Can you comment on that?

S: There is a lot of math in algorithms; some algorithms are more mathematical than others. For instance you think of an algorithm that calculates name in a very efficient way prime numbers. You know what are prime numbers?

R: Yes.

S: And there is a lot of theory, arithmetic theory regarding prime numbers; there are also unsolved arithmetical problems relating to prime numbers and the calculation of prime numbers is a hard problem; it's not easy; and you can have an algorithm that calculates prime numbers in a more efficient way. Now, of course this algorithm cannot be patentable because you cannot exclude mathematical method from use; anybody should be entitled to use this mathematical method. Then, let's imagine that we use this particular mathematical method for cryptography reasons. So, you have a cryptographic mechanism that uses prime numbers; and of course in order to implement it you need to calculate them and to calculate them exactly with this. Now, the use of this algorithm for a specific purpose and in this particular case the cryptography implementation could possibly be patented; but then what you patent is this particular implementation; the program method; not the algorithm. If you get a patent on the cryptography method, then other people cannot use this cryptography method; they can still use the mathematical method that calculates the prime numbers for other purposes. So, I tried to approach- let's say- this argument that software is math, because I can understand the argument; the fact is a lot of mathematics in the foundations of software for instance there is a lot of mathematics in the foundation of sorting algorithms, but software eventually is not pure math, it can go a little further than that, based on what you do with software. When I studied computer science, one of the most interesting subjects was theoretical informatics, and that was partly mathematics.

R: Another argument I found, is that software patents specifically in the software industry there is no support of innovation because of the source code being open or closed.

S: I can understand that because if the source code is excluded from public use then you cannot use it to innovate; and if the source is open like in the basic mechanism of open-source then you can use it and therefore you have a better starting position to innovate. There is truth in this argument but on the other hand it is up to the, it is the decision of the creator of the source code to put it in the public domain or to exclude it from the public domain. And I think that the creator has this decision, it's the creator who is to decide; it is a basic principle also in any intellectual creation, for instance if you write music or if you write a book or if you make photography or if you paint a painting it's up to you whether you would like to put it in the public domain, but even in this case it's up to you as the creator it's your human right to allow people to copy it or not to allow people to copy it, it's your creation. And although I'm not a lawyer I think there is a kind of analogy, so it's up to the creator to decide if he or she will put it in the public domain and let's say promote innovation in this way or whether he or she decides to put it under protection, provided that it is a technical implementation, in which case innovation is still promoted but in another way. I mean that's only my view, but I am aware of the fact that there are many different views out there.

R: And now to conclude, if you could give a definition of software. Because I've experienced it as a very special case of technology. How could you define it and why is it important today?

S: Software in itself? oh I cannot define it. Because you know, software is a generic notion and under software you can understand a lot of things. And computer science has codified the notion of let's say

writing programs; and you can write programs for many different purposes, but all of them are software. So, you can write programs in assembler language which is very very close to the hardware, so that you can have control of individual parts of the hardware, individual registers. You can write software that does additions, that does multiplications, divisions which is also particularly interesting how to do them and then this is software that is very very close to the hardware; it is adapted to the hardware; it takes into consideration the way hardware works. And then you can go one step further and write software; you can write an operating system; this is a system that controls the whole computer, so that is a kind of link between the application programming and the hardware. And we know Windows, Mcdos, Linux and so on and so on. And then, you can go one step further and you can write user interfaces. These are exactly what the user sees. And this is the surface of Windows, for instance; the surface of Linux. And this is something that is addressed on the one hand to the user, because you use the Windows, on the other hand to the machine. And then you can go and write application programs like Microsoft Word or Excel or such things; which are addressed even to people who don't have deep knowledge of computers; to solve certain practical problems. And then, you can go and program games, for instance, or you can program a computer to play chess. So, these are levels of programming but when you speak about software you may mean anything of this. So, to give a definition it's more complicated than a simple sentence.

R: But on the other hand, each level of programming is just a level of programming, there is no definition or is there?

S: It's more in practical terms. I don't think that you can capture the real nature of the specific program simply by definition. These things are better defined in quotations marks by examples. So, if I tell you that, you see, when I spoke about different levels I tried to give an example in each, in each case so that you an idea about what I'm speaking. But software is a very generic word, a very generic notion. So, to try to capture the whole content in a single definition, I think it's a futile. You shouldn't do that. You shouldn't think that everything can be defined; it's not; defined by a dogmatic definition; this is not the case. We spoke about prime numbers. But, prime numbers are a mathematical concept and I can give you a definition about prime numbers; as a matter of fact I have to give you a definition, otherwise we don't know what we are speaking about. But, software I would rather give you examples.

R: And then, why software is important today?

S: You cannot imagine your life without software. You are using it in every step; in every phone call that you do you are using software. When you walk in the city, when you drive along the highway, your cell phone gets a kind of connection to different antennas, depending on the proximity. So, when there is an antenna here and an antenna there, and then you walk or you drive, and as long as you are in the proximity of this antenna your cell phone has a connection with this antenna. When you drive, you get distance from this and you get more close to the other, then your cell phone doesn't communicate with this antenna anymore, but with the other antenna, of course this you don't know; you don't realize because you say, okay, I have a good signal or I don't have a signal; then you realize maybe that I don't have a signal therefore I'm not close to any more antenna, but going from one antenna to the other, you don't even realize, but it happens. And it is software of course.

R: Okay, I think that was it. I don't have any other question, unless you have something to add.

S: The only thing that I would like to say is that we have spoken about are notion and concepts that are not easy and are not simple; they are complicated; and they have different abstraction levels; you can go quite deep and analyze; or you can stay on the surface and approach them in a simple way in a way; the way you receive you realize them and if you would like to analyze deeply you have to; you have to speak in different terms, you have to go down the abstraction levels; speak about concrete things and this applies even more if you speak about interdisciplinary subjects like patenting which has at least two different facets; one is the technological facet and the other is the legal facet; and patenting in a marvelous way combines the two. And neither of the two is itself simple; both are complicated and then you can imagine if you combine two complicated things it makes the outcome

even more complicated. And this is what I would like to give you on your way.

R: Thank you very much.

S: Your welcome.

## **Appendix G (Full Interview Transcript Respondent 3)**

R for Research, T for Respondent 3

R: First of all, I would like to ask questions about April, like when did it started...?

T: ...what we are? what we do?

R: Yeah, if you can say it in your own way..

T: Yeah, yeah sure, but just to like give a quick introduction; so April we are an organisation working with promotion and protection of free software. It started in 1996, so it's been like 16 years already; over 16 years now, so we've been around a quite long time and its action is mostly twofold. One is information, promotion of free software to general public, to also local committees, governments and so on and the second part would be more defense; defense meaning that we would actually working on various [...] coming up in parliament both in France and at the European level, to actually make sure; try to help at least, that the ecosystem the legal ecosystem is not nefarious to free software and might be at some point even positive. So, that's pretty much what we are doing. So, we actually are a team of three people. So there is Frederic Crouchet, who is not here right now, who is the director. there is Aurelia Gilardi, administrative assistant and I'm the public affairs officer. So, I'm focusing mostly on everything that's [...] and also relation with parliament and authorities [...] pretty much.

R: So, and there is a support of members

T: Yes, 5000, 5500. Actually is around 5000 individuals; so members who pay the yearly membership; who are just usually people like you and me who are interested in what we do; and around 500 like companies, organizations and so on. So, I think there is something around 350 companies who are mostly doing business in free software but not only; and the rest is associations, but also local governments and some are part of organizations and so on.

R: And is that from France only or?

T: Mostly France, not only; we have some big organisation, for example Google is a member, so it's some also international and from individual members, mostly people from France but also lots of people from the French speaking areas; so many people in Belgium but also in Northern Africa and also people all over the world cause [...] and the internet has no borders; but since we are doing most of our stuff in French we mostly focusing on the French speaking..

R: Now, a little bit about how you, say, promote and protect free software- I read that on the website- how is this practically working?

T: At the legislative as like the advocacy part you mean...?

R: With the public or the members..

T: Ok, so with the public it's mostly we are doing information with the leaflets, just you know small books and those things; we also do a lot of conferences, we are having stands on various events; so that's already quite a bit of work. Mostly, let's say also we give a lot of information on the website; all these kind of things. We are also organizing various events such as, we have Libre en Fête, which is a weeklong event in March when we help out people in organizing more events, where they live with their neighbors, with the friends, with their children schools' wherever; to actually explain what is software is and how it can be used in those kind of things. On the advocacy, so more like protection part, it's mostly like classic advocacy work meaning we go, we do a lot of watching the news, what's going on the parliament like French parliament, French government, French local governments and also in Brussels; we meet those people as well, with their assistants or maybe [...] for instance or members of Parliament themselves and we like maintaining watch on what's happening; and then whenever there is something that should be of importance to us we talk about it meaning we just send out some press release and everything we have some information, legal information available and then go see people and explain why it is important for us.

R: And I read again on the website that you say there is a difference between advocacy and lobbying. Can you talk a little bit about that?

T: Yes, sure. Pretty much, what...like... It's not like I don't like lobbying as such, it's just different.

Because lobbying means you are company or person, someone who is paid to defend interests coming from, you know, your clients. We don't have clients; we have a cause, we have an idea that we defend; and because we do that people are paying us, but it means that the people; there are no clients because they cannot decide [...] what we are going to do. Or like the general organisation can decide during the general assembly but it's like one person one vote. What are you a big company that's paying 1000 of Euros or just an individual paying 10 Euros a month/ year it's the same. So, yeah we have a [...] pretty much, we have statutes and it [...] what we are defending is written in there, so that's not changing. And that's different because lobbying usually... I mean the actions of day to day work might look the same, but it's not the same where we are coming from and what we are trying to reach. And pretty much is also, advocacy we could be happy and delighted if we could stop doing our work, cause there was no need for it; but that's not happening soon; but if free software won we would just stop it; that would be nice.

R: So, another thing from the website: what does democratization of software means?

T: It means that, we're talking about democratization because that's the [...] of free software actually, because free software is like, you can access to software; you own the software, like really; it's not a black-box; you know you have proprietary software where you can't do anything about it. On the other hand is, it's much more democratic as you can do everything about it, you can also share it. So, there is no issue there is the no costs meaning that everyone can actually you know get it and use it as much as they want; there is no risk of having a license, having your license expired and so on and so forth; so, there is no as huge associative cost with that, plus the fact you can actually you know meddle with it, redistribute it, share it; it's much more democratic because it's not a company that decide what you what you can or cannot do you just free to do whatever you want.

R: So, you mean that free software is democratized software.

T: Yeah, yeah. It is democratized software so since we are providing this kind of software, we are providing democratization of software and the ownership by people of the software.

R: Okay and the other thing was like the watchdog on digital freedom but I think...

T: Yeah, you know that internet, free software... To have internet you need free software and vice versa, so it's kind of issue interconnected.

R: Okay. And now I will ask you as well about the unitary patent. So, as far as I understood from Gibus as well yesterday, you are interested in the unitary patent because of software patents specifically. Can you talk about that?

T: Yeah, yeah sure. Okay, mostly Gibus would have told you already, but we have been working on the software patent issue for a while now, because the first [...] were early 2000s; Gibus was already very active part of it and April was working on it a lot; especially during 2004- 2005, there was the directive on the patentability of software. It's really a real threat, cause pretty much, like, the one thing that could stop free software from happening and working would be software patents. So, it's pretty obvious for us; it's like the one; one of the very dangerous things we need to focus on. And plus we are talking about democratization, about freedom; patenting software is patenting ideas; so the idea that you can own an idea; you can prohibit everyone else to use an idea; and that's even something; the concept is like contrary to everything like we've ever learned, so that was pretty much the basis and... Actually, when we first heard about the unitary patent we were mostly curious about it cause it's something that was [...]; and honestly at first we were not against it at all because we thought unitary would be like European patent you know with the control of the European Parliament; and why not; I mean it's not an issue in itself; it is how it was presented actually. We have heard already about from this project of the unified patent court and so on and so forth; that was not surprising. But as soon as we got the proposals and could read what was inside we realized that the idea was to give away all the powers of controlling patents; that were owned by parliaments and by courts and national courts to a new international organisation that no one knew about it; no contract whatsoever over. So, that was a real threat cause we've been working a lot on how the European Patent Office was getting dangerous; because they were trying to push for software patents; it's been



something that's been [...]; we've been seeing lots of issues about for the last maybe 10 years. And then suddenly the EPO becomes the center of a new organisation that; the only one who will be able to grant patents with no overview no court, no one to actually check what's possible and what's not; so that really was a big threat for us.

R: And okay. So, what do you think it's going to happen at the end with the unitary patent?

T: I think, there is still a chance that the European Court of Justice will actually dismiss the regulation; Gibus is better than me on the legal arguments, but I am also pretty much convinced that this time they could equally issue or at least they would like circumvent it, and reinstate the [...]; as far as I can read from the juridical case law of the ECJ they tend to actually make sure they have a wide dish area over, and they would actually go completely against that; so that's definitely a possibility we have. But, on the other hand, we're not sure yet about that; I would never bet on the court to actually dismiss an action cause that's not... The only thing is that the court needs to be ratified by quite a few countries before it comes into force including UK, France and Germany. Regarding France, sadly enough, I'm pretty they are gonna ratify it; that's not something we can really do; I wish it could be otherwise but anyway. On the other hand, in the UK it's much more complicated because the [...] committee from the [...] parliament actually was against the regulation, it was signed by the government and the rest but still there was a parliamentary opposition which was quite strong; plus also the Euro skeptic sentiment in the UK right now; so signing a new bill that would deprive a national court of the power to give in to an international body, is something that is not going to be seen so well; so that's quite an issue. And Germany, honestly I don't know, I think it's gonna pass but also right now... what's happening right now as well is a resolution against software patents that's about to pass in the general parliament; so I wouldn't say it's a done deal there; so I don't really know but I think it has quite a lot of chances to pass but it's going to be some [...] debate; and so what I'm wondering is that they keep saying that it is going to pass and be done soon; but until then countries have to ratify it yet; and it looks complicated for a country to actually do it; so like maybe they would just fall away side which had happened before on other regulation and might happen again. So, plus if other country like Poland actually; its parliament asked its government not to ratify it. So, like if you get more and more countries that opting out of it; like it's going to be... It's dead already, it's just gonna hide it but yeah.

R: The other question is, as I understood from Gibus yesterday also, is that the unitary patent is the current threat to software patents, to free software with software patents, but even if it doesn't work out for the unitary patent there is still a threat to free software.

T: Yes there is.

R: So how do you see that in the future? Software patents specifically aside from the unitary patent.

T: Honestly, it's quite complicated right now, because everything that is related to patents is [...] an issue and especially because it's mostly European competence now so it's happening in Brussels. And it's [...] an issue, I don't see them reforming patents until the next Commission, this is going to be in the European Parliament in less than a year now. So, I think it's going to be quite quiet until then because of that, but maybe in a couple of years, like as we see happening in Germany with resolution on software patents happening; also the US that's, you know, there is a lot of debate on that right now; it's very strong; there are cases going in front of Supreme Court; so there is a lot of discussion about it so we can think and hope maybe that the issue are going to come back in the European Parliament and European Commission and Council; but yeah it's not so easy. On the other hand, there is still something that needs to be done at some point with the EPO; it's quite obvious the fact that they actually deciding on their own case law without any overview whatsoever; it's getting frustrating for everyone involved; both for us because the text and the spirit of the European Patent Convention is not being respected but also for companies who are working directly with patents because their case law is so wide and so diverse that it's very different; like depending on which country you actually litigating like you can have totally different outcomes. So, something will probably be done I guess at some point, and something we need to be careful about because what's gonna happen or

not happen we don't know yet... But yes... And also yes, there is the Enlarged Board of Appeals of the EPO that actually asked for the legislators from all the countries to take over and to redefine what's patentable and what's not including software; so even in demand from their own court of appeal to actually focus on that and to redefine what's tricky; what's patentable. So yes, it must be I guess that something happens at some point cause the situation is going to get more and more difficult. But, I don't know who is going to do that; how it's going to start; and I guess [...]. And the last possibility would actually have to have some case, even with or without the unitary patent, that's coming from one Member State who is going up to European Court of Justice and then see what the ECJ has to say. But, as we know the legal relation between the EPO and the ECJ it's not so easy to see how it's going to happen. But yeah, pretty much the situation is a mess; at some point someone it's gonna to have to tackle that but it's not so easy to see who is going to do it.

R: Okay, and what is the role of April in all of this?

T: Well, if it's a legal, democratic process like for instance a new directive or something like that, we gonna be definitely the forefront of that; and definitely going to explain to MEPs what's the issue; what's so important and so on. Also, try maybe to write amendments and push on the right direction. If it's not on the more like the democratic like [...] or it's much more like new internet regulation and the EPO is very much harder for us, obviously, because it's not Europe incentives; but there are still some ways, for instance, there's gonna be, I'm sure, there will be some [...] for France who's gonna be there; because France is part from the EPC. So, try to reach those people to explain to them; and also cover on media; so by writing press release; asking journalists to take up the issue and so on; yeah typical advocacy work.

R: Okay, I think that was it. Thank you very much!

T: No problem, I hope that was okay.