Legal Aspects for Digital Preservation Domain

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ABSTRACT

Long term digital preservation serves the preservation of data substance and operability, so that future users are enabled to use stored data and rerun the preserved processes to gain the stored information. Furthermore, Law is becoming an essential application domain for technology developments. In case copyright protected data has to be digitally preserved, every process of a digital preservation system may violate this right, when the rightholder who has the exclusive rights did not grant the relevant rights of use. This paper shows a Legal Ontology that provides a hierarchical overview of how legal constraints and obligations (e.g. IP rights and licensing issues) could be implemented in an automated process of a DP system. In simply terms, difficulties with legal taxonomies may arises when the creators and the users don't share the same perspective. This would be the case when the creators of the taxonomy are lawyers and the users not. Legal taxonomies for digital preservation can be represented with ontologies which are an explicit account of a shared understanding in any domain. Through the use of ontologies the communication can be improved, which, in turn, can give rise to greater reuse, sharing, transparency, and inter-operability. Every DP activity must ensure the authenticity and legitimacy of the performed actions and processes. Hence to validate the correctness of our legal ontology we used a set of competency questions defined in a specific case study. The goal is to obtain a clearer taxonomical view of the necessary legal knowledge that will address the concerns of industrial use-case DP stakeholders. Therefore, we recommend using the Legal Ontology for the DP domain, in order to integrate different legal perspectives and perform reasoning and inference over legal knowledge and information.

Digital Preservation (DP) does exist for a long time and is an ongoing challenge for information society. Heretofore the main focal point has been on the preservation of static digital objects and artifacts. The TIMBUS EU Project[1] uses this fundus of information to develop solutions which enables the preservation of interactive media, dynamic digital objects, and entire business processes and services.

The description of whole processes including all their inter-dependencies, essential components and their configurations is a complex task. The aim is to re-deploy the systems in the future and to do this in a way which allows interaction with them. To ensure the authenticity and legitimacy of the performed actions and processes is an essential part of every DP activity. In order to deal with different legal perspectives and concerns, the ontological approach can help to organize legal information and requirements– making it a pivotal element of any DP system. It is obvious that legal issues and obligation in the DP have to be addressed. Rights can be infringed by almost any process of a DP system. Besides, there are other legal requirements involved, e.g. contracting issues and licensing. In order to reach our aim of creating a common understanding of the meaning of legal concepts and terms, ontologies can help to mitigate the risk of misinterpretation, especially in the field of in legal applications, by giving contextual explanation and precise legal information. The importance of this technology is evidenced by the growing use of ontologies in a variety of application areas [1] ,[2], and[3]. Also, by their role on the Legal areas as observed in [4],[5], [6], [7], [8] and [9].

In the following, we first want to outline the importance of legal aspects for digital preservation and then briefly introduce the concept of Legal Ontology Engineering in the domain of DP. After emphasizing the drawbacks of these works, we present our methodology to address these shortcomings. Then we focus on showing the innovation and advantages of our developed Legal Ontology on the basis of a recent case-study in e-Health. Finally, we point out specific validation steps taken to evaluate our work and sum up our contributions to complete the paper.

The preservation of digital objects and the reuse of them in the future are influenced by legal requirements. This has effects on all aspects of the preservation challenge: business constraints, process descriptions, computational environments and their mutual dependencies, digital assets that are produced and consumed by the processes, roles of individuals and organisations, and dependencies on third-party products and services. These requirements are established in European Directives as well as national laws or regulations which have a large impact on how Digital Preservation can be carried out. Preservation actions might have implications on intellectual property rights or data protection. To find out what legal requirements must be fulfilled the first question has to be if data that should be digitally preserved is protected. When data is copyright protected it is important to know what the terms of the license contract determine regarding the right of use. Even when already existing

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[1] http://timbusproject.net/

digital objects have to be moved from one folder to another within the digital preservation system copyright might be affected. The storage of copyright protected data can potentially infringe the copyright-holder's exclusive rights when the act of reproduction is not allowed. The main goal of Digital Preservation is to keep important information available for the future. Hence it is important to take a closer look at the activities that might be possible and necessary activities in the digital preservation system. Processes like migration or emulation are very important to keep the stored information safe for the future. The admissibility of these actions depends on the terms of the license contract. Therefore, if the existing license contracts do not allow such actions, amendments might be necessary. The setting-up and optimizing of IT contracts need to compensate the various interests of the stakeholders who are involved in the preservation efforts. Digital preservation actions might not only cause potential violation of copyrights, but also might infringe data protection law through the storage of personal data. Questions arise like: does a prior and valid consent of the data subjects exist; does a legal permission to store the data exist; where will the data be stored. Data protection requirements differ in the various EU-Member states. To comply with the legal requirement regarding data protection law it is even more difficult when storage is planned to be used outside the EU, e.g. in the United States. Furthermore, legal requirements like the fulfillment of legal obligations to preserve certain data can be a driver for digital preservation. All enterprises have to retain and preserve data, the so called non-sector specific preservation obligations established in e.g. tax law or commercial law. Besides, there might also exist corresponding additional obligations, the so called sector-specific obligations. The law identifies what must be preserved, for how long and for what purpose. The clearer you have in mind what the legal requirements are you have to fulfill, the better you can think of strategies to avoid potential infringement.