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Legal Issues in Software Engineering
CS-C3150 Software Engineering

Cloud-based services, like clouds in the sky, continue to shape, alter and evaporate (Senftleben, 2013). These services are taking over the software industry of today and therefore it is becoming increasingly important to understand its legal aspects. Cloud services range from personal storage to social media and from content channels created by users to cryptocurrency. These platforms raise as many copyright issues as there are liquid droplets and frozen crystals that form a cloud in our Earth's atmosphere(Senftleben, 2013). While cloud-based service providers try to avoid relying on collecting societies and creative industries, one of the key issues is the breathing space granted by copyright law outside the scope of exclusive rights. (Senftleben, 2013)

Although innovations provide new conveniences and raises the efficiency to new heights, but cloud services threatens a storm of legal implications. While using cloud services, the biggest legal aspect to be considered is the user data privacy. The main difference between cloud softwares and traditional software licensing is that the user data is not stored on the local machines but it is stored on overseas severs which may be accessed exclusively by the user or it maybe shared between many. By using cloud softwares you, as a customer, don't have absolute privacy and security over your data. Customers should be entitled to access their data whenever they wish. Also, when the contract ends or the service provider ceases to operate, they should be able to erase their data whenever they want. Reliability is another important aspect of cloud services. If somehow the remote server stops working, the customers would be heavily affected because they won't be able to get any services. Thus, the customers need to check that the services provided by the provider are reliable and meets all their requirements. If service levels fail over and over again, the customer should have the right to terminate the contract. Copyright limitations are another aspect that can play a very important role in case the company provides the services in multiple countries. The strength of the copyrighted material changes with the user's location. This depends on the business law enforced in the client's country which may not be equivalent to the company's copyright.

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The company also has a secondary responsibility to infringe the content made available by cloud service to the users. In this context, safe harbors for hosting are of particularly importance(Senftleben, 2013). The so-called safe harbor involves storing of third-party content without any active involvement in the choice of the hosted material (Senftleben, 2013).

Legal automated reasoning is a great tool for advising developers about legal reasoning. I think it can be a very good way to tackle the legal aspects listed above by using automated reasoning in the case of growth of cloud services. A legal expert captures the rule-like essence of legal norms and the definitions and relationships between legal concepts. The software and its environment is also formalised which is done by a domain expert. The automated legal reasoning then occurs within an integrated software development system based on the given software which involves the developer's involvement. Since the legal aspects in case of cloud services are very user-centric, automated legal reasoning can advise the developers into writing 'safe' software for the users based on the formulations of the legal expert and the domain expert. Also, legal automated reasoning will definitely make the legally 'laymen' developers more aware of the user-related issues by poking them with advise in "translating" and manifesting individual consequences in the software (Oberle et al., 2012). As the legal consequences will get checked in the development phase of the software itself, the software will be more robust and legally 'correct'. An important point to note is that although legal automated reasoning can assist in capturing these legal aspects, it cannot completely eradicate these issues.

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