



Final project proposal

Type	Undergraduate/Master
Title	<i>Semantic Sky</i>
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Department / Group	
Computer science and engineering	
Topic(s)	
Semantic web, Office development, web services,	
Project can start from	01.04.2014
Project duration	4 months
Short description	
<p>These days, the number of data sources an ordinary computer user works with every day is very large and continues to grow. With the increasing number of cloud services with specialized functionalities, the users are faced with the necessity to routinely perform manual actions to interchange data among different cloud and web services, in order to perform more complex and composite actions. These actions always require a certain amount of dedicated time from the user, who has to change the context in which he work, in order to take the actions and transfer data from one system to another. Therefore, we developed a software platform, based on the concepts and technologies of the Semantic Web, which provides the users with a unified and simple composite approach to the different services they use, and crates a simple flow of information from one infrastructure to another. The system is able to automatically discover the context in which the user is working, and offer him the actions which can be used over the data within the context. In this way, the user can completely focus on his tasks in his work environment, and get relevant information and possible actions in that context. This system automates the execution of the users' tasks, which leads to improvements in their productivity, information exchange and efficiency. The system is called "Semantic Sky" and represents a platform where many cloud services are interconnected by the use of semantic web technologies.</p>	
Results and assessment	
<p>Create a plugins for different office applications that will add meta data to documents and make semantic annotation named entities (live objects). The meta data for the document and live object is stored in two places: in the live object repository as previously mentioned, and in the document itself. The Microsoft Office Word API offers the developers of Word add-ins the possibility to embed custom XML data directly into a specific part of the document. This part is called CustomXMLParts, and is not accessible through the Word application. Rather, it is used by Word add-ins to store and retrieve custom data that the developers can define. This feature is used in the Semantic Sky add-in for storing the meta-data for each live object, amongst other things. When the meta data is defined, it is serialized into structured XML and put into the CustomXMLParts of the document, as well as in the live objects repository. When this meta-data needs to be accessed, its XML is retrieved from the CustomXMLParts of the document and deserialized back into an object.</p>	
Other (additional) information	