Semantic Web Technologies to Reconcile Privacy and Context Awareness

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Abstract:
Increasingly, application developers are looking for ways to provide users with higher levels of personalization that capture different elements of a user's operating context, such as her location, the task that she is currently engaged in, who her colleagues are, *etc*. While there are many sources of contextual information, they tend to vary from one user to another and also over time. Different users may rely on different location tracking functionality provided by different cell phone operators; they may use different calendar systems, *etc*. I will discuss work on a Semantic e-Wallet aimed at supporting automated identification and access of personal resources, each represented as a Semantic Web Service. A key objective is to provide a Semantic Web environment for open access to a user's contextual resources, thereby reducing the costs associated with the development and maintenance of context-aware applications. A second objective is, through Semantic Web technologies, to empower users to selectively control who has access to their contextual information and under which conditions. This work has been carried out in the context of *my*Campus, a context-aware environment aimed at enhancing everyday campus life. Empirical results obtained on Carnegie Mellon's campus will be discussed.

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