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Abstract

E-Government is the civil and political conduct of the government which involves using information and communication technologies (ICT). Currently, it is facing several problems relating to integration of information and systems, extraction, and representation across heterogeneous organizations. Additionally, e-Government also encounters big challenges in achieving interoperability and integration; when differences in laws, regulations, services, administrative processes have to be accounted for, along with the different languages spoken across different regions and countries. There are numerous approaches, proposals, frameworks, and projects available to achieve semantic interoperability in the e-Government domain; especially dealing with the creation and management of semantic web services. There is a lack of supporting methodology, specialized tools, and guidelines (which describe how formal semantic descriptions of the services in practical applications can be created and maintained). Moreover, in the e-Government paradigm, it is expected that formatted information be available in different ways, when presented to senior citizens or government officials, etc.

Therefore, the e-government services need to provide information where format and methods of delivery adapt according to the users and situations. The semantic Web presents the information in a machine readable format and (strives to make e-government processes fully automated. In recent years, Semantic Web technologies based on ontology) have brought about promising solutions to the above engineering problems. This research presents a survey for some framework approaches for E-government by Semantic Web. It also discusses the platform namely Protégé ontology API for semantic ontology development in e-governments. The research would also be of interest to novice semantic Web researchers that might use it as a starting point for more investigations.

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Index Terms

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Keywords

E-government; Semantic Web; Domain ontology; Services; Linked data; owl