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An Enterprise Solution for Standard and Profile Neutral Geo Spatial Metadata Management

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Abstract:

Geo Spatial metadata management plays a key role in Spatial Data Infrastructure, for discovery of geo spatial resources across an enterprise. The publish-find-bind paradigm provides mechanism to capture spatial metadata of geo spatial resources so that the resources can be discovered using standard OGC services like CSW (Catalogue Services for Web) and use them. The paper discusses multiple aspects in implementing enterprise level spatial metadata solutions. Several spatial metadata standards have evolved and standardized at regional level (FGDC, Dublin, Anzlic …) and at an international level (ISO19115). Techniques to catalogue the metadata in a standard-neutral way is an essential step to discover the resources. The paper discusses the basic information model for such cataloguing. ISO has standardized rich metadata content in 19115 standard and also defined guidelines for restricting or extending the standard with the concept of "profiles" to suffice the specific requirements of different organizations. The information model should support such dynamic profiles in terms of capture, persistence and mapping the content to standard queries. Another dimension in metadata discovery is extending the core queryables (the metadata content to be queryable in a standard way) through "profiles of catalogue services" like CSW application profile for ISO, FGDC etc. Providing interoperable services across such profiles is discussed. Metadata authoring, automatic capturing from spatial data, synchronizing captured data to spatial resources and maintaining currency are prime issues for reliable Spatial Data Infrastructure solution. The paper discusses the issues and solutions on above aspects while implementing INSPIRE profile of ISO.