

Kuwait Geographic Information Metadata Research

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SUMMARY

Geographic information Metadata is one of the important GIS related standards for geospatial information sharing. ISO/TC 211 has been developing the standard since 1995 and more than 400 metadata elements involved in the approved standard by ISO in 2003. Actually, there are only limited metadata elements may be used for GIS in typical countries.

Kuwait Geographic Information Center (KGIC) at Kuwait Institute for Scientific Research (KISR) is one of the top research centers on geographical related information research and management in Kuwait. Several national GIS related projects have been finished in the last more than 10 years. Anyway, due to the GIS projects were implemented via different software platforms and lack of referenced GIS standards in the implementation, much work still need to be done in order to share and use the plentiful geographic and environmental information resources.

KGIC aims to establish an open GIS center to server KISR and Kuwait on Geomatics information sharing such as GIS, RS, and photogrammetry datasets. Based on the data control and data assurance requirement in KIEIN project which funded by UNDP and KISR, a GIS Metadata Draft is suggested to make. This metadata will be originally developed for KIEIN project and later extended to the national level. As the result, Kuwait Metadata Profile (KMP) based on ISO/TC 211 19115 has been developed in KGIC. This profile accepted ISO/TC 211 metadata architecture and used UML structure to define the relationship of metadata entities and elements. All the needed metadata packages, entities, and the elements which can be used for projects oriented management and sharing have been listed in the document by elements dictionary. The other elements which may be used for other countries situation have been diminished from the draft. A metadata software implementation method based on the KMP is also discussed in the paper.

All the KMP research and development procedures are guided by ISO/TC 211 standards and demands. This is to make sure all the geographic information managed by KMP can be shared in KGIC and the outreach in future. Clearly this is a more efficient metadata standard than ISO/TC 211 19115 for the GIS related information management in Kuwait.