INTEGRATION OF GEOLOGIC MAP DB USING GEOLOGIC MAP STANDARDIZATION(DRAFT)

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ABSTRACT:

Geological map is an important data source using the development of national territory and natural resources, prevention of geological hazard and environmnetal pollution, and other educational and research purpose. However its both computerization and standardization have not yet been tried systematically or comprehensively, thus There are limited to its value and effective usage. Both investigated and published geological map until a recent date have used different geological boundaries, geological age, color, symbol, pattern and acronyms due to different period because of a long period of geological investigation and a number of investigator, and moreover, two adjacent geological maps are included many problems. finally, such geological data are provided only for the benefit of the publisher rather than that of the user. therefore it is important to the standardization of geological information in the user side so that it can be incorporated with other IT and ET resources by, for example, merging with other spatial information, producing thematic map, or extracting additional information

the major study area to solve these problems is data modeling. the present spatial data are disappeared modelers' idea and are distorted by programmers. this also enables data to play a part the level of information but it is impossible to proceed with the level of knowledge this problem occurred to be considered data model subsequently which is the most important coupling medium between modelers and programmers

This research prepares a geological data model, geological symbology and makes out GIS representation for digital geological map unit in Korea.

To the ontology specification for digital geological map unit in Korea make out: 1) firstly, we limited to geologic world to digital geological map in Korea.

2) secondly, we extract to the objects of rock unit, geologic time unit and geologic symbol unit from digital geological map. 3) thirdly, we considered the standardization of geological term in Korean and English and make out the geological term of rock unit and geologic time to clear term definition and scope. 4) finally, We classify the geological object(term) of rock unit and geologic time and make a guideline about the spatio-temporal ontology specification for digital geological map unit.

To a geological DB integration make out: 1) firstly, we need to find out the major geological term, symbol, pattern and acronyms correctly in consideration of internet keyword which is both Korean and English. 2) secondly, we classifiy geological term in hierarchy with spatio-temporal classification and prepare geological map identifiers(Geologic Map UFID) 3) Finally, we construct the GIS DB applied geological data mode and symbology.

KEY WORDS: geologic map, standardization, data integration, GIS