A PROPOSAL OF ADAPTATION OF A KNOWLEDGE-BASED SCENE ANALYSIS MODEL TO SOME REMOTE SENSING PROBLEMS

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ABSTRACT

A scene analysis computer program, developed according to an AI paradigm, is described through its representational and control components. The available declarative knowledge about a domain or process can be stored in a particular type of associative network, in the form of concepts, part and particularization hierarchies, predicate calculus-like formulas and decision rules. Procedural knowledge can also be supplied in many forms, as codes associated to attributes and predicates, actions to be performed after concept activation and control affecting heuristics. Control can be viewed as a series of propagation of alterations, problem solving and image measurements steps. The necessary adaptations to be performed over this program in order to store knowledge from experts on some remote sensing and image analysis problems are discussed. Some of these problems are related to the analysis of geological sites, map guided interpretation and knowledge-based segmentation.