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Nota di contenuto	Preface; Contents; Part I Invited Paper; 1 Using Space-Based Technology for Smart Resource Management during Disaster Early Warnings; Abstract; 1...Introduction; 2...Novelties; 2.1 Data Collection Through Space-Based Technologies; 2.2 Data Collection Through Sensor Networks; 2.2.1 Adaptive Information System for Prevention and First Response; 3...System Architecture; 4...Conclusions; References; Part II Editorial; 2 Intelligent GIS Conceptualization; Abstract; 1...Introduction; 1.1 Universal Model of Data; 1.2 General Architecture of IGIS; 2... Service-Oriented Architecture; 2.1 General SOA of IGIS 2.2 Application Services2.3 Database, Knowledge Base, and Ontology Services; 2.4 End User Services; 3...Ontology; 3.1 Knowledge Representation by Ontology; 3.2 Open Technology for Ontology Development; 3.3 Ontology for Subject Domains; 3.4 OWL and GML; 3.5 Data and Workflow; 4...Scenario Approach; 4.1 Scenario Definition; 4.2 Expert Systems; 4.3 Inference Machine; 4.4 Inference Machine as a

System Supervisor; 4.5 Expert System as the Core of the Decision-Making Support Subsystem; 4.6 Case Studies of the Scenario Approach; 5...Case Study; 6...Conclusion; References

3 Ten Years of the International Workshop "Information Fusion and Geoinformation Systems" Abstract; 1...Introduction; 2...Subject Concepts; 3...Scope and Scientific Level; 4...Format Originality; 5...Future Prospects; 6...Conclusion; References; Part III Ontologies and Modeling in GIS; 4 Semantic Retrieval of Geospatial Datasets Based on a Semantic Repository; Abstract; 1...Introduction; 2...Related Work; 3...The SemGsearch Methodology; 3.1 Conceptualization Stage; 3.1.1 DIS-C: Conceptual Similarity Algorithm; 3.1.2 Application of Conceptual Similarity in GEONTO-MET; 3.2 Stage of Synthesis

3.3 Stage of Analysis 4...Results; 5...Conclusions; Acknowledgments; 5 A Semantic Model to Query Spatial--Temporal Data; Abstract; 1...Introduction; 2...Background; 2.1 Representing Spatial Dynamics in an Ontology; 2.2 Representation of Semantic Relations; 2.3 Reasoning with Spatial--Temporal Information in an Ontology; 2.4 Querying Information on a Spatial--Temporal Ontology; 3...The Continuum Model; 3.1 Rules for an Appropriate Use of the Model; 3.2 Reasoning on the Continuum Model; 4...Querying on the Continuum Model; 5...Conclusions; References

6 Modeling Concepts for Consistency Analysis of Multiple Representations and Heterogeneous 3D Geodata Abstract; 1...Introduction; 2...Related Work; 2.1 Data Heterogeneity; 2.2 Consistency and Multiple Representations; 2.3 Consequences for Our Work; 3...Hybrid Data Model; 3.1 Hybrid Core; 3.2 Extension of the Standard ISO 19107; 3.2.1 Basic Modeling Principles; 3.2.2 Extensions for Raster and Voxel Data; 3.2.3 Extensions for CSG Data; 4...Management of Multiple Representations; 4.1 Modeling Concept for Multiple Representations; 4.2 Modeling Concept for Hybrid Identities; 5...Hybrid Consistency

5.1 Hybrid Consistency for Entirely Overlapping Object Representations

Sommario/riassunto

The Workshop Proceedings reflect problems of advanced geoinformation science with a special emphasis on environmental and urban challenges. The Proceedings incorporate papers presented by leading scientists doing research on environmental issues from modeling to analysis, information processing and visualization. As well as practitioners engaged in GIS and GIS applications development. The Proceedings pay close attention to the problems of scientific and technological innovations as well application opportunities such as getting environmental and global warming problems under control, as well as the monitoring, planning and simulation of urban systems with respect to economic trends as related to: Artificial intelligence; GIS ontologies; GIS data integration and modeling; Environmental management ; Urban GIS; Transportation GIS; GIS data fusion; GIS and corporate information systems; GIS and real-time monitoring systems; GIS algorithms and computational issues; Landscape studies; Global warming; GIS and the Arctic sea; Novel and emerging GIS research areas; Maritime and environmental GIS; and Coastal GIS.