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## Introduction to the issue on heterogeneous data access and use for geospatial user communities - part II

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# Introduction to the Issue on Heterogeneous Data Access and Use for Geospatial User Communities—Part II

**T**HIS is the second part of the JSTARS special issue on heterogeneous data access and use for geospatial user communities. The first part was published in December 2009.

Whereas the availability of data pertaining to earth sciences is increasing, supported by initiatives like INSPIRE, GMES and GEOSS, the heterogeneity of the different datasets poses challenges with respect to the accessibility, use and integration of the data. This special issue addresses these challenges by presenting a set of studies related to various aspects of accessing, using and integrating heterogeneous data. Topics include the application of meteorological and climatological data in geo-sciences, the application of geo-data in meteorology and climatology, interoperable interface specifications that are promoted by the Open Geospatial Consortium (OGC), (meta)data standardization, the discovery and use of data and metadata, data exchange formats, data optimization, semantic interoperability, visualization tools and web services.

The first part of the special issue included papers related to geospatial service infrastructures for satellite-based earth observation data (Heinen *et al.*) as well as hydrological data (King *et al.*), interoperability and discovery services (Nativi and Bigagli), and the use of heterogeneous soil moisture proxies for improving storm runoff estimates (Beck *et al.*).

This second part includes two papers related to satellite remote sensing data. The contribution of Chen *et al.* describes the use of virtual globes to access, visualize and analyze heterogeneous A-train datasets. Prados *et al.* present the air quality data products and services available through Giovanni. Giovanni is a web based tool for access, visualization, and analysis of satellite remote sensing products, model output and surface observations relevant to global air quality. Two other papers are from the hydro-meteorological domain. Nan *et al.* present an analysis of similarities between precipitation radar images and the North American Land Data Assimilation System (NLDAS) Combo precipitation data products. Weerts *et al.* present two case studies that combine geospatial data, distributed models and weather forecast products to forecast peat fire risk and to validate modeled river discharges within the Delft-FEWS forecasting platform.

The special issue is initiated by a national initiative of the Dutch “Space for Geo-Information” program. Within the project “Atmospheric Data Access for the Geospatial User

Communities” (ADAGUC—<http://adaguc.knmi.nl>), a software framework was developed to provide spaceborne atmospheric and land surface datasets through interactive and interoperable web services that can be used for data comparison, resampling, selection, manipulation, and visualization in GIS. The final workshop of the project formed the basis for this special issue.

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