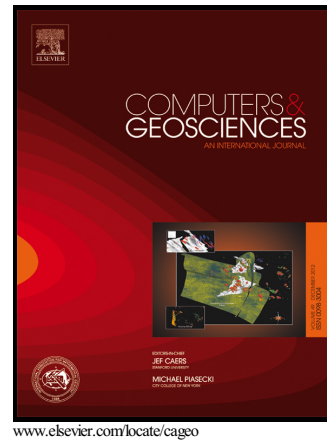


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# Virtual Integration of Sensor Observation Data

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## Abstract

This paper discusses the design, implementation and evaluation of a framework that enables the virtual integration of heterogeneous observation data sources through a Sensor Observation Service (SOS) standard interface. Currently available SOS implementations follow a data warehouse design approach for data integration. Contrary to this, the present framework uses a well-known Mediator/Wrapper virtual data integration architecture, enabling the direct access to the current data supplied by the data sources. Currently, the framework is being validated as the OGC compliant technology to publish the meteorological and oceanographic observation data generated by two public agencies of the regional government of Galicia (Northwest of Spain).

*Keywords:* Observation Data, SOS, Sensor Web, Interoperability, Data Integration, Sensor Data.

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## 1. Introduction

The success or failure of many environmental applications and tools is greatly determined by the availability and effective management of appropriate observation data. The amount of such data that is currently being produced is huge and the heterogeneity of the processes that generate those data is wide.

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