Sensor Web Applications in Geospacial Infrastructure: A Comparison

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Paper 1: Steve H.L. Liang, Arie Croitoru, Vincent Tao: "A distributed geospatial infrastructure for Sensor Web"
Paper 2: Jonathan L. Goodall, Jeffery S. Horsburgh, Timothy L. Whiteaker, David R. Maidment, Ilya Zaslavsky: "A first approach to web services for the National Water Information System"

References:

[1]   Liang S.H.L., Croitoru A., Tao C.V., "A distributed geospatial infrastructure for Sensor Web", *Computers & Geosciences*, Vol. 31, No.2, pp. 221-231, 2005.
[2]   Goodall J.L., Horsburgh J.S., Whiteaker T.L., Maidment D.R., Zaslavsky I., „A first approach to web services for the National Water Information System", *Environmental Modelling & Software*, Vol. 23, No.4, pp. 404-411, 2008.

Main Contributions:

Paper [1]: This paper is about the definition of Sensor Web and the architectural details which have to be considered when constructing Web Services for sensor data. There are explanations for the usability and the advantages of a standardized Sensor Web and examples of existing systems which are collecting sensor data. There are also design goals for web services declared in this paper.

Paper [2]: The paper is about a National Water Information System (NWIS) in the United States. Hydrological data is collected via multimodal sensors and stored in a standardized database system. The standardized database system enables comparing and combining data from different observations in a consistent application. A different sight of web services is described and the web service architecture is explained. Design concepts and guidelines are included.

Comparison:

The seminar paper "Sensor Web" compares the two papers in view of:
- The way sensor web is described in paper 1 and how it is implemented in paper 2
- How many of the definitions (about architecture, interaction, using protocols, interoperability) were applied to the project in paper 2
- Furthermore both papers can be compared with the targets and requirements in the field of sensor web.