An Overview of OpenSensorHub for SensorWebs and IoT

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Abstract
OpenSensorHub (http://www.opensensorhub.org) is an open source software community being built around the development and deployment of a new software stack supporting the full vision of the OGC® Sensor Web Enablement (SWE) suite of standards, as well as some IoT protocols (https://github.com/sensiasoft/sensorhub). The goal is to allow easy deployment all types of sensors/actuators (in-situ and remote sensors, mobile or static, etc.) within a cross-domain context and interconnect them through the web in a fully interoperable manner.
OpenSensorHub supports the full range of sensors and actuators (both simple and complex) while providing capabilities for discovery, quality assessment, data streaming, tasking, visualization, and processing (onboard or online). Yet a major driver for OpenSensorHub is to ultimately provide this functionality to sensor deployers and exploiters in a package that is easily deployed and configured with minimal development required. The OpenSensorHub community is focusing on all aspects of this challenge, from web service support to javascript clients to online middleware components.
The main development team for OpenSensorHub has been heavily involved for 15+ years in designing sensor web standards and implementing software solutions for interoperability of disparate sensors. This includes editorship of two of the OGC SWE specifications, chairmanship of the SWE Domain Working Group, and development of various server and client tools such as the Space Time Toolkit. But the team is very eager to work with other developers in order to grow the OpenSensorHub community and bring to reality the vision of a fully connected and interoperable web of sensors, actuators, and processes.
This presentation will provide an overview of the goals and architecture of OpenSensorHub and will define the potential roles of deployers and software contributors within the open source software community. In addition, both live and recoded demonstrations of the current capabilities of OpenSensorHub will be provided. Finally, the presentation will discuss how the FOSS4G community can help advance the project by being adopters and code contributors.
References


