

Sensor Networks & Web Enablement (SWE)

Development and Application of SWE in Healthcare, infrastructure development for rural areas, disaster management, climate change, emissions, environmental observations and agriculture. R&D proposal could concentrate on R&D and customization of the following on above directed applications vis-a-vis international Developments, particularly, Open Geospatial Consortium(OGC). The main components of SWE as defined by OGC where R&D projects could be developed are:

- 1. Observations & Measurements Schema (O&M)** – Standard models and XML Schema for encoding observations and measurements from a sensor, both archived and real-time.
- 2. Sensor Model Language (SensorML)** – Standard models and XML Schema for describing sensors systems and processes; provides information needed for discovery of sensors, location of sensor observations, processing of low-level sensor observations, and listing of taskable properties.
- 3. Transducer Markup Language (TransducerML or TML)** – The conceptual model and XML Schema for describing transducers and supporting real-time streaming of data to and from sensor systems.
- 4. Sensor Observations Service (SOS)** - Standard web service interface for requesting, filtering, and retrieving observations and sensor system information. This is the intermediary between a client and an observation repository or near real-time sensor channel.
- 5. Sensor Planning Service (SPS)** – Standard web service interface for requesting user-driven acquisitions and observations. This is the intermediary between a client and a sensor collection management environment.
- 6. Sensor Alert Service (SAS)** – Standard web service interface for publishing and subscribing alerts from/to sensors.
- 7. Web Notification Services (WNS)** – Standard web service interface for asynchronous delivery of messages or alerts from SAS and SPS web services and other elements of service workflows.