

# Semantic Geostreaming Toolkit

Geo-referenced data streams (geostream) have created major challenge on streaming management, query and integration. Semantically managing geostream data has the potential to provide better data integration and reasoning. We develop an open source Semantic GeoStreaming Toolkit (SGST) that aims to provide integrated sensor data management solution. In particular, this tool uses the Open Geospatial Consortium (OGC) GeoSPARQL recommendation and a time-annotated RDF streaming data management service developed at NCSA(National Center for Supercomputing Applications). The resulted toolkit offers geostreaming data management, fetching and RESTful web services (including [Linked Data API](#) support). We evaluate SGST with several real-world use cases including IACAT Virtual Environmental Observatory, USGS earthquake GeoRSS feeds for earthquake engineering simulation, Geo-referenced Twitter feeds for citizen sensing and Geo-referenced sensor data from field deployment in an agricultural environmental observatory and emergency management etc.

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