Semantic Enablement for Integrated Sensor Web and Spatial Data Infrastructure: Location Intelligence from Sensors (LISENS)

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Abstract: The talk is going to cover research on the development of a globally shared open spatial expert system(ES), LISENS, a first of a kind geo-enabled KBES for multiple fields, smarter cities to climate modelling. LISENS is integration of SW and SDI with domain KB on data and problems, ready to infer solutions. Semantic interoperability of SW, SDI spatio-semantic KBs with inferencing logics of geometry, topology management are critical aspects of work. The session will throw light on several well-known challenges in big data arena such as : i) how to build open source spatial ontologies for spatial phenomenon using causative factors ii) how to connect ontologies to intelligent inferencing logics iii) how to build specialized knowledge bases for a generalized spatial KBES iv) how to apply the system to automate procedures viz. urban and natural v) how to integrate sensor web(SW), other data sources and spatial data infrastructure(SDI) with open source technologies.

1. Short Biography

My areas of research and teaching being geomatics and geo-spatial technologies, I work towards intelligent geospatial analytics merging remotely sensed data, navigation technologies, informatics and GIS together, which are proving a strong platform to progress towards sustainable smart societies, and I continue my endeavour towards that goal, through research, development and teaching. I am a Marie Curie Postdoc Fellow on data-driven innovation at Edinburgh University under TRAIN@ED project. I am working with peace-building processes compiling spatial data collected online, using AI, NLP and geo-visualization. I am proposing to set up a spatial data center "PeaceTech Edinburgh" to aid United Nations peace-building tasks through geospatial intelligence.

[1]Updated information are available at
https://sites.google.com/site/bhattacharyadevanjan/home