IoT analytics: from Big data to Fast and Smart Data

IoT is all the rage nowadays, and for a good reason. It can help us out in almost every action in our lives and Businesses: from pocket-sized devices and other smart objects that we carry around or surrounding us at all times and everywhere, to smart factories and smart supply chains and recently we witness the emergence of Smart Cities.

In this context data is generated continuously as a stream by different sources such as smart objects, sensors, GPS, vehicles, stations to cite only few, with various formats such as JSON, XML, RSS, CSV … etc.

Considering the fast and massive data generated in smart cities platforms and the as well as the specific characteristics of Smart Cities Platforms regarding the need of getting them highly intuitive, interactive and adaptive (hence real time decision making and fast problem solving), approaching smart cities analytics using existing Big Data solutions seems to be an expensive and rather ineffective alternative.

In fact such solutions suffer from two major drawbacks: Semantic heterogeneity of generated data and the Scalability of data streams processing platforms.

In this talk Conceptual, technical and technological perspectives bringing together Fast Data, Smart Data and Soft Computing for IoT analytics will be discussed and explored.

Visualization and Research Reproducibility?

Nowadays, running tests and visualize simulations becomes an essential part of scientific findings validation and experimentation. It becomes crucial to researchers to launch simulations and scripts to evaluate and test their models and algorithms on computer platforms. However, research dissemination methods suffer from a major lack in that they do not allow real test of the code and scripts used to validate the findings in the published papers. Furthermore, conventional simulation software have solely been designed to allow online and crowd sourcing, testing and visualization of implementations and experimentations outcomes.

In this speech, I'll try to review the on-going development project of Exec&Share Platform as a Service simulation suites dedicated to research community. "Exec&Share" is supported by many academic and research organizations in many countries.

The platform enables scientists to openly collaborate, share and visualize the outcome and data underlying their research publications.

Relying on the powerful parallel processing feature of the grid-based platform and on its innovative concepts, the platform provides a Benchmarking features i.e. it allows launching effortlessly and simultaneously a collection of simulations codes and scripts using the same set of input data

and the same or different running environments. Furthermore, the recent development of the platform will allow a very sophisticated features of Visual simulation and interactive visualization dedicated to many very important research domains including Bio-technology and Visualization of high frequency financial data.

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Biography: completed his Diploma in Computer Engineering. Then he obtained his masters in Computer Science (Information systems) in INSA Lyon- France and then his Phd from INSA Lyon, in collabration with the university of the Ryukyus, Japan.

In 2003, he underwent training in Development and Implementation program in Computer Software Applications in CMC-TATA, New Delhi, India. In the same year, he also underwent another training in Information and Communication Technologies in MEIO University and Okinawa International Center, Japan. In 2008, 2009 2010, 2012, 2013 and 2014 he did many research stays on Digital Rights Management and image processing in the University of the Ryukyus and Ritsumeikan University - Japan. During the period 2000-2010, he worked as lecturer and assistant professor, did his research and taught Computer Engineering and Information Systems in many universities including INSA, Lyon, the university of the Ryukyus in Japan, Beijing University of Technology, South China University of Technology China, and the Insitute of Visual Informatics in Malaysia. Since September 2010 he is associate professor in EFREI, a French engineering school located in Paris. He is also the head of the Business Intelligence Program at EFREI, president of Olab-Dynamics Association for
Interdisciplinary Scientific Cooperation and Technology Transfer. His is a research fellow in many international institutes.
His main topic is Collaborative Information Systems. This involves many topics including Web 2.0, , IS Architecture, IoT Security, Cloud Computing, SaaS, Semantic Web and semantic SOA.