

A few thoughts on Big Data.

An FDC perspective

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Caveat

Not a “me too” please!

Many Societies involved in BD

- That's quite all right!

- > Big Data is about **sourcing**:
sensors, signal processing, IoT ...
- > Big Data is about **transport**:
architectures, protocols, caching, mirroring ...
- > Big Data is about **processing**:
computation, data analytics
- > Big Data is about **application fields**:
genomics, market analyses, customer care ...
- > Big Data is about **ambients**:
Smart Cities, Power Grids, Health Care ...

Plenty of technologies in the BD space

Hype Cycle for Big Data, 2013



Source: Gartner

<http://whatsthebigdata.com/2013/11/20/gartner-hype-cycle-for-big-data-2013/>

BD is part of a bigger puzzle



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BD is part of a bigger puzzle

☼ Public Institutions

- ODF

☼ Regulators

- EU vs US



www.themetisfiles.com

The 4 Vs

■ Volume

- 1 GB and then 1TB used to be BIG
- Perception of BIG related to
 - * Storage
 - * Computation
 - * Algorithm
 - * Rendering
- Result of processing
- **Can architectures scale?**

The 4 Vs

■ Volume

■ Velocity

- Absolute velocity of incoming data
- Sampling rate
- Processing architecture (centr. - distr.)
- **How can consistency be ensured?**

The 4 Vs

■ Volume

■ Velocity

■ Variety

- Differences beyond independent sources
 - * different metrics
 - * different stability
 - * different credibility
- **How to compare Apple and Oranges?**

The 4 Vs

■ Volume

■ Velocity

■ Variety

■ Value

- **Who benefits?**
- **Who is Accountable?**
- **How are Sources rewarded?**

A new Tack to Big Data

- Why

> Big Data is at the top of the Hype Curve



- > Big Data can be seen as a Fabric rather than an Infrastructure or collection of Silos
- > IEEE has Data. Are these BIG DATA?
- > We might have 3Vs, for sure we haven't pursued the 4^o V

A new Tack to Big Data

- Why

- Provide a Framework

- > Analytics, Economics, Psychology of Perception, Rendering, Security, Trust
- > Ontologies (in tech area) / Standardization
- > Platforms and Architectures (Open Data, 5 STAR,...)
- > Regulatory aspects in a global context

A new Tack to Big Data

- Why
- Provide a Framework

- Walk the talk

- > IEEE has plenty of Data: It is time to leverage them
- > Re-engineering processes for data acquisition
- > Create meta-data ... information

Can we walk the talk?

A new Tack to Big Data

- Why
- Provide a Framework
- Walk the talk

- Explore Opportunities

- > Provide free insight to our members
- > Create summaries on what is going on as paid services
- > Provide information as a service to indiv. & companies

Big Data Implication

- Legal Aspects

- > Don't ask the lawyers if we can do it
- > Ask them to help us to do it
- > Likely need to redraft our relation with authors, speakers
why not?

Big Data Implication

- Legal Aspects

- Organisational Aspects

- > Who owns the various data today?
 - IEEE Explore
 - Social Media
 - Conference attendance
 -
- > Change the way reviews are processed
 - keep tab on both rejected and accepted papers
- > Change the way conferences are run
 - data collection from many sources

Big Data Implication

- Legal Aspects
- Organisational Aspects

- Technical Infrastructure

- > Connect the Data Bases
- > Create API for third Parties
 - hey, aren't we talking about Open Data?
- > Support Processing in the Cloud
- > What, when, how much does it cost?

Big Data Implication

- Legal Aspects
- Organisational Aspects
- Technical Infrastructure

- Economic Aspects

- > What should be sell vs what shall we provide
 - to our membership
 - to the Market
 - to Data Crunchers
 - to Data Intelligence companies
- > what biz model(s)

What about a Pilot?

■ Identify

- > an area
- > a champion
- > a few partnering Societies

■ Define

- > the expected output
- > the roadmap

■ Ensure

- > FDC Support
- > Legal, IT, Mkt involvement