Classification of Types of Big Data

The following classification was developed by the Task Team on Big Data, in June 2013. Comments and feedback are welcome.

1. Social Networks (human-sourced information): this information is the record of human experiences, previously recorded in books and works of art, and later in photographs, audio and video. Human-sourced information is now almost entirely digitized and stored everywhere from personal computers to social networks. Data are loosely structured and often ungoverned.

   1100. Social Networks: Facebook, Twitter, Tumblr etc.
   1200. Blogs and comments
   1300. Personal documents
   1400. Pictures: Instagram, Flickr, Picasa etc.
   1500. Videos: Youtube etc.
   1600. Internet searches
   1700. Mobile data content: text messages
   1800. User-generated maps
   1900. E-Mail

2. Traditional Business systems (process-mediated data): these processes record and monitor business events of interest, such as registering a customer, manufacturing a product, taking an order, etc. The process-mediated data thus collected is highly structured and includes transactions, reference tables and relationships, as well as the metadata that sets its context. Traditional business data is the vast majority of what IT managed and processed, in both operational and BI systems. Usually structured and stored in relational database systems. (Some sources belonging to this class may fall into the category of “Administrative data”).

   21. Data produced by Public Agencies
      2110. Medical records
   22. Data produced by businesses
      2210. Commercial transactions
      2220. Banking/stock records
      2230. E-commerce
      2240. Credit cards

3. Internet of Things (machine-generated data): derived from the phenomenal growth in the number of sensors and machines used to measure and record the events and situations in the physical world. The output of these sensors is machine-generated data, and from simple sensor records to complex computer logs, it is well structured. As sensors proliferate and data volumes grow, it is becoming an increasingly important component of the information stored and processed by many businesses. Its well-structured nature is suitable for computer processing, but its size and speed is beyond traditional approaches.

   31. Data from sensors
      311. Fixed sensors
         3111. Home automation
         3112. Weather/pollution sensors
         3113. Traffic sensors/webcam
         3114. Scientific sensors
         3115. Security/surveillance videos/images
      312. Mobile sensors (tracking)
         3121. Mobile phone location
         3122. Cars
3123. Satellite images

32. Data from computer systems
   3210. Logs
   3220. Web logs