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## Learning from physics research to tackle big data

Scientists at CERN are using big-data techniques to process 15 petabytes of information a year to piece together what our universe is made of.

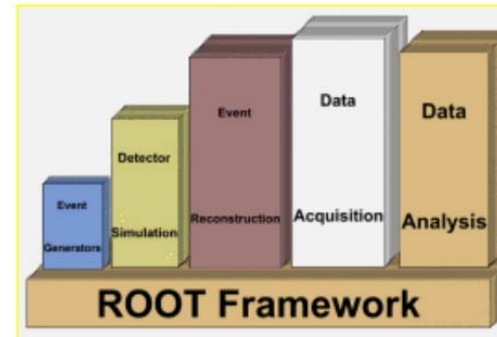


by [Dave Rosenberg](#) | September 23, 2011 2:42 PM PDT

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Companies are increasingly collecting amounts of digital information that are so large as to be unwieldy. It's no surprise that finding a way to securely store, categorize and recall this information efficiently is a huge advantage for any enterprise or organization.

The growth of information has introduced an entirely new category of software in the [big-data](#) arena, which includes a variety of databases, processing engines, and applications. The main objective of all of these tools is to make data more malleable and consumable so that it can be used



ROOT framework  
(Credit: [CERN](#))

A highly topical interdisciplinary field of research

- \* CERN, astronomy (cosmic surveys): Petabytes of data
- \* Bioinformatics: genome analysis is Big Data!
- \* Economic data: e.g. what, when, where offer?
- \* Social networks: What statements are in the “social graphs” of Facebook friendships?

Developments since 2012:

- \* International keynote speeches at DPG Spring Conference
- \* Foundation of a dedicated trade journal
- \* U.S. Government Big Data Initiative: Bundling existing programs and increasing them by \$200,000,000.

Growth of commercial data volume: approx. 70% / year