Information Management in the Year 2016

Major Accomplishments and Unsolved Challenges

Jennifer Widom
2016: Major Accomplishment #1

World’s bytes accessible by web search

• Deep web is crawled
• Painless, seamless global data sharing and access
• “If Google hasn’t found it, it doesn’t exist”
DBMS’s are fully self-managing

- Or else all critical data is served from a developing nation with cheap labor
2016: Major Accomplishment #3

Osama bin Laden’s location identified using data integration and mining techniques

- Unfortunately by the time the data analysis finished he was long gone
2016: Unsolved Challenge #1

World’s bytes ever actually read → 0

Bytes written

Gap between size/diversity of data and ability to process it grows without bound
Spam!

Regardless of the new technology, spammers will adapt.
2016: Unsolved Challenge #3

A general solution to information integration
• System, syntactic, and semantic

Still unsolved in 2026
2016: Unsolved Challenge #3

A general solution to *information integration*
- System, syntactic, and semantic

Still unsolved in **2026, 2036**
A general solution to information integration

• System, syntactic, and semantic

Still unsolved in 2026, 2036, 2046
A general solution to *information integration*

- System, syntactic, and semantic

Still unsolved in **2026, 2036, 2046, ...**