

Archive Requirements and 2020 Outlook for Tape MSST 2014

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Long-Term Archiving Community Needs: Who the Users Are

Organizations subject to government regulatory compliance requirements

- Industry analysts estimate there are over 150 state and federal laws
 - well-known examples are Sarbanes-Oxley, HIPAA
- Data retention is a cost of doing business

Companies whose business is data retention: (e.g., Flickr, SmugMug, Facebook)

- Data retention is what the customer pays for or why they come

Companies whose value is their data (e.g., Google, Netflix?)

- Data retention is key to the business' value

Any organization that looks at data as an asset (government, surveillance, health care, scientific, M&E, TelCo, “Big Data” companies, etc.)

Long-Term Archiving Community Needs: Challenges for Users

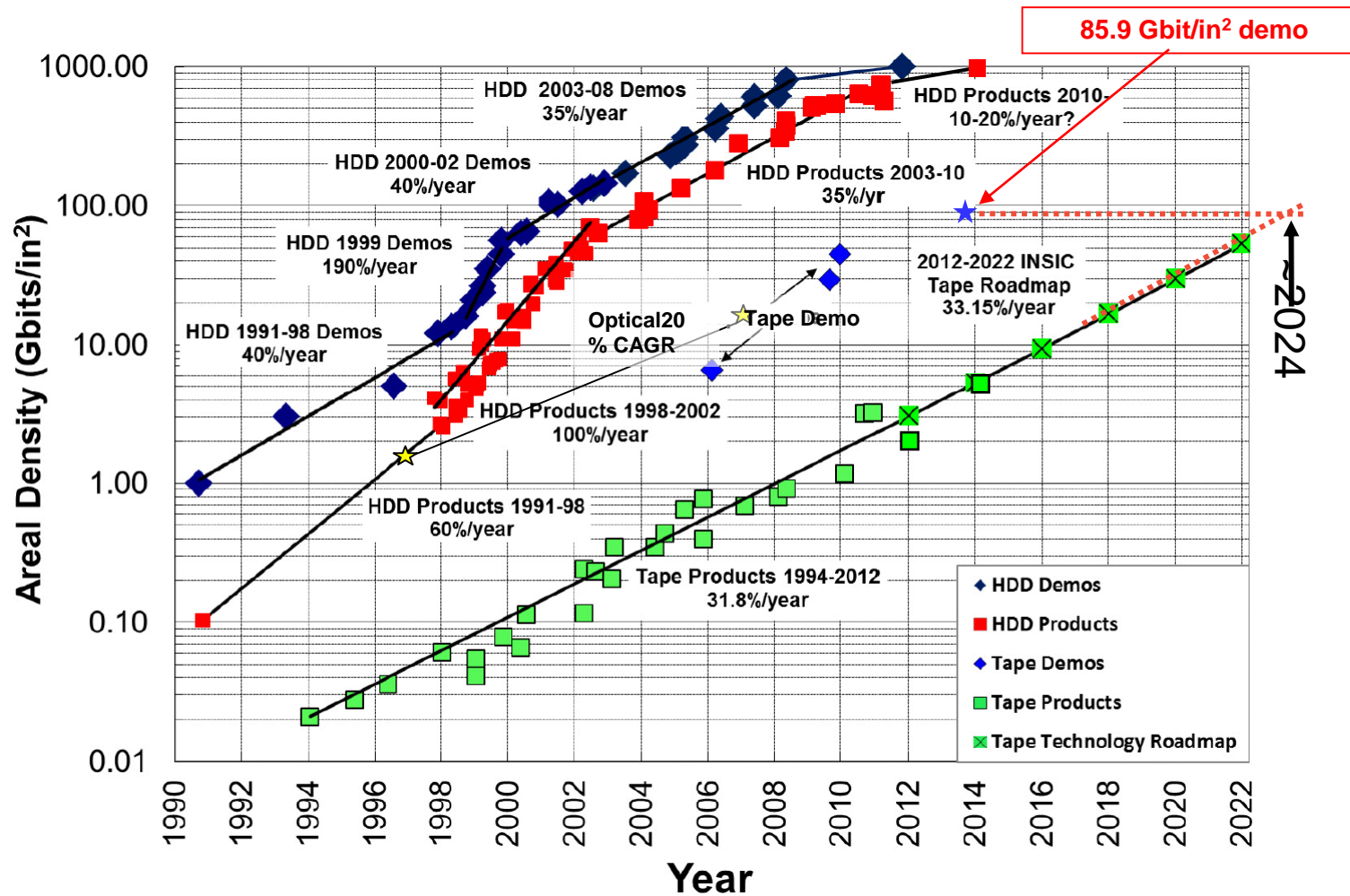
Operational challenges

- cost (\$/GB, TCO)
- access time requirements
- access density (e.g., how many files/GBs per day?)
- volume of data
 - CAGR of data becoming > CAGR of disk storage
- safety

Technology challenges

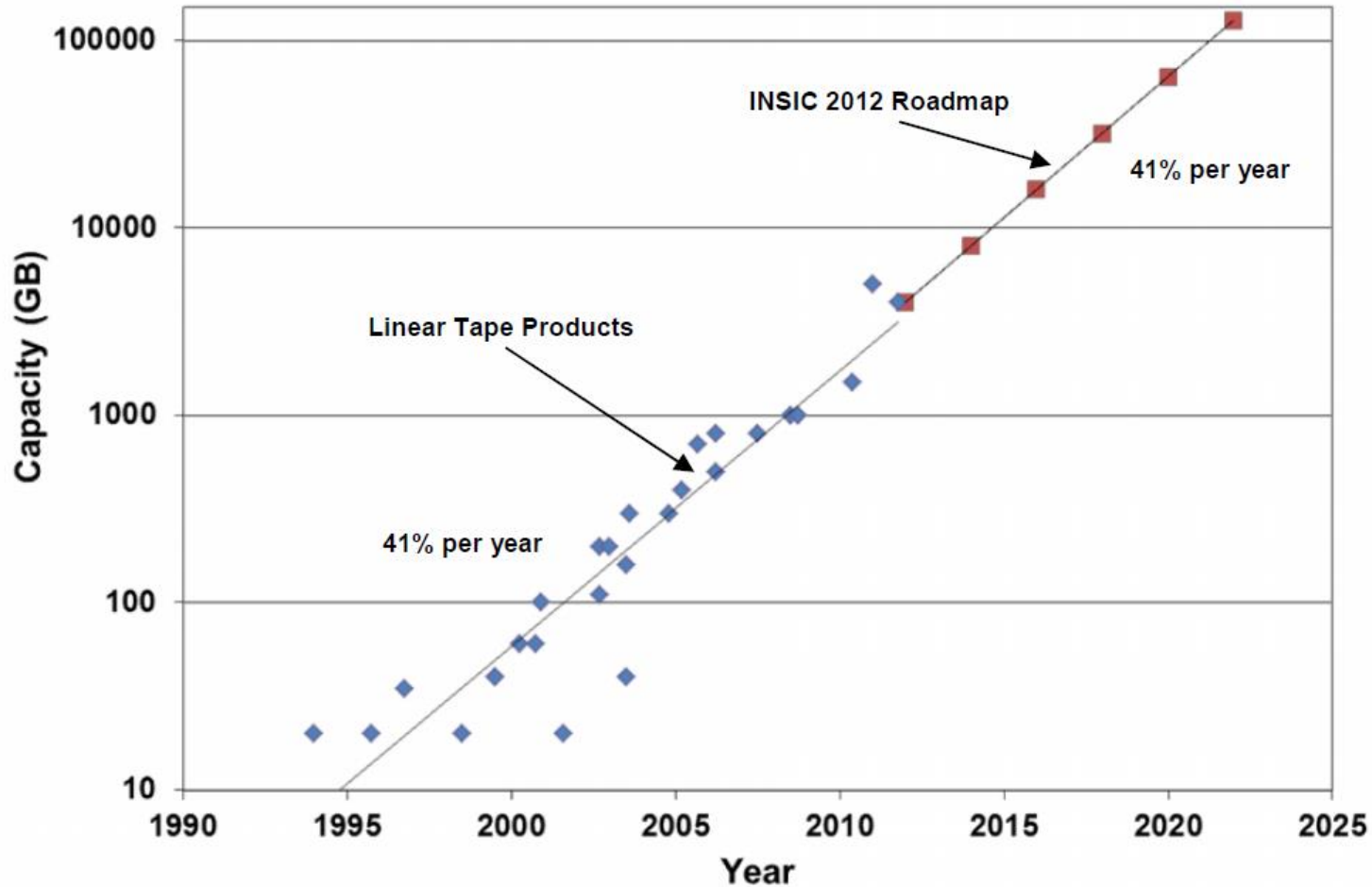
- media lifetime
- device availability lifetime
- open vs. proprietary formats
 - multiple vendor options

Media, Now and 2020: Storage Technologies Areal Density Trends



(Sources: INSIC 2012-2022 International Magnetic Tape Storage Roadmap, Mark Lantz, IBM Zurich)

Media, Now and 2020: Tape Cartridge Capacity Trends



(Sources: INSIC 2012-2022 International Magnetic Tape Storage Roadmap)

Interfaces, Now and 2020

Physical Interfaces

- converged networking (e.g., FCoE, RoCE)
- local and network* storage indistinguishable?
 - maybe not in 6 years, but inevitable?

Logical Interfaces

- file vs. object
 - unimportant, we'll use what's convenient for access model

needed

- local vs. network
 - no difference (see above)

* will we have outgrown the term “cloud” by 2020? I hope so.