Storage Business Concerns

- Data growth up to 100% yearly
- Over 160B gigabytes created last year*
- Meeting performance SLA’s are a challenge
- Data archive and disaster recovery are critical
- Compliance and data security issues
- Managing TCO and energy costs a must

“Estimate that for every dollar spent on computer hardware, another 50 cents is spent on energy.”*

Source: Industry analyst.
Market Characteristics

- Optical growth rates projected to be slightly below storage market average
- Optical opportunity about 1/3 of next smallest segment
Historical Data Hierarchy

- Disk a performance choice, Tape a cost choice
- Optical a compromise with better cost than disk, and better performance than tape, plus compliance values

For large enterprise customers and large capacity installations, the solution is combined disk and tape:
- Lower disk costs, including SATA
- Blended performance characteristics
- Higher capacity tape
- WORM on disk and tape, encryption on tape
- Standardization (LTO)

For low end and consumer storage, disk and optical are the choice:
- Optical capacity points are sufficient
- Optical media is standard for video distribution
- Removability provides interchange
Information Security is a major emerging need

- **High performance**
  - Compress the data then encrypt
  - Encryption at tape drive speeds
  - Off-loads encryption task from servers

- **Cost effective**
  - Leverages existing tape automation infrastructure
  - Can eliminate need for encryption appliances

- **Addresses management of encryption keys**
  - IBM Encryption Key Manager a component of the Java Platform
    - 2 Key Management Methods (Library, System)
    - Integrates with System z cryptographic security systems
  - Tivoli Storage Manager encryption key management
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