

The future of storage, simple and intelligent

Ed Lee

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Storage follows computing

Computing

1980

2000

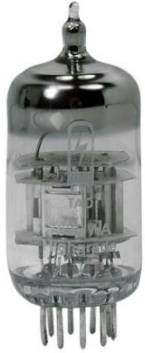


Storage



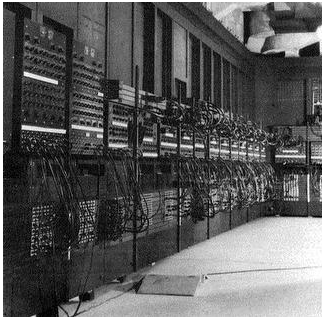
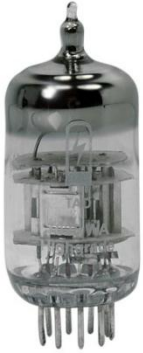
Semiconductor Technology

Smaller, faster, denser



Computing Technology

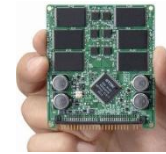
Smaller, faster, denser



Simple, intelligent

Storage Technology

Smaller, faster, denser



Flash



Simple, intelligent

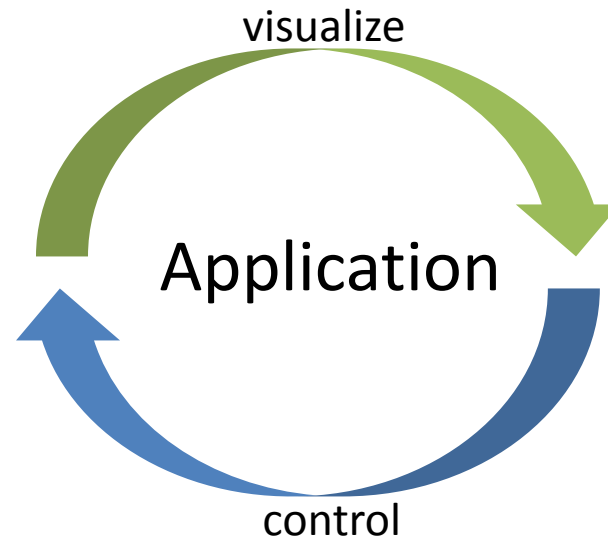
Is flash SSD just a faster hard disk?

- 400 times faster than a hard disk!
 - Speed of sound is “only” 250 times faster than walking
- Eliminates a key mechanical barrier to scaling computing systems

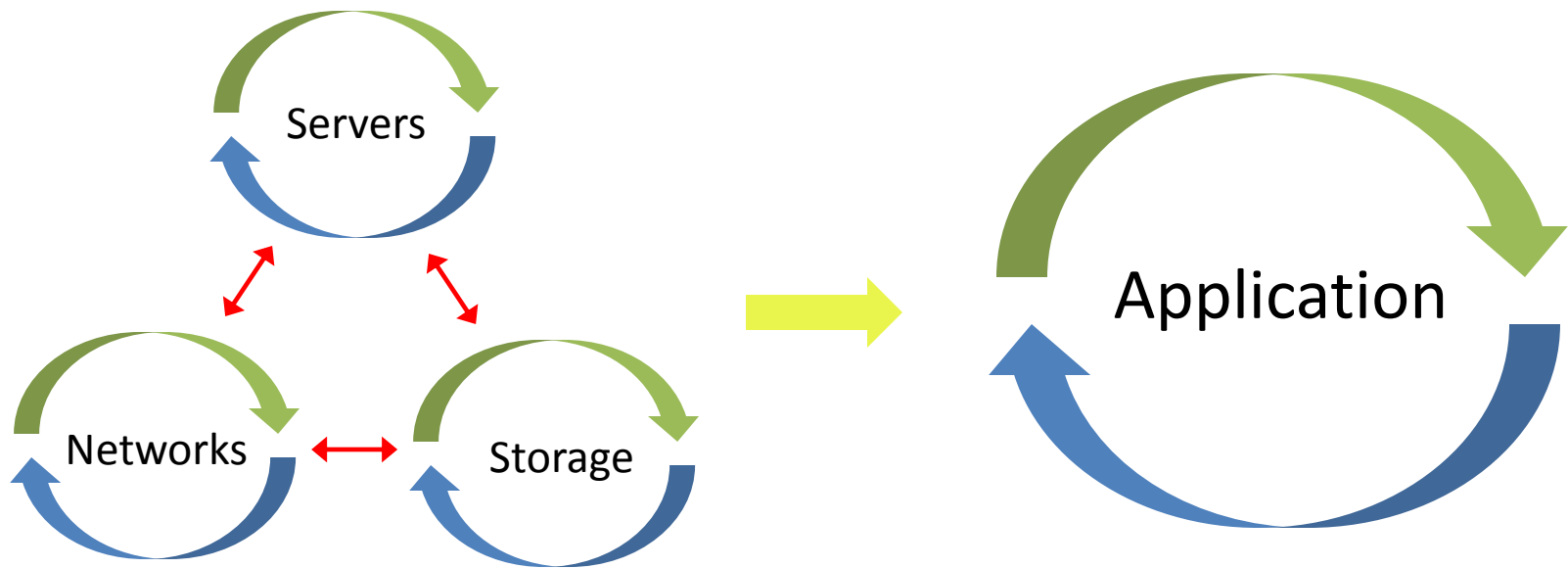
SSD is a new building block



Simple, intelligent, application-aware



Need simpler “user models”



Challenges

- Visualize the complete system, end-to-end
 - Collect information + analysis
- Easy to control the system
- Traditionally hard for certain tasks
 - Bottleneck identification
 - Quality of service
 - Application-level impact

Intelligent systems

- **Aware of target applications**
 - Virtualization
 - Databases
 - Cloud
- **Aware of operating environment**
 - Network configuration and status
 - Storage configuration and status
- **Simple, direct user interaction models**
- **How will intelligent systems cooperate?**
 - Meetings?