

LSI LOGIC®

LSI – Preparing for Petascale Computing

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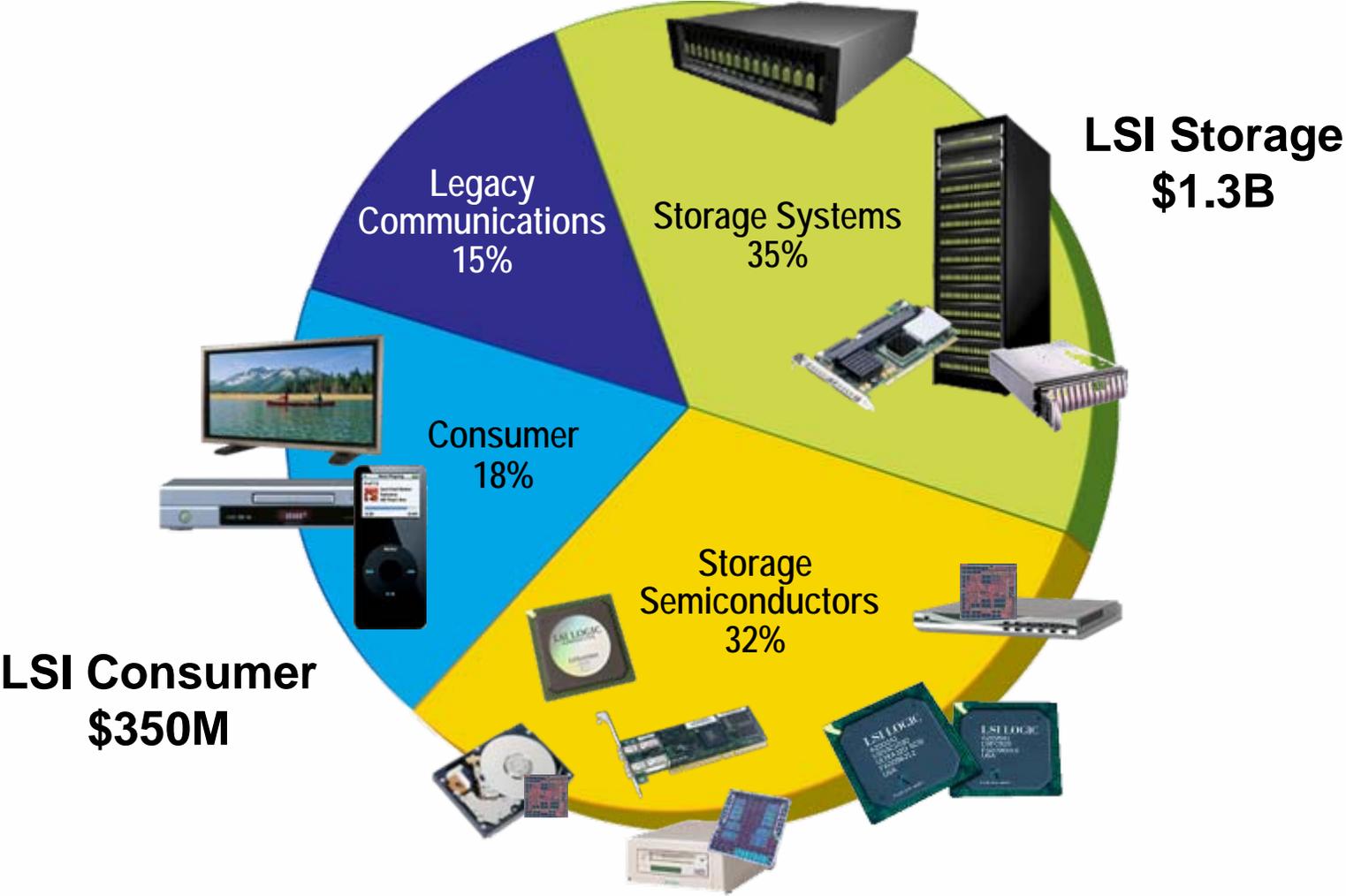
25
YEARS

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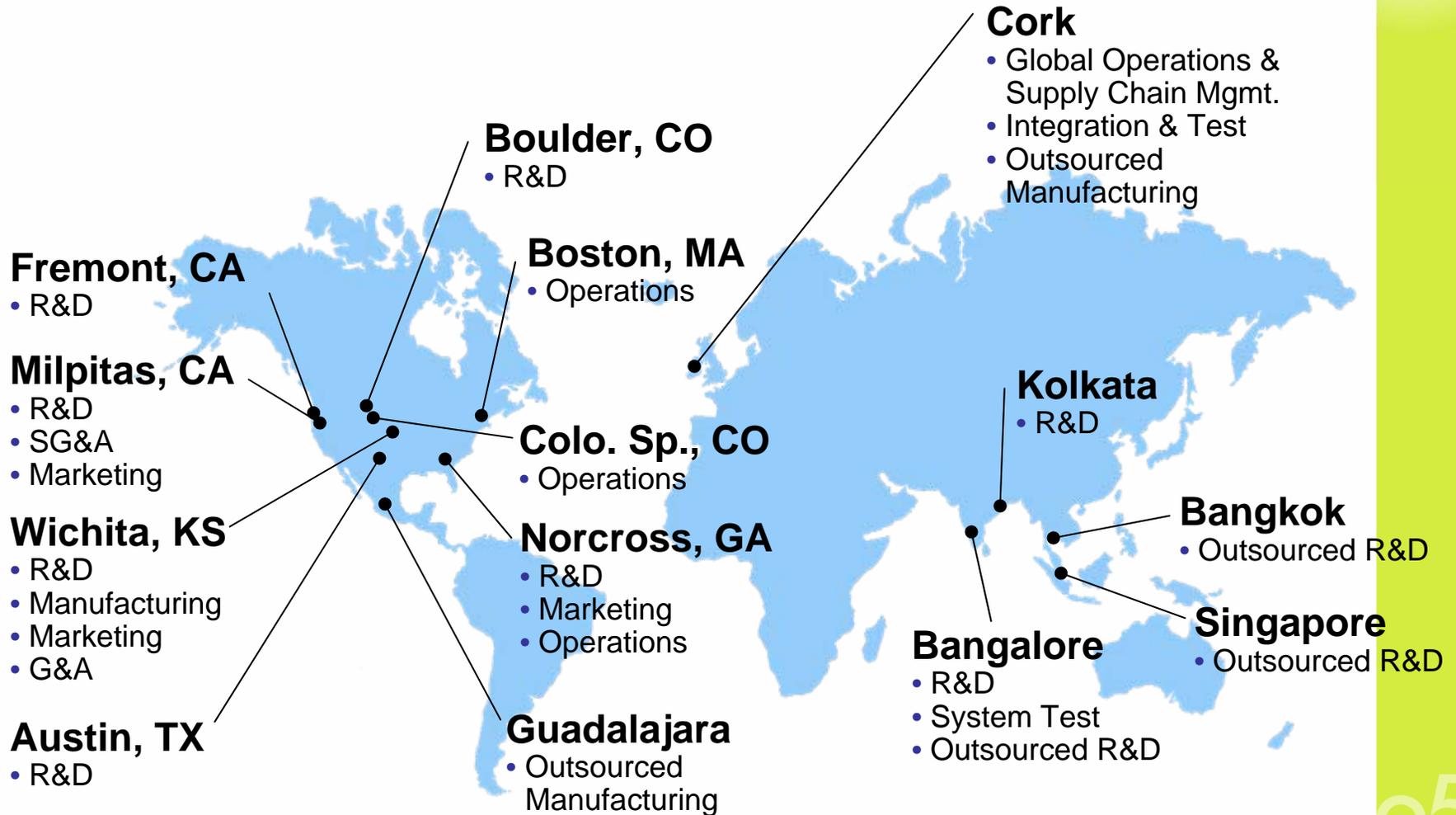
2005 LSI Revenue Profile



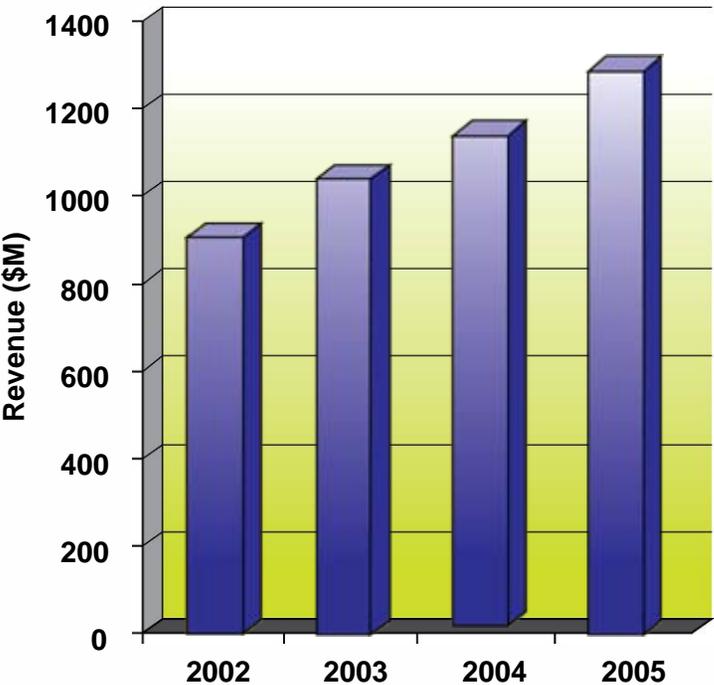
Total LSI Revenue = \$1.92B



Global Infrastructure

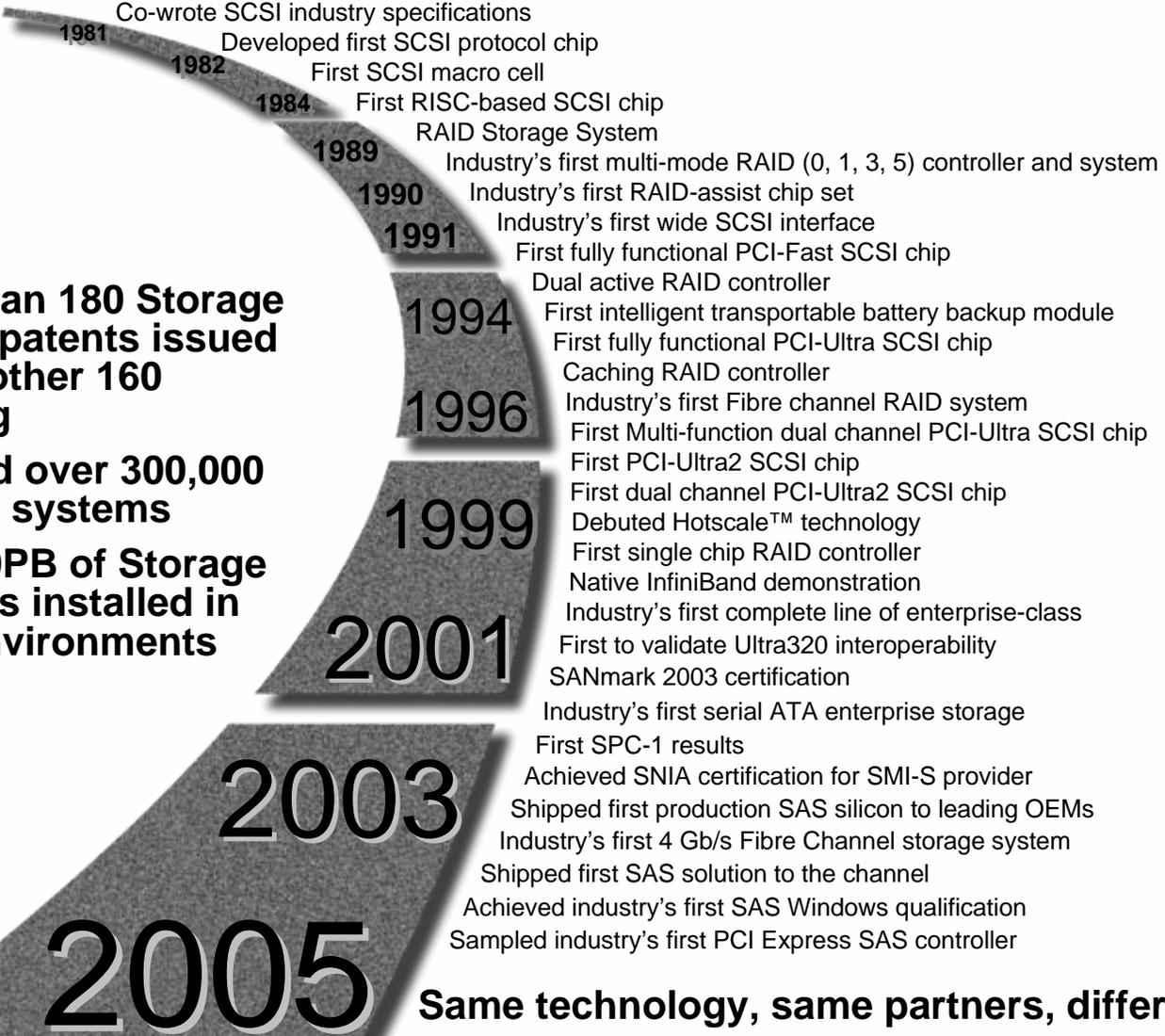


LSI Storage Growth



25 YEARS

25 Years of Storage Innovation

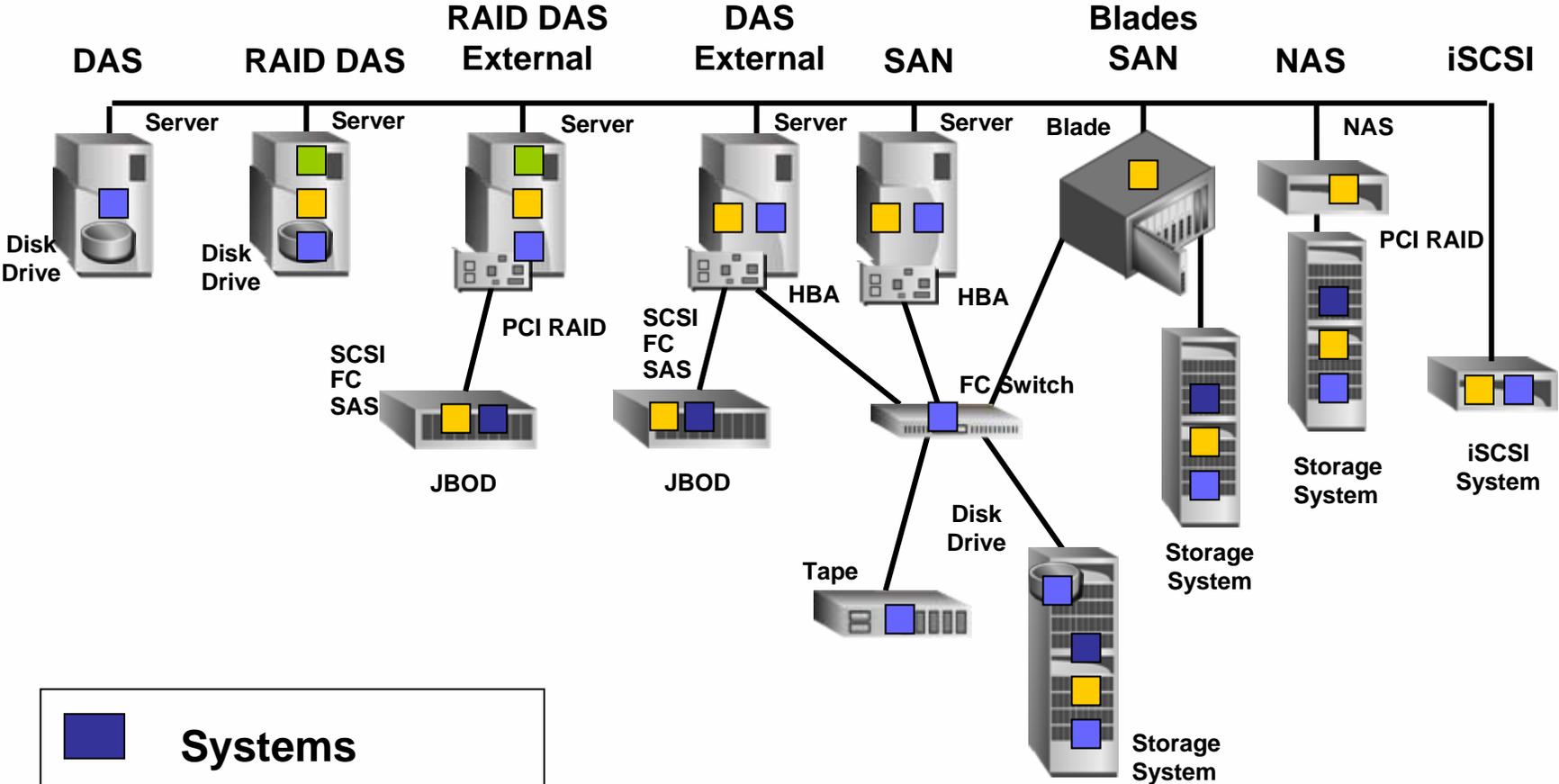


- ✓ **More than 180 Storage related patents issued and another 160 pending**
- ✓ **Shipped over 300,000 storage systems**
- ✓ **Over 40PB of Storage Systems installed in HEC Environments today**

Same technology, same partners, different names...

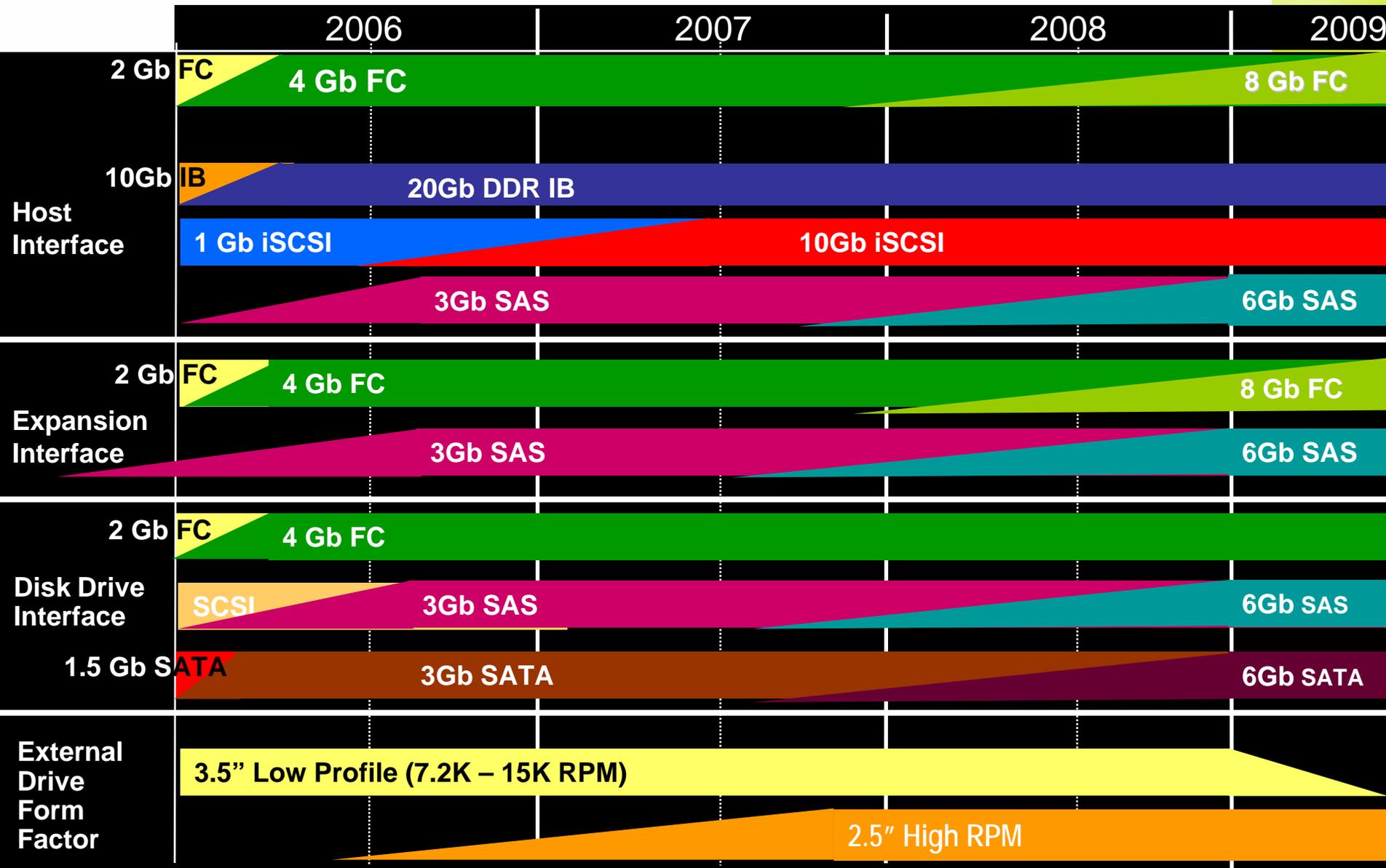


LSI Storage Footprint

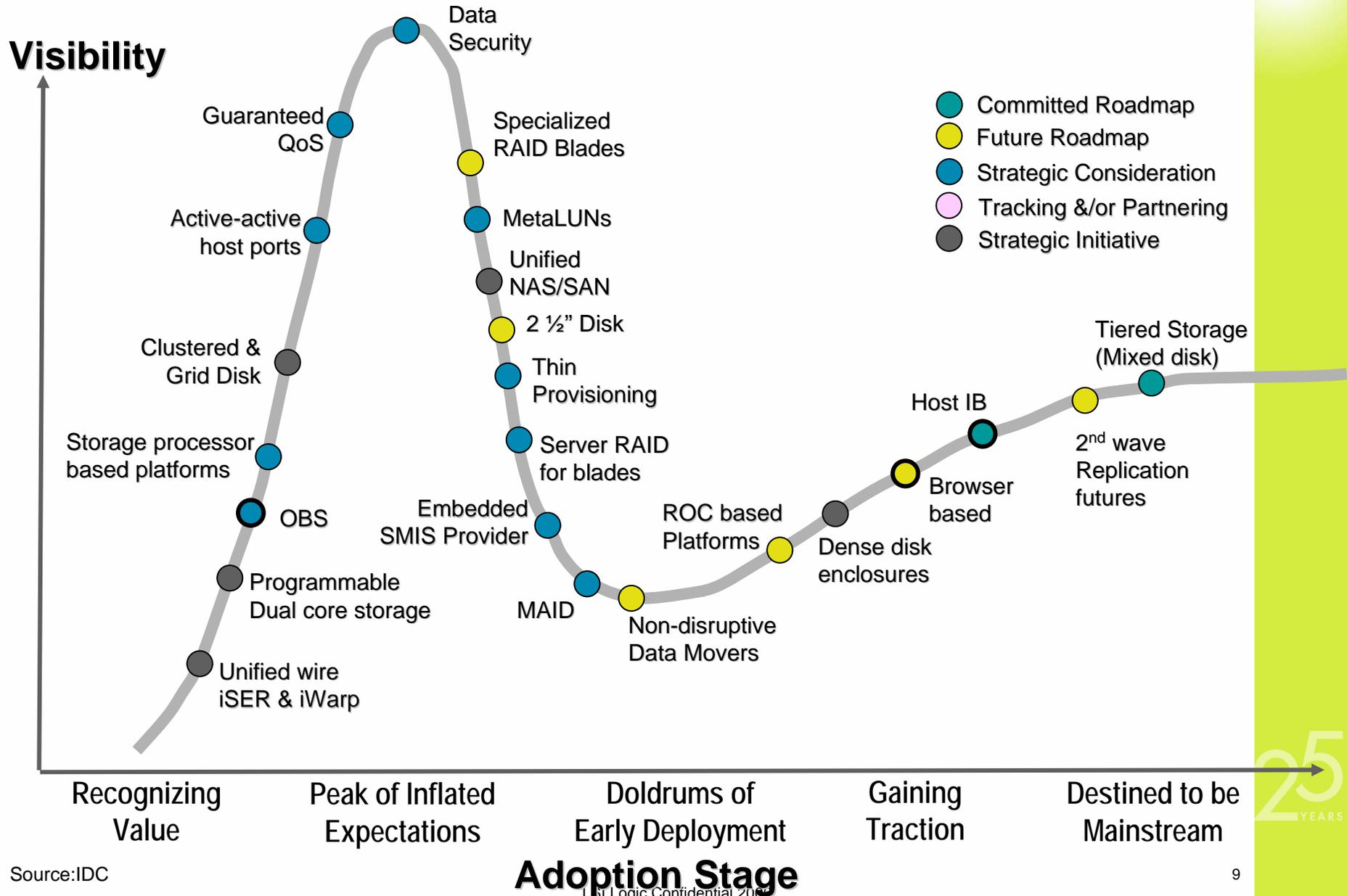


	Systems
	Board Level
	Standard Silicon
	Custom Silicon

Technology Roadmap – Industry View



Technology Watch List "Planning Dashboard"



Technology Trends

- **The Fundamentals**
 - Power/Cooling
 - Disk Density
 - I/O Interfaces

- **Innovation at the Fundamentals**
 - RDMA
 - Multi-Core Processors
 - Object Based Storage

- **Data Management**
 - Continuous Data Protection (CDP)
 - Predictive Failure Analysis (PFA)

- **Standards**
 - Storage Bridge Bay
 - IBTA+OFA
 - T10, TCG, IEEE, DMTF, SNIA, OASIS, IETF, T11, T13
 - Storage Performance Council (SPC)

Complete Data Protection Solutions

External

PB 5-6



PB 4

SANtricity



PB 1-3



Internal

HBAs
SW RAID

MegaRAID



- Robustness
- Interoperability
- Common Management Software
- Scalability
- Investment Protection

Manage

Protect

Move

Connect

25
YEARS

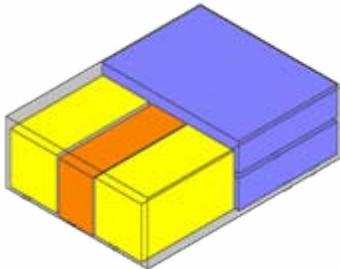
SS3600 (PB 1-3) Enclosure



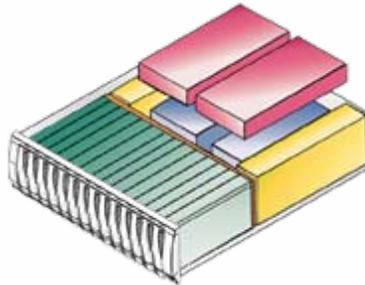
- 2U, 12 Drive SAS/SATA Enclosure
 - JBOD or drive expansion module SAS-SAS/SATA ESM
- Integrated controller module
 - 4Gb FC-to-SAS/SATA
 - 3Gb SAS-to-SAS/SATA
 - 1Gb iSCSI-to-SAS/SATA
- RoHS and WEEE compliant

Modular Hardware Components (PB 4-6)

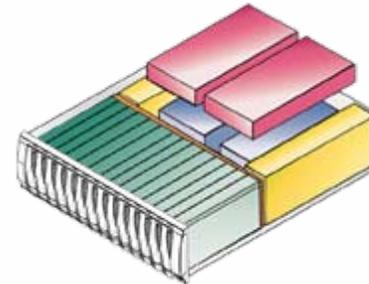
699x



399x



FC4600



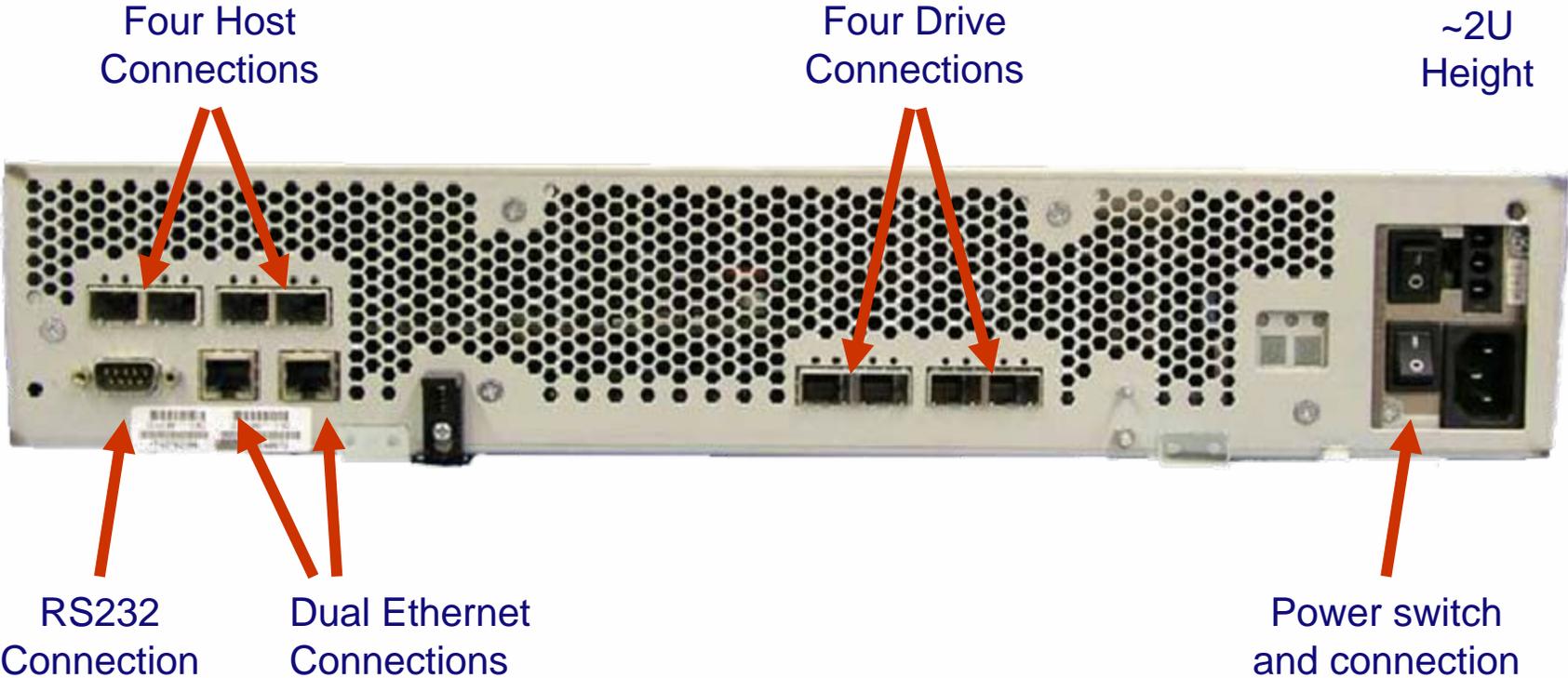
Controller Module	Embedded Controller	Drive Module
<ul style="list-style-type: none"> • Dual-active controllers • 8 host/SAN connections • 8 drive loops • Ethernet connections • Hot-swappable FRUs 	<ul style="list-style-type: none"> • Dual-active controllers • 4 or 8 host/SAN connections • 16 FC and/or SATA Drives • Redundant pathing • Hot-swappable FRUs 	<ul style="list-style-type: none"> • 16 FC and/or SATA Drives • Loop or switched architecture • Redundant pathing • Hot-swappable FRUs

FC4600 – (PB 4-6) Enclosure



- 3U, 16 Drive, 3 ½" Drive Enclosure
- Integrated controller module or SBOD expansion
 - 4Gb FC
 - Infiniband
 - 16-Port Managed Switch
- Supports 2Gb and 4Gb Fibre Channel and/or 3Gb SATA drives.
- Drive CRU is common between PB13 and PB46
- RoHS and WEEE compliant

6998 FC4 Controller Module



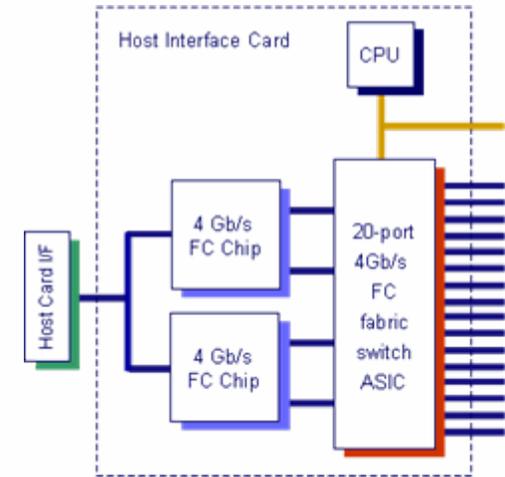
6498 Infiniband Controller Module



- Using host daughter card technology
- Does not increase controller's host-side bandwidth
- Limited release (HPC)
- Only for Linux (not all variants)

699x-ES Overview

- 6998 controller with embedded switch
 - 16 external ports, 4 internal ports
 - All ports capable of auto-negotiation
- Full fabric services and interoperability
 - Supports WWN Zoning
 - Compatible with other major switch vendors
 - Will certify with an extensive compatibility matrix
- An easy-to-use interactive GUI for management
 - Uses Ethernet port for management and configuration
- Does not increase controller's host-side bandwidth



RJ-45
Ethernet

Sixteen
4 Gb/s SFP
Host Interfaces

Finally

- New technology demonstrations at SC06
- Follow-on discussions?

Questions

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