



The SCSI Franchise Adapts for Solid State Storage

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SCSI Adapts for Solid State Storage

- Optimized Solid State SCSI Initiative
- Advances in SCSI for FLASH
- Express Bay
- Beyond 12Gb/s SAS
- SCSI Futures

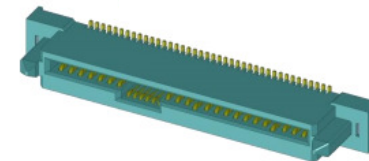


SCSI SF

Optics



SCSI EXPRESS



SCSI is Everywhere!

- Operates Over Numerous Transport Layers
 - ATAPI (ATA, SATA)
 - USB
 - Memory sticks
 - FireWire®
 - Infiniband®
 - iSCSI
 - FC
 - FCoE
 - Parallel SCSI
 - SAS



USB



Firewire



INFINIBAND™



Parallel
SCSI



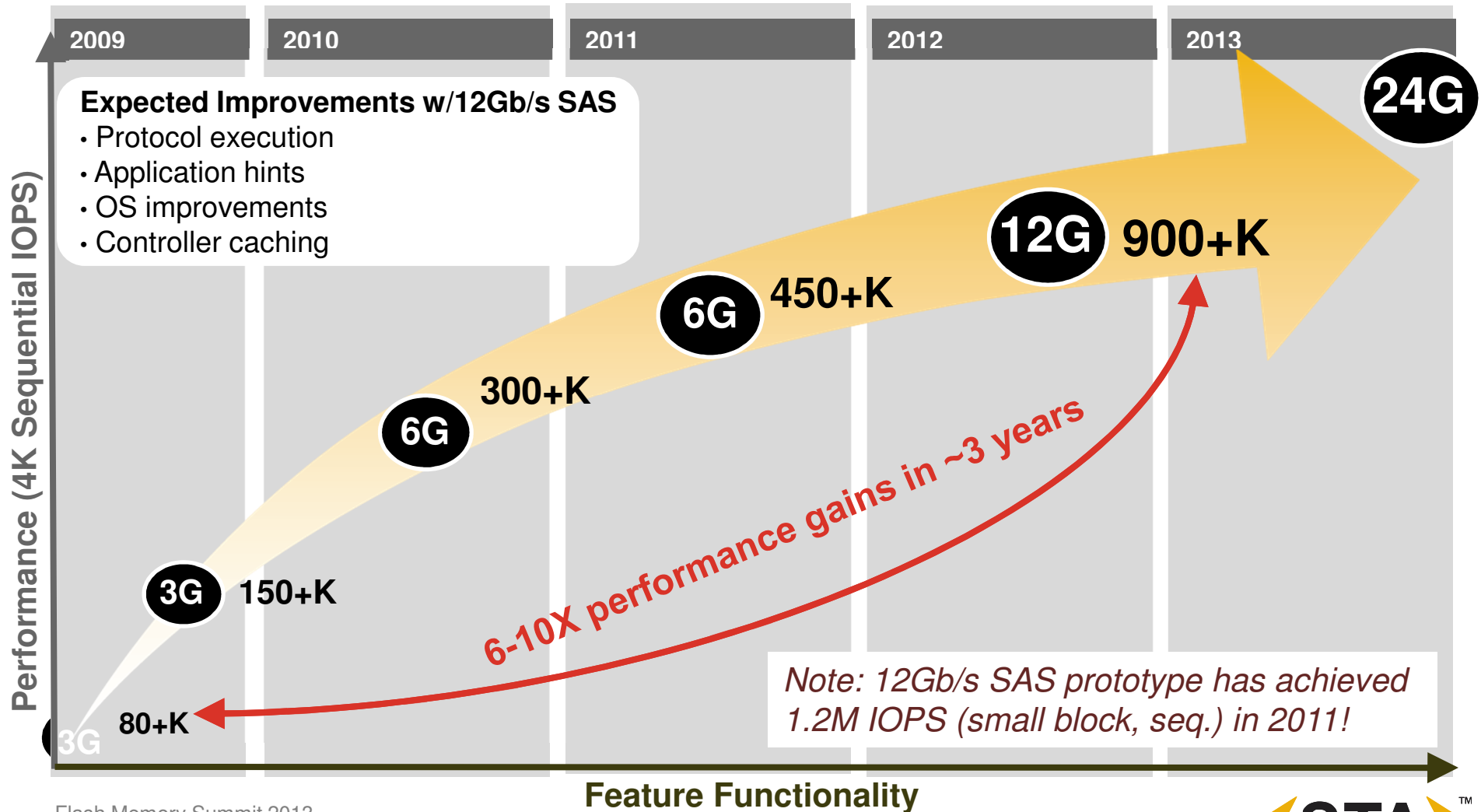
Serial
Attached
SCSI

The Most Widely Implemented Logical Storage Protocol



SAS Continues to Evolve

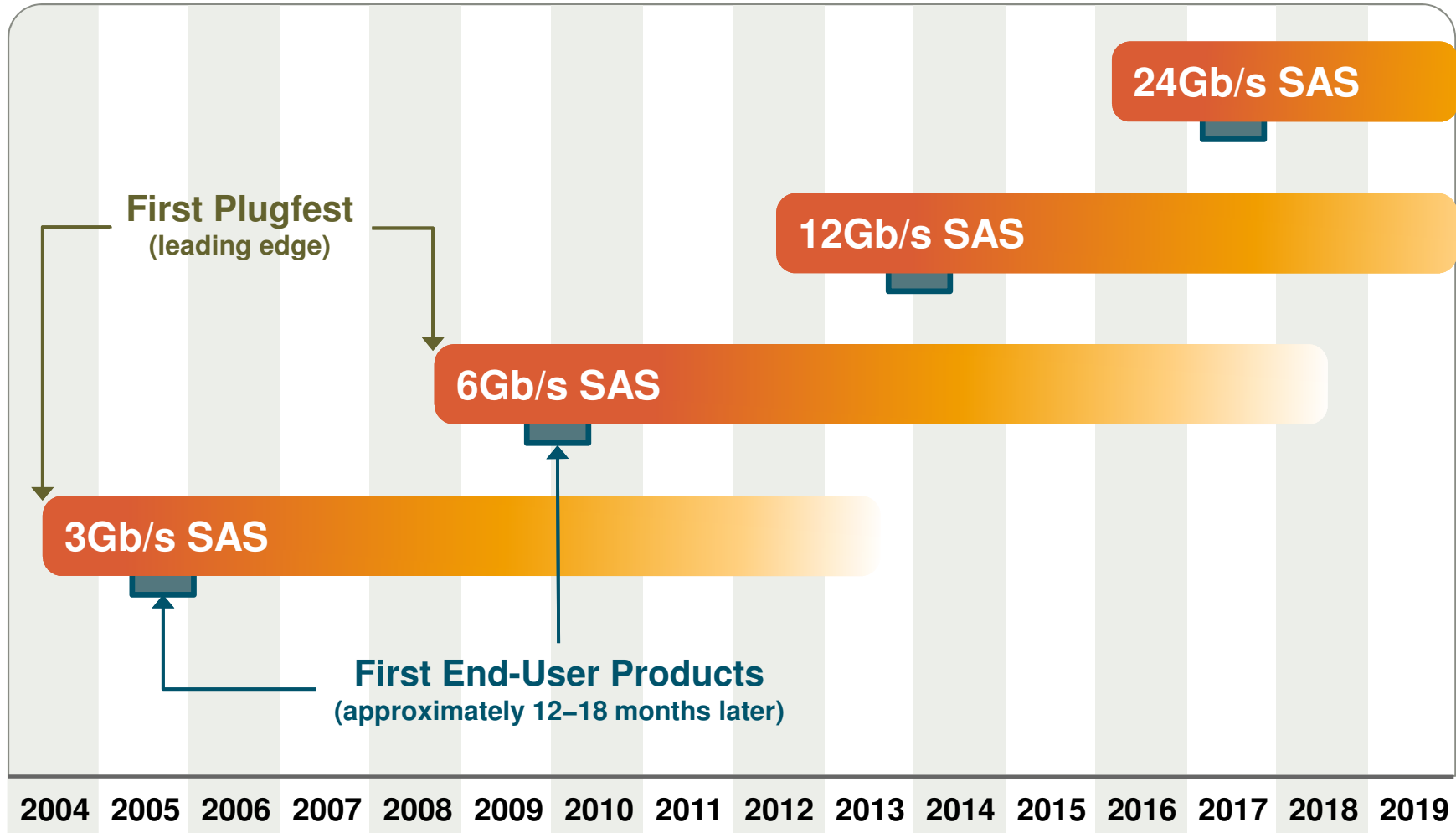
- Performance Gains without Protocol Changes



SAS Continues to Evolve

- SAS roadmap moving forward
 - 24 Gb/s SAS specification in development
 - Preserve 6Gb/s SAS, 12Gb/s SAS, and 6 Gb/s SATA usage models and compatibility
 - 12Gb/sec SAS controllers now shipping at >1 million IOPs
- Proven Reliability, High Availability, and Serviceability
- SAS Ecosystem in Place
 - Test & measurement equipment
 - Internal & external connectors and cabling
 - HDDs and SSDs shipping today

SAS Roadmap



** SAS Roadmap updated Sept. 2010.*

SCSI Express

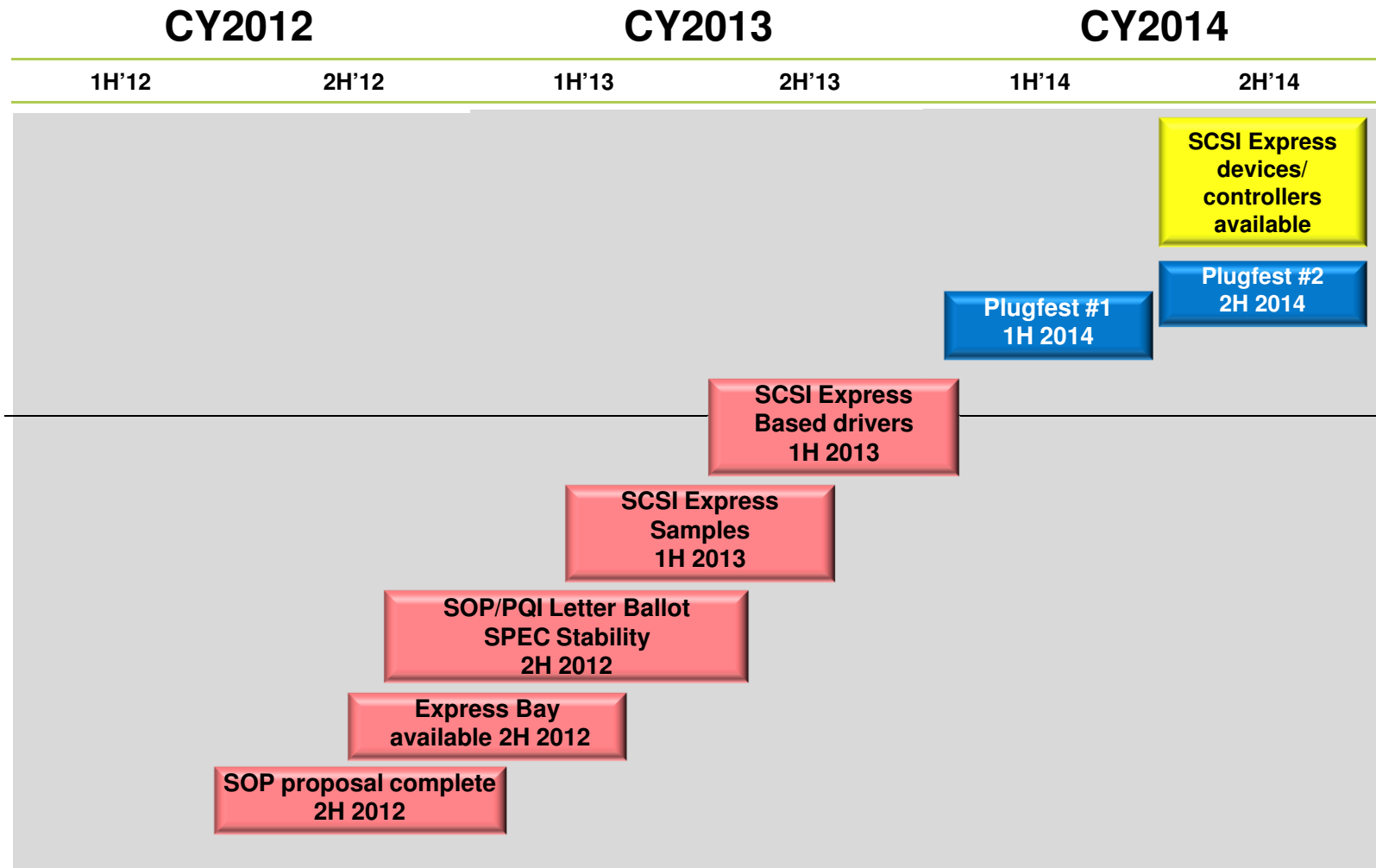
- Proven SCSI Protocol Combined with PCIe
 - Enterprise storage for PCIe based storage devices
 - Increased performance through lower latency
 - Coexistence with SAS via Express Bay and command set
 - Unified management and programming interface



SCSI 
EXPRESS

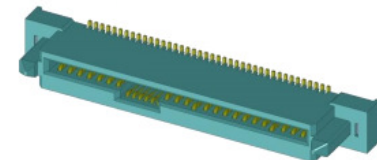


SCSI Express Roadmap



SCSI – Looking to the Future

- SCSI Express
 - 12Gb/s SAS & 24Gb/s SAS
 - Performance and Investment Protection
- Leverage Express Bay
 - Up to 25W Devices
 - SAS and SCSI Express
- New Features
 - Extended Copy Feature
 - Atomic Writes
 - Hinting & other NVM Features



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