STA Update

• Next plugfest for week of September 26 at UNH
  – NDA on STA website Needed to attend planning sessions starting in Aug.
  – Focused on large system build, error handling/exception testing, and 3Gb SATA compatibility
• STA recommends the inclusion of color (Blue) pull tabs on the Mini SAS 4x connectors to denote a SAS connector
• Updated Roadmap
SAS Roadmap

- **Ultra 320 SCSI**
- **SAS 3 Gb/s SCSI**
- **SAS 6 Gb/s SCSI**
- **SAS 12 Gb/s SCSI**

Note: Beginning of bars denote first plugfest utilizing the technology

www.scsita.org
Preliminary Goals for 6Gb

- Preserve 3G installments/infrastructure
- Double transfer rate while improving cost/performance
- Reduce the number of host/external storage connections/Gb
- Be compatible with 6Gb SATA within the constraints of the 6Gb SATA usage models (ie. short backplanes, short cables, etc.)
  - Longer backplanes may require additional components or higher negotiated signaling levels
- Leverage other PHY standards work (EQ, BER, etc) where applicable
  - For example: OIF CEI-6G, etc.
- Maintain 1.5Gb & 3Gb SATA/SAS Compatibility
- Same usage models apply for 6Gb as they did for 3Gb
  - Including backplane and cable distances, applications
  - Additional cost burden for rack-to-rack cabling solutions (10m) acceptable, but must not add cost to current usage models
  - Equalization schemes should not appreciably burden cost & power budget, especially for disk drives
- Critical mass components ready for plugfest testing in mid-2007
Preliminary Goals for 6Gb

• Bandwidth Aggregation
  – If required, no need to optimize for 1.5Gb bandwidth
  – Need diminishes with time
  – Complexity is a risk to meet the market window
  – Disk drive requirements vs. host/controller connections
6Gb Considerations meeting informative—will do it again in Austin

- Need additional quantitative information on alternatives
  - What are the relative power and die size implications of the different EQ schemes
  - What are the detailed technical impacts (protocol and relative costs) for the different bandwidth aggregation schemes
- STA believes the same usage models apply for 6Gb as they do for 3Gb
  - Backplane distances, system applications, etc.
  - Are there any technical considerations that conflict with this model?
- Does the change in the roadmap timeframe change the thinking on the need for bandwidth aggregation?
  - The longer it takes 6Gb to enter the market, the less interesting aggregation becomes
  - What is the timing difference for a specification with and without bandwidth aggregation?
- Is there any work that can be done by UNH to help ensure backward compatibility with existing 3Gb implementations or BER?
Next Steps

• Circulate objectives within STA
• Request feedback within 2 weeks
• Republish objectives with a request for presentations