

***Designing Storage  
Architectures for Digital  
Preservation:  
Panel 3 – HSM Future***

***September 21, 2012  
Library of Congress  
Henry Newman***

# *Our Distinguished Panelists*



- Paul Leury Crossroads
- Diamond Lauffin FileTek
- Thomas Clark IBM
- Brad Blasing Oracle
- Jonathon Otis Quantum
- Lance Evans SGI

## *Question for the panel*



- What is the future market for what we now call HSM
- How do you see the future specifically for HSM technologies and why?

# *Ground Rules for all of us*



- 4 minutes per panelist timed
- No discussion about specific hardware or software products is allowed
- We expect 10 minutes for discussion among panel members and moderator after the individual presentations, and then questions from audience

- What are the challenges for HSM software?
  - Are new standards emerging?
    - If so what are they and what requirements do they address?
- What sizes do you expect to see archival/long-term systems grow to in 2012, 2015 and 2018?
  - What markets will see the biggest growth?
    - Why?
    - What industry-wide software challenges do you see?
- What are the challenges to migration?
  - Media migration to denser media
  - Migration from one HSM to another

- How can data integrity be ensured?
  - Where are the standards?
    - There is T10 (PI/DIF and DIV)
    - But what about end to end?
- For each storage system and component type how can LOC calculate
  - Silent corruption rate
  - What is the integrity of a bit data given copy count on various media types
    - It is likely impossible to calculate everything including software errors and intentional destruction by an employee
  - That is why software layer is critical, but where are the end to end standards that meet our requirements

# ***Panelists – Take It Away***

***Audience: Please hold  
questions until after the  
panelists have spoken***