

# Heavy Storage For Thin Clients

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RIVIERA HOTEL CONVENTION

CENTER, LAS VEGAS

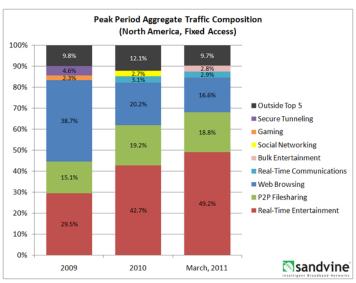




#### 2012 Storage Trends (1)

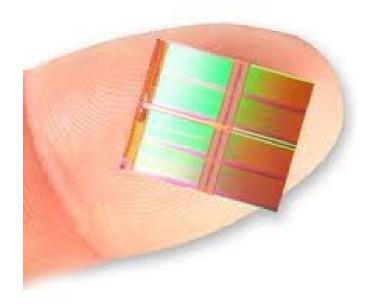
- 4K X 2K video moves into broadcast with 8K X 4K coming soon
  - The BBC plans to broadcast part of the 2012 Olympics in 8K X 4K
- 2. Video over the internet consumes over 60% of internet bandwidth in North America
  - Netflix, Amazon Prime, YouTube, etc.
  - Close to 90% of all internet traffic within a few years





#### 2012 Storage Trends (2)

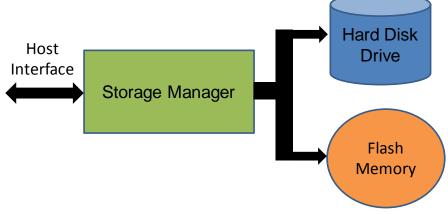




- 3. HDD shortages due to damage from the flood in Thailand impact the production of computers, DVRs, Console Game Systems
- 4. Flash memory prices decline due to excess capacity and greater production capacity with 20 nm node products
  - more flash memory in devices—128 GB tablets
  - some HDD replacement esp. in niche markets

### 2012 Storage Trends (3)

- 5. Dual storage and hybrid storage systems using solid state storage and hard drives will be in majority of Ultrabooks computers
  - becoming more
     widespread in computer
     and consumer products
- Higher speed storage interfaces find broader use
  - Thunderbolt
  - SATA-IO USM
  - USB 3.0



Flash Memory and HDDs: A Marriage of Convenience, 2011









#### 2012 Storage Trends (4)

- 7. Growth in cloud storage use by professional video
  - enables collaborative workflow
  - new cost effective services through the cloud enable greater sophistication for smaller shops
- 8. Growth in cloud storage by consumers
  - Social networking, content sharing and new services drive cloud use
  - Growth in personal and home cloud devices
- Cloud storage drives growth in tiered storage including flash memory, tape, HDDs





## Conclusions





- The 2012 Storage Visions theme is "Heavy Storage for Thin Clients" and we have a variety of sessions discussing digital storage's role from the client and service side
- 2012 will lead to richer formats, fatter and hybrid storage devices and more services through the "Cloud"
- Grab your karma and go!