



# Heavy Storage For Thin Clients

*Tom Coughlin, Coughlin Associates*

*JANUARY 8 & 9, 2012*

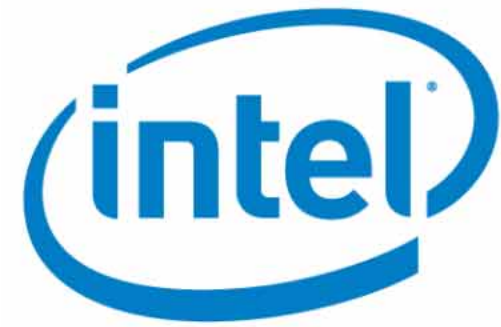
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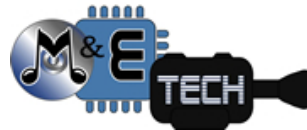


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# CONFERENCE AGENDA

Day 1 –

Sunday January 8, 2012

**A1:** Growth in Storage for Hi Res Content Creation & Production

**B1:** Protecting What we Have

**C1:** Analyst Perspectives: In the Cloud or in Our Cells

**D1:** Storage Options for Devices and Systems

**E1:** A Brave New World: Storage for Home, Office and Entertainment Reception

Day 2 –

Monday January 9, 2012

**A2:** Accessing Everything on CE Devices

**B2:** Long Term Content Protection and Archiving

**C2:** Opportunities & Challenges: Consumer & Enterprise

Cloud Storage

**D2:** Content Delivery Where Ever and When Ever

**E2:** Making, Saving, Sharing and Protecting Family and Business Content



**STORAGE VISIONS® 2012**

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- Tadashi Yogi, Consultant
- Mary Yurkovic, Createasphere



# Special Thanks to:

- Ron Dennison
- Andy Marken
- Dennis Waid
- Tracy Laidlaw
- Sandee Swart
- Ellen Sesma
- Harold Adler
- Fran, Will, Ben and Connie Coughlin

# Storage Visions Awards

To be given out during the reception Tuesday evening

- Visionary Products Awards
  - Mobile Consumer Electronic Storage
  - Home Consumer Electronics Storage
  - Consumer Storage Device
  - Enabling Consumer Storage Technology
  - Enabling Professional Storage Technology
  - Media and Entertainment Systems
  - Media and Entertainment Storage
- Visionary Company Awards
  - Home Consumer Electronics
  - Mobile Consumer Electronics
  - Media and Entertainment
- Art of Storage Award

**In addition there will be prize drawings for conference attendees at the reception and various other times**





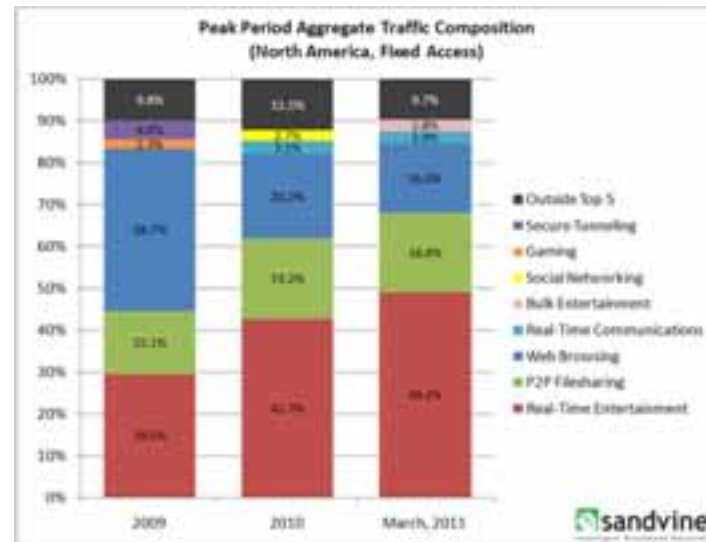
# Entertainment Storage Alliance™

- On-going activities to provide resources and a forum for the integration of storage and entertainment
- **[www.entertainmentstorage.org](http://www.entertainmentstorage.org)**
- Quarterly Updates on Storage and Entertainment (newsletter)
- Discounts on partner reports related to storage, entertainment and consumer electronics
- Discounts on Storage Visions, Creative Storage and other ESA programs.



# 2012 Storage Trends (1)

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



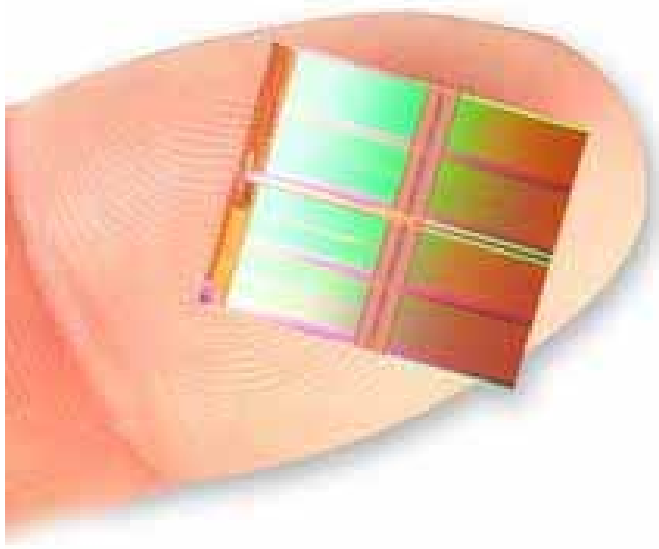
## 2012 Storage Trends (2)



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



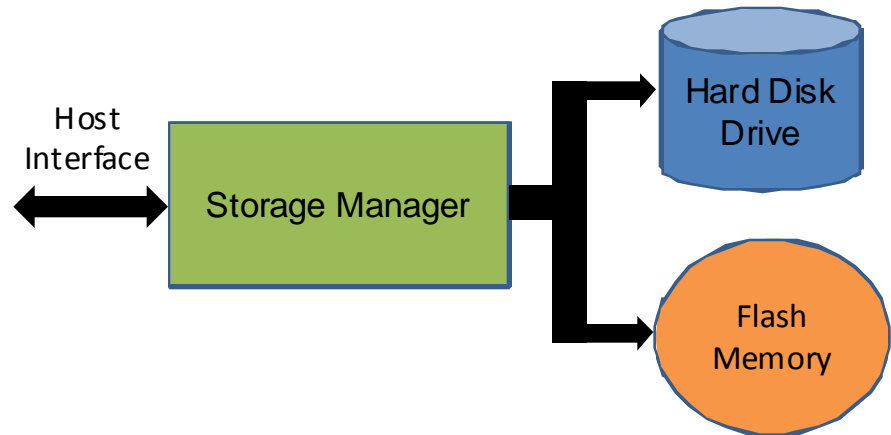
# 2012 Storage Trends (3)

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

6. 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



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## 8. Growth in cloud storage by consumers

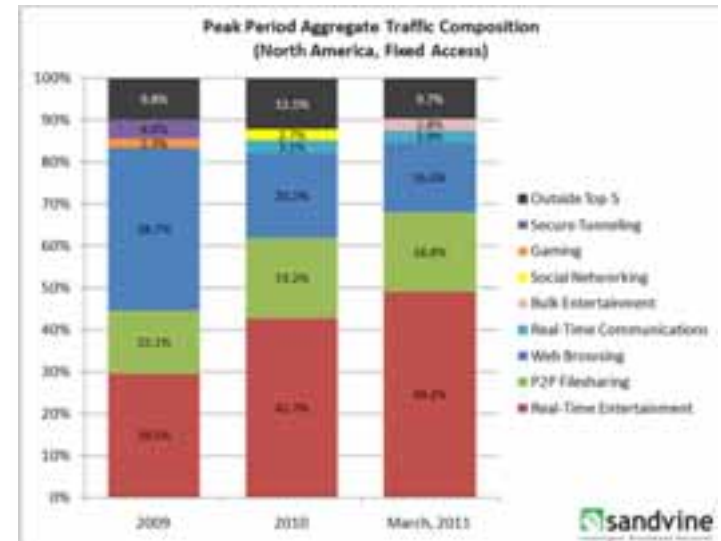
- Social networking, content sharing and new services drive cloud use
- Growth in personal and home cloud devices



## 9. Cloud storage drives growth in tiered storage including flash memory, tape, HDDs

# 2012 Storage Trends (1)

1. Movie production in 3D and up to 60 fps drives bandwidth and storage requirements
2. 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
3. Internet video consumes over 60% of internet bandwidth in North America—going to 90% soon



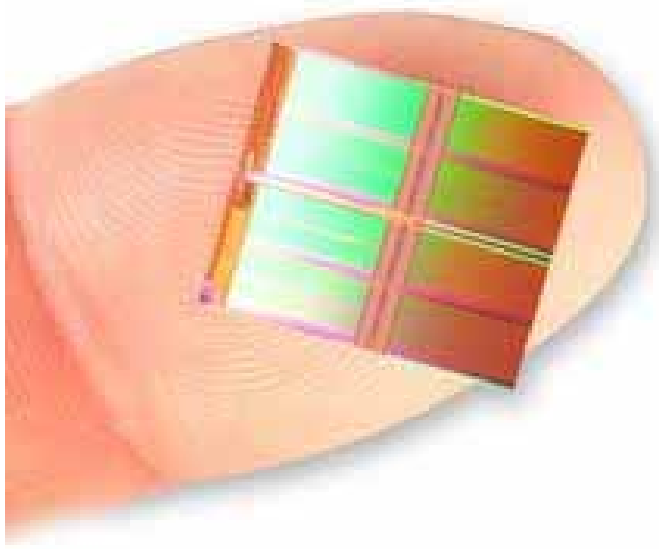
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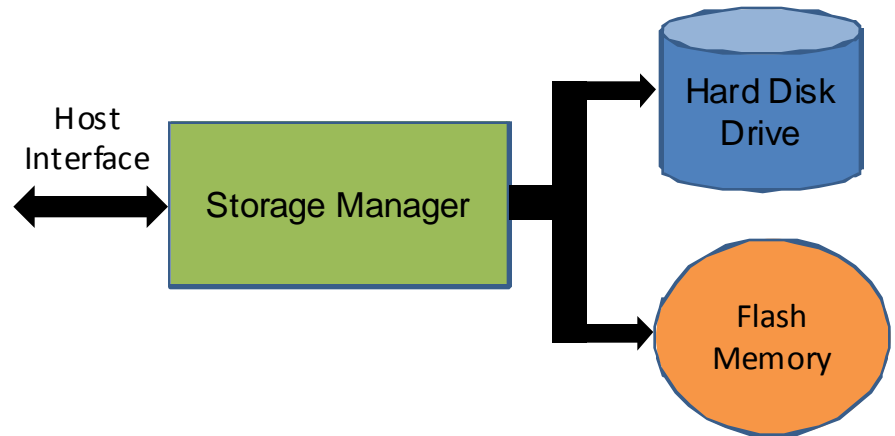
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# Conclusions



- 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!

# Thanks

