# When will Flash memory take off in enterprise environments?

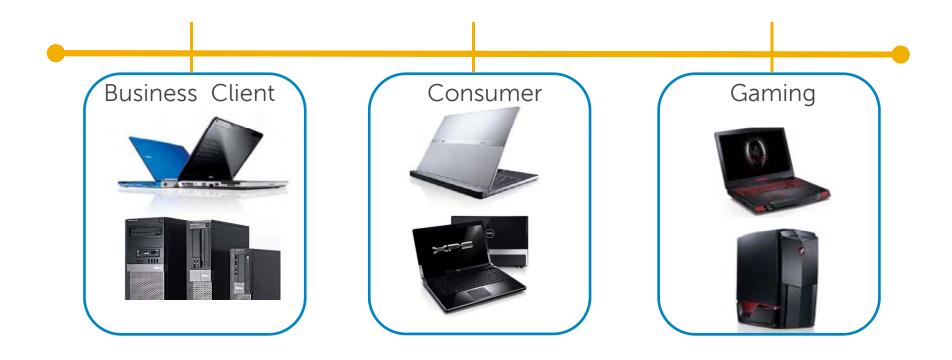


Paul Prince Enterprise CTO, Dell Inc. August 18, 2010

## What is Dell doing with SSDs?



## SSDs across broad portfolio of Dell client systems





## SSDs across growing portfolio of Dell enterprise systems

Band 2
Mainstream Performance

Band 1
High Performance

Band 0
Extreme Performance

SSDs in
PowerEdge™ servers,
PowerVault™ storage,
EqualLogic™ storage,
and Dell|EMC storage.

SSDs in PowerEdge blades, selected PowerEdge 11G servers, and PowerVault MD12xxa. (PCIe-based) SSDs on R710 and R810 rack servers & M610x blade servers.







#### **Automated SSD Tiering**

Dell EqualLogic PS6000XVS and PS6010XVS Storage Arrays

- Enables the performance of SSD with capacity of HDDs
- Mixture of SSD and spinning media within one array /member
- Automated data tiering within a member. Hot data placed on SSD





## Dell extending SSD enterprise offerings: Fusion-io *ioMemory* Technology



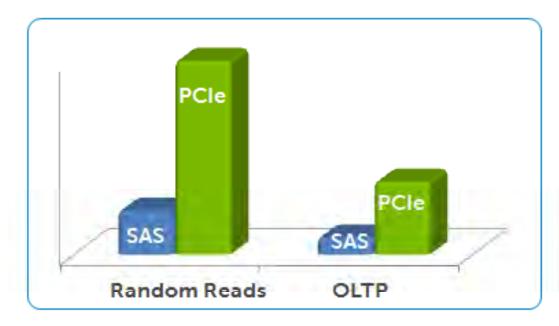
Adds new memory tier of flashbased solid-state technology to Dell PowerEdge R710, R810, M610x servers.

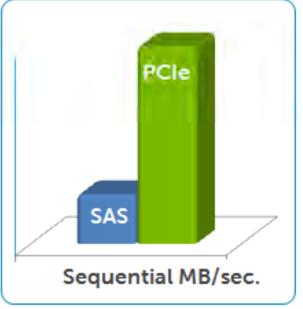






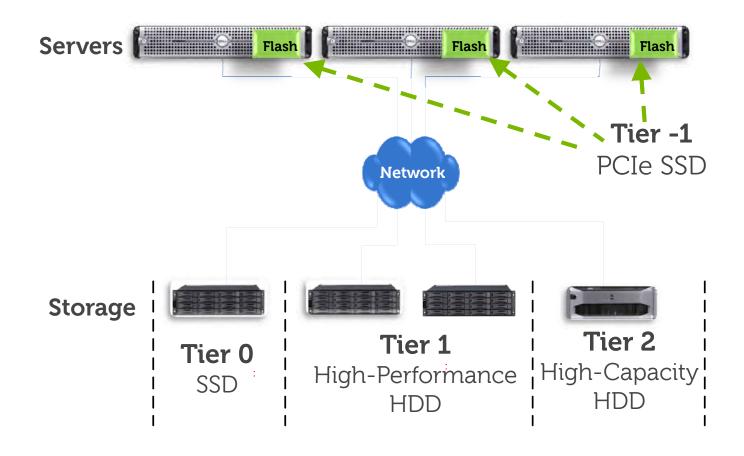
## PCIe-based SSD performance changes the game in data tiering architectures





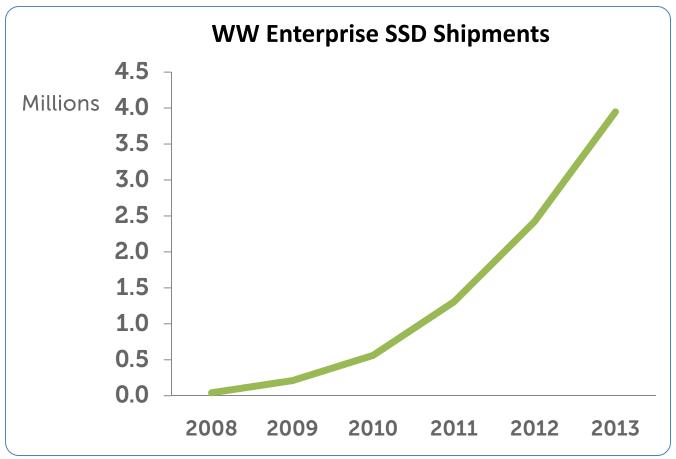


#### SSDs in Data Tiering Architectures





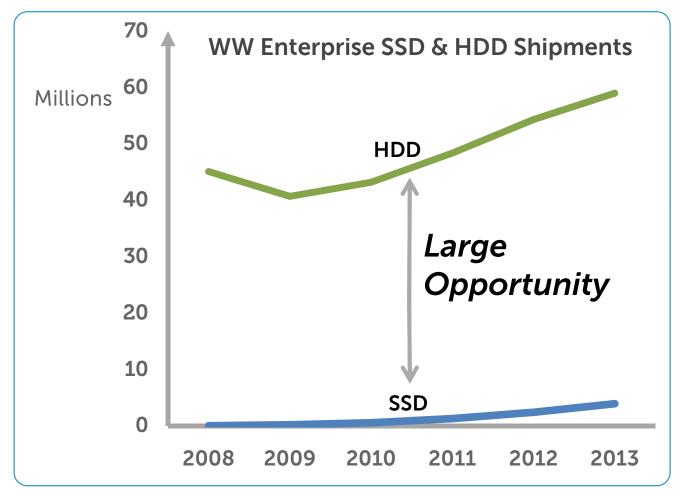
## Enterprise SSD shipments projected to rise sharply



Source: IDC 2009 WW Solid State Drive 2009-2013 Forecast Update



#### Still a fraction of HDD volumes...



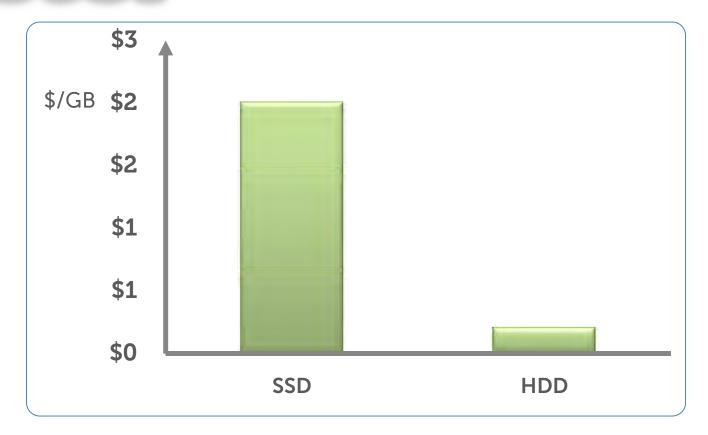
Sources: IDC 2009 WW Solid State Drive 2009-2013 Forecast Update & Worldwide Hard Disk Drive 2009-2012 Forecast



# What can the industry do to accelerate adoption?



### Cost















DOLL

# Thanks!

