



### ENHANCED DATA PROTECTION SOLUTIONS

...VIRUS SCAN INITIATED...

...APPLYING ENCRYPTION KEY...



INTRUDER DETECTED...

ACCESS DENIED...

...SCANNING...

...COMPRESSING...

...REPLICATING TO TIER 2...

...PIT COPY CONFIRMED...

### REAL IMPROVEMENTS OR REPACKAGED TECHNOLOGY

N+I  
2004



Opening Remarks:  
Mark Armstrong CEO & CTO  
Avail Solutions



Panel Discussion:  
Mark Ferelli, Moderator

NETWORK+INTEROP

NETWORK STORAGE DAY 2004



D2D2T

The New Market Buzz





# Disk Use Growing

- Disk is becoming more attractive
  - Prices decrease as capacity and performance increase
- Tape is less attractive
  - New tape technology prices increase with capacity and performance
  - Some tape technologies are faster than common network bandwidths causing usage problems



# Tape is Not Dead

- Tape still preferred as long-term medium
  - Uses tried-and-true methodologies and management techniques
  - Incorporates single drive / multiple cartridge orientation
  - Offers preferred archiving solution
  - Provides off-line and off-site storage capabilities





# Staged Disk to Tape

- Enables continuous streaming to tape
- Uses emulation or virtualization schemes
- Includes HSM-like methods to migrate and replicate data through a hierarchy of managed storage



# Combined Protection

- Disk-to-Disk-to-Tape (D2D2T)
  - Backup data to disk in OS format
  - Migrate data to tape when convenient based on rule-based migration and replication policies
  - Purge individual file data from RAID
  - Restore individual files to network



# D2D2T Methods

- Tape emulation
  - Data format mirrors writing application
  - Data migration in same format
- Tape virtualization
  - Disk data format IS tape format
  - Data migrated to tape in tape format



# This is News?

- Companies like IBM, STK and EMC have had this type of technology available for years
  - Very expensive
  - Requires specialized skill-sets to manage
  - Oriented for high-end customers



# The Real Challenge

- Bringing the benefits of this technology to the SMB market
  - Ease of use is paramount
  - Flexibility: Must be adaptable to any configuration requirement
  - Scalability: Start small and grow to any size
  - High value proposition and excellent ROI





# Need Proliferated

- SMB Market not exception to data protection rule
  - More sensitive to market drivers
  - Need solution now
  - Larger companies also implementing D2D2T for same reasons



# Markets Change Landscape

- Compliance regulations driving demand
  - 72% of readers affected by HIPAA, Sarb-Ox, GLBA or the Patriot Act (*Network Computing*)
  - HIPAA fines can reach \$25k per violation
  - Sarb-Ox fines can net \$1M or 10 year prison sentence
- More data requires flexible solution
  - Average backup window is 14 hours (*IDC*)
  - 86% of companies back up 10 – 100 gigabytes daily (*Imation*)
  - Most data requirements will increase 10 times in 5 years (*Imation*)
- IT departments are stretched
  - No time to integrate and test solutions





# D2D2T Advantages

- Compliant technology built in
  - WORM capable
  - Integrated software
- Staged backup copies data faster
  - Takes less time to back up to disk
  - Migrate data from disk to tape when convenient
  - Reduces time application server is offline
- Integrated box is easy to deploy/manage
  - All in one system eliminates integration hassles





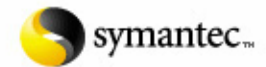
## Enhanced Data Protection Panel

- Moderator: Mark Ferelli  
Editor, Computer Technology Review
- Panelists
  - » **Phil Pascarelli, CEO, Breece Hill**
  - » **Neville Yates, CTO, Diligent Technologies**
  - » **Don Kleinschnitz, Vice President, Symantec Enterprise Administration**
  - » **Hossein ZiaShakeri, Vice President, Advanced Engineering, Spectra Logic**
  - » **Michael T. Rowan, CTO, Revivio**
  - » **Bob Guilbert, VP of Marketing and Business Development, NSI Software**
  - » **Michael Nixon, Senior Manager for Tape Storage, Sony Electronics Business Solutions Division**
  - » **Michael V. Hardy, Director of Enterprise Sales, Western North America, Quantum Corporation**



**BREECE HILL**

**DILIGENT**  
TECHNOLOGIES



**SPECTRA LOGIC**

**revivio**

**NSI**  
SOFTWARE

**SONY**

**Quantum**