Photo Archiving:

*where have all your digital photos gone?*

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Digital Failure

- Damage rarely visible
- Photo damage: unreadable
- Collection damage
- Recovery services
How did they disappear?

• Internal media failure
  - From consumer point of view, media failure only one aspect, best known

• Other........
  - Industry needs to understand whole scenario
  - Many things to go wrong – lack of confidence

• Business opportunity for that trusted medium
What can go wrong - *besides hardware or media*?

- **Short term:**
  - Mistakes
  - Moving Photos
  - Malice
  - Metadata
  - Media Incompatibility

- **Long-term**
Mistakes

- Erasure
- Overwriting
- ‘Left behind’ photos
- Displacement: e.g. Drag & Drop Disappearances
Moving photos

- Migration to a new computer / drive
- Size mismatch of source and backup media
- Transmission problems
  - bit errors
  - cryptic user messages “warning, this is a read only file”
- Backup frequency
Moving photos

• Migration to a new computer / drive

• Size mismatch of source and backup media

• Transmission problems

• Backup frequency
Malice

• Virus
  – Erasure / modification / displacement
  – Time-bomb
  – First Day
  – Prevention: virus software necessary but not sufficient

• Theft
Metadata

• Folder systems (folder systems are in effect metadata)
  – Hierarchy
  – Duplicate filenames
  – Meaningless filenames

• Database systems
  – ‘Hidden’ DB
  – DB versions
  – Cross-application compatibility?

• Vista changes
Media Incompatibility

• Incompatibilities within optical media types
  − Experience with CDs: can be read on some drives, not on others

• Confusing
  − +, -, RW, R, Blu ray, HD, double /single sided
  − Different user flow for writing DVDs and CDs (no documentation)

• Poor hardware labeling
  − can you write with this drive or only read?

• Result: caution!
What can go wrong that is not related to hardware or media?

- **Short term:**
  - Mistakes
  - Moving Photos
  - Malice
  - Media Incompatibility

- **Long-term:**
  - Disaster
  - Change in Standards
  - Online
  - Photo Software obsolescence
  - Family Factors
Disaster

• Localized
  – Fire
  – Flood
  – Wind
• Wide-area
  – Earthquake
Changes in Standards

- Image format
  - Essential to manage legacy formats when designing new formats
  - Backwards compatibility
  - Migration service / tools
  - Lossless migration
  - Metadata standards

- Sort order
  - XP changes in sort order from that in previous OS versions
Online Photo and Backup Services

• Contact
  – Email might change, and user gets no warning of deletions

• Quality maintenance
  – Resolution maintained?

• Business model
  – Business model: must make payments/purchases or company may go out of business
Photo Software Obsolescence

- Database migration?
- ‘Hidden’ DB
- Loss of metadata

- Must: Metadata embedded in image file
Family Factors

- IT Management
- Legacy
- Volume
- Family Problems
What everyone is afraid of........
Media Failure and recovery?

- Flash drives
- Hard drives
- Optical media
  - Consumer has no idea what to buy
  - Consumer has no idea how to store
**Question**

When will we be free of the risk of data loss?

**Answer**

Never!

Stone, Paper, Film, all carry some risk

Need to minimize risk; bring to an acceptable level
What can OSTA do?

- Longevity standards, certification and labeling (ODAT)
- Consumer education
  - (e.g. www.savemymemories.org)
- Photo/Video/Audio storage standards
  - MPV, Everplay

== > Business Opportunity for the Trusted Medium
There are two kinds of digital photographers:

(a) those who have lost a bunch of valuable photos and

(b) those who will lose a bunch of valuable photos in future

*Quote from a modern day philosopher (who shall remain nameless)*