

# eTracker

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User Data is growing at enormous speed. A large chunk of data consists of Multimedia contents like images, songs, movies etc. However, with the growth of e-governance and eClassRooms, Users now store more important data on their home computers and laptops. These data can be related to their tax returns, stock investment or school study materials or research thesis. A home user does not have any effective ways to prevent data loss from hardware/software failure or human error.

# Abstract (Contd..)

Freelancers, Independent professionals and SMBs also have critical data. However, existing solutions are difficult to administer not cost-effective. With the growth of internet, freelancer, designers, writers provide their services around the globe. They not only have more critical data to manage but also need to version them to keep track of changing customer requirement.

eTracker is an email-based versioning and backup/archiving application. This application stores only latest version of file on hard disk and archives old versions to email server. Also, it can backup files to email server.

This presentation explains the high level approach, the implementation details in Windows and its usage.

# Learning Objectives

- ❑ Importance of Versioning and Archiving/Backup
- ❑ Identifying files and folders for Versioning and Archiving/Backup.
- ❑ Maintain links to older versions and archived/backup copy
- ❑ Usage scenarios for eTracker

- ❑ Email Storage
- ❑ Versioning and Archiving/Backup
- ❑ Why existing solutions are not effective ?
- ❑ Software Components
- ❑ Benefits of Email based Versioning and Archiving/Backup
- ❑ Conclusion
- ❑ Q & A

# Email Storage

- ❑ Cloud based email storage space is free and expandable.
- ❑ Secure and Reliable.
- ❑ Reroute data to different folders based on rules.
- ❑ Can create multiple account.
- ❑ Can access data from anywhere.

- ❑ A way to track revisions to document.
- ❑ Useful in document reviews, implementing and viewing changes.
- ❑ Part of document lifecycle.

- ❑ Archiving – Move data to secondary storage leaving a pointer
- ❑ Backup – Copy data to secondary storage leaving original copy on primary storage.
- ❑ Both store data on secondary storage.
- ❑ Archiving is to conserve space by moving idle data to secondary storage whereas Backup protect data from loss.

# Why existing solutions are not effective?

- ❑ For a home or SMB user,
  - ❑ Cost – Requires additional hardware and software
  - ❑ Administration – Every solution has software component which has a learning curve.
  - ❑ Mobility – Secondary storage cannot be accessed from anywhere. It requires software to access it.

# Software Components

- ❑ eTracker Shell Extension – Provides context menu for versioning and Archived/Backup files.
- ❑ Application GUI – To specify files and folders, email login and password to store files.

# eTracker Shell Extension

- ❑ Allows user to select files/Folders and start versioning and Archiving/Backup.
- ❑ Provides different icons for visual clue if file is Versioned/Archived/Backup.
- ❑ User can see all the available versions and open the required version.
- ❑ Can add Tags/Comments for easy referral of various Versions.

- ❑ Specify email Login-id and Password for storing files.
- ❑ Maps files and folders on local hard disk to email folders.
- ❑ Specify rules for archiving based on creation time, access time or size.
- ❑ View files and folders which are Versioned/Archived/Backup

- ❑ Once a file is identified to be Versioned/Backup/Archive, a email is created with:
  - ❑ Complete file path as on Desktop as a “Subject” of email
  - ❑ File information such as modify date, size, Tags/Comments are stored as “Body” text
  - ❑ File data as “Attachment”
  
- ❑ If the file size is more then allowed attachment size, then file can be split into multiple attachments
  
- ❑ File data can be encrypted or password protected for security

# Architecture - Versioning

- ❑ To start Versioning:
  - ❑ Right click the file
  - ❑ Select “Add Versions” from the context menu
  - ❑ The current file will be sent as an email attachment. A email identifier will be returned.
  - ❑ Store the email identifier in “Extended Attributes” of that file which will allow us to open the file again.

# Architecture – Versioning (Contd.)

- ❑ To open a version:
  - ❑ Right click the file.
  - ❑ Select “Show Versions” from the context menu.
  - ❑ A pop-up dialog box will show all available versions along with comments/tags and file information.
  - ❑ Select the version to open.

# Summary

- ❑ Email is free.
- ❑ Home users need a low cost backup solution
- ❑ eTracker uses public email to backup home users data
- ❑ Latest version of data is locally available
- ❑ Older versions archived in email repository
- ❑ Can access data from anywhere
- ❑ In case of hardware failure, data is available

- ❑ Cloud provides virtually unlimited space at fraction of cost.
- ❑ Cloud vendors can provide email interface to cloud storage.

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# Questions?

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