Virtual Lecture
On
WINDOWS 8
Memory Management
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Overview

- What is Windows 8?

- What are some new features of Windows 8?

- Availability.

- Critics and Effects to people's lives.

![Windows 8]

- The next generation of Microsoft Windows.
- An operating system produced by Microsoft.
- Primarily focuses on TOUCH.
- Is used for personal computers .

Some new major features

- The touch factor.

- Picture Password.

- New File Copy Confirmation dialog box.

- Support for USB 3.0

- Native support for mounting VHD and ISO disc images.

- Faster boot time.

The touch factor

✓Allow users to use Windows with the touch interface as well as with mouse and keyboard.

✓Allow users to do two things at one by clicking the tiles along the side.

✓Work really fast and fluid to get between your running app.

Windows Explorer Ribbon
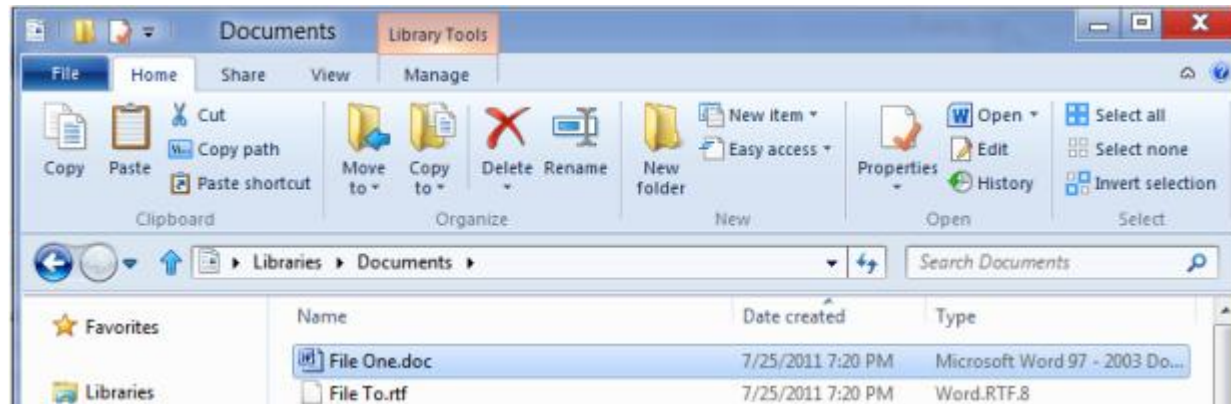
➢ **Allow users to optimize Explorer for file management tasks.**

➢ **Create logical and reliable locations in a streamline experience.**

New File Copy Confirmation Dialog Box

➢It is designed to make life easier.

➢Show individual progress bars when you have multiple copy operations occurring simultaneously.

➢Allow to pause a copy operation, if you want to give preference to another operation.
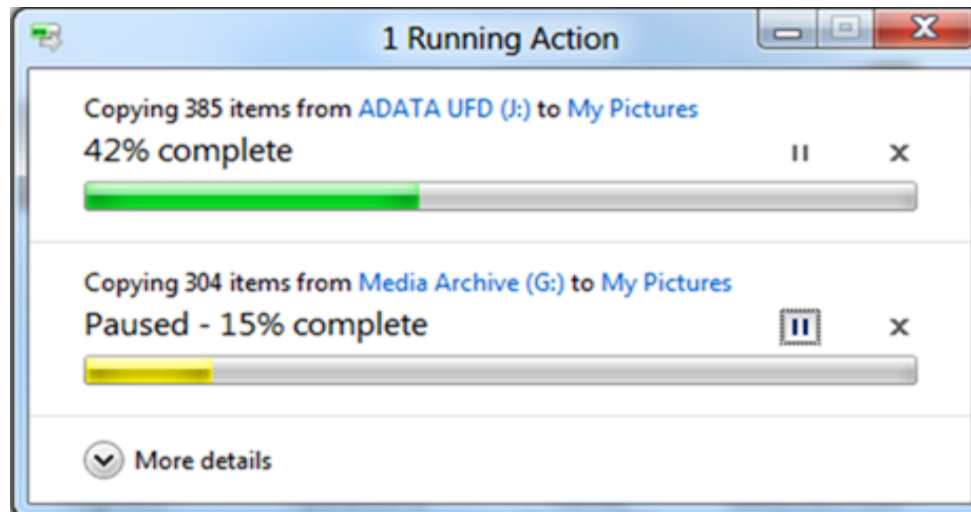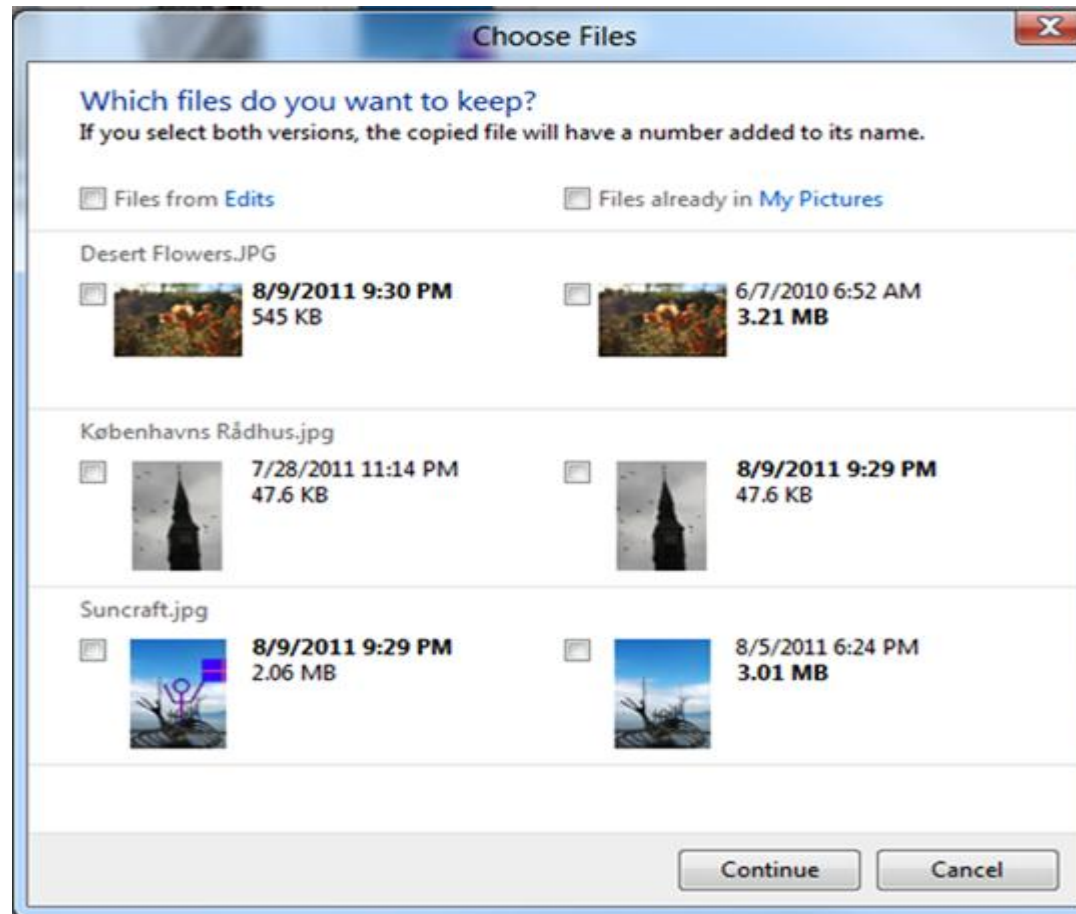
➢Display a new conflict resolution dialog box if a conflict occurs while copying files.

➢Allows users to handle the situation much easier.

Native USB support

➤ Still supporting USB 1.0 and USB 2.0 devices.

➤ In the meantime, USB 3.0 will offer 10 times faster than USB 2.0 and much better power management.

Other features

- ## Supporting for mounting VHD and ISO disc images.

    * Windows Explorer allows users to select an ISO image and access its contents via a drive letter.

    * Constantly create a virtual CDROM or DVD drive and assign it to the next available drive letter to the new removable drive.

- ## Faster boot time.

    * Need only 30-35 seconds to boot the system by hibernating the kernel session instead of shutting it down

Major Critics and Effects

- not clear what data and where will be it stored?

- Each process on 32-bit Microsoft Windows has its own virtual address space that enables addressing up to 4 gigabytes of memory.

- Each process on 64-bit Windows has a virtual address space of 8 terabytes.

- All threads of a process can access its virtual address space. However, threads cannot access memory that belongs to another process, which protects a process from being corrupted by another process.

- The virtual address space for 32-bit Windows is 4 gigabytes (GB) in size and divided into two partitions: one for use by the process and the other reserved for use by the system.

State of the Process
1. Free

- Free The page is neither committed nor reserved. The page is not accessible to the process. It is available to be reserved, committed, or simultaneously reserved and committed.

Reserved

- The page has been reserved for future use. The range of addresses cannot be used by other allocation functions.

Committed

- The page is not accessible and has no physical storage associated with it. It is available to be committed.

- Committed Memory charges have been allocated from the overall size of RAM and paging files on disk. The page is accessible and access is controlled by one of the [memory protection constants](). The system initializes and loads each committed page into physical memory only during the first attempt to read or write to that page. When the process terminates, the system releases the storage for committed pages.