



tight integration with the Microsoft Plug-and-Play (PnP) standard, allowing hassle-free installation and use of external devices. The new standard also required backward compatibility with USB 1.0 devices. Except for Windows NT, USB support has been integrated into every Windows operating system.

What kind of devices use USB?

All kinds. Here is a partial list of the most common devices: Mice, Keyboards, Joysticks, Scanners, Printers, Web Cameras, Digital Still Cameras, GPS (Global Positioning Sensor) Receivers, Modems, External Hard disks, CD-ROMs, CD-RWs, DVD-ROMs, DVD-RWs, Network Connections and PDAs.

There are all kinds of adapters that will allow users to connect external devices to a USB port when the computer has no more PCI slots in the chassis to accept devices, such as: Serial/parallel port to USB, Joystick port to USB, SCSI to USB and Ethernet to USB.

But that is not all. There are all kinds of digital gadgets: USB transfer cables that allow two non-networked computers to move data from one to the other, USB networking systems for in-home or small office and switches that allow one or more USB devices to be shared by multiple computers.

And just when it appears that the possible uses for USB devices have been exhausted, someone comes up with some truly unique ideas. How about a data storage device that is small enough to hang on your keychain, has no moving parts, uses no batteries or external power, needs no device drivers, and can hold up to a GigaByte of data? Once connected to your computer, it can be used as a hard drive. Even though the officially correct name for the device is "USB Mass Storage Device", most vendors have their own names for them such as Flash Drive, Jump Drive, Thumb Drive or Mini USB Drive. Priced from \$30 to \$400, these devices come with capacities ranging from 16 to 1024 MegaBytes.



Now, for the person who thinks they have everything: How about a ballpoint pen that remembers everything that you write? Yes indeed. For \$200 (MSRP), you can have an Io Personal Digital Pen from Logitech. Using the Io could not be simpler: Write down whatever you want — up to 40 pages at a time. When you place your pen into its cradle on your desk, everything gets transferred to your PC. It comes with software that will help you organize your ideas, and integration



with applications such as Lotus Notes and Microsoft Outlook lets you share your pages with anyone.

standard are showing up on store shelves. The USB 2.0 standard has two very important features:



1. Optical sensor captures everything you write
2. Processor digitizes your words and images
3. Rapid-charge USB cradle transfers digitized data to your computer
4. Ink cartridges let you write like you normally do
5. Memory stores up to 40 pages between transfers
6. Battery lasts up to 25 pages between recharges
7. Cap controls on/off — remove to turn on, replace to save battery

- It is backward compatible. Any USB 1.x device will work correctly when plugged into a USB 2.0 port. Conversely, a USB 2.0 device will function correctly when plugged into a USB 1.x port. Obsolescence of current USB devices is not an issue.
- It is very fast. USB 2.0 can move data at up to 480 Megabits/sec (480 Megabits/sec = 60 MegaBytes/sec). That is 40x faster than USB 1.x. It is now fast enough to connect high-speed mass storage devices to PCs. A typical hard drive can sustain a transfer rate of 30 MegaBytes/sec.

USB 2.0

USB has quietly become the interface of choice when connecting low-speed peripherals such as keyboards and mice to computers. But with the increasing use of devices such as digital still cameras, digital video cameras and mass storage devices, it became clear that USB 1.1 was not fast enough at 12 Megabits/sec to transfer large volumes of data in reasonable time intervals.

In order to meet the demand for higher speed while maintaining previous functionality, the USB 2.0 standard was announced in April 2000. After over a year of waiting, devices that use the new

USB 2.0 transfers data at one of three different speeds:

- Low Speed (1.5 Megabits/sec = 0.2 MegaBytes/sec)
- Full Speed (12 Megabits/sec = 1.5 MegaBytes/sec)
- Hi Speed (480 Megabits/sec = 60 MegaBytes/sec)

USB vs FireWire

Many people confuse USB with FireWire (aka IEEE 1394 or i.Link), and from a non-technical user's point of view, they share many common characteristics:



- They both use a small diameter flexible cable.
- Both allow external devices to be connected and disconnected without rebooting the workstation.
- They both can have multiple devices connected to a single port.
- Both automatically recognize the connected device when it is powered up.
- And now, both are pretty fast.

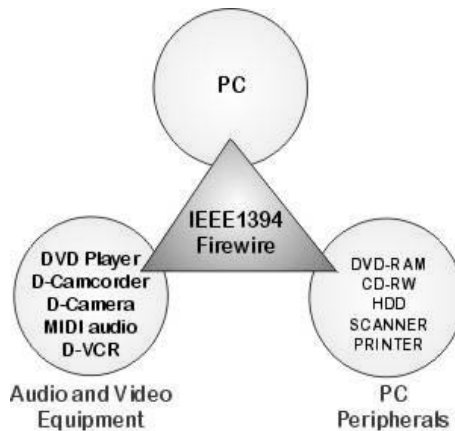
FireWire, but this is not the case. FireWire is currently the only technology used in digital video cameras. Anyone who has the need to edit home videos on his/her computer will need a FireWire connection. FireWire will continue to be used in both computers and video products for the foreseeable future.

Some of the more well-known computer peripheral vendors (Adaptec, D-Link and

Belkin) are marketing computer hardware upgrade kits that contain both USB 2.0 and FireWire ports on the same adapter card. They sell for \$50 -\$100 each.

But the similarity ends there:

- FireWire can have up to 63 devices connected to a single port; USB can have up to 127.
- FireWire can move data at up to 400 Megabits/sec (50 MegaBytes/sec); USB can transfer data at 480 Megabits/sec (60 MegaBytes/sec).
- The variety of computer devices that use USB is much greater than those that use FireWire.
- While USB is standard equipment on most computers sold today, FireWire is standard equipment only on Apple and Sony computers.



USB 1.x provided computer users with a simplified way of connecting peripherals to their computers but suffered from an almost-fatal flaw: It was too slow to be effective on anything but very low-speed devices. With the arrival of USB 2.0, users can now look forward to many more devices using USB technology to provide simple, cost-effective hardware solutions for the full spectrum of computer devices.

From the comparison, it would appear that USB should be a clear winner over



SPAM CONTROL

Many people estimate that that the number of junk mail messages, referred to as Spam, will overtake the number of legitimate e-mails this year. We have set up a filter on mail accounts hosted by WNYLC to block many known junk e-mailers from mailing our users. Individual users can control filters on their own accounts by following the "Spam Control" link on the bottom left of <http://www.wnyc.com>

This link will take you to a page that explains how the filter works. At the bottom of the page, there will be a box for users to enter their e-mail address and password, and instructions for recovering a password if you do not know it.

Once you are in the program that blocks junk mail, you will have an option to activate the program for your individual account and an option to have junk mail deleted before you see it or just marked as "Spam" so that you can review it before deleting it.

Currently Enabled is 1	
Spam Assassin Configuration	
This page lets you configure several attributes that are important to configure Spam Assassin. Ideally, all you should worry about is if Spam Assassin is enabled or not. However, this gives you a bit more flexibility.	
If you want to use the default settings, just check the "Spam Assassin Enabled" box.	
In general, change only one thing at a time to see if you can live with the results. After that seems to be working, adjust another parameter.	
Spam Assassin Enabled	<input checked="" type="checkbox"/>
Things marked as spam disposed of. Note that the sender is not notified of the rejection. To do so may clue the spammers in that there is a live address. However, if a piece of email is marked as spam, it is Gone .	<input checked="" type="checkbox"/>
Score to mark as spam (default 5): Set the number of hits required before a mail is considered spam.	<input type="text" value="5"/>
Spam Assassin can change the Content-type: header of suspected spam to "text/plain". This is a safety feature. If you prefer to leave the Content-type header alone, don't set this.	<input type="checkbox"/>
The subject line of suspected spam will be tagged.	<input checked="" type="checkbox"/>
Give the spam report in the header lines rather than the body. If this is on, you may want to also enable the terse reporting option.	<input checked="" type="checkbox"/>
Use a terse reporting style on messages marked as spam.	<input type="checkbox"/>
Check the From: address for a valid MX record this many times	<input type="text" value="3"/>
Number of seconds to wait for checking MX records	<input type="text" value="5"/>

If you have any questions about the use of this program, send us an e-mail at wnyc@wnyc.com



WNYLC Web Statistics For January 2003

Total Hits	1,148,250	Accessed Using Internet Explorer . . .	97%
Total User Sessions	35,555	Accessed Using Netscape	2.1%
Average Hits/Day		Operating Systems Used:	
(Monday—Friday)	39,227	Windows 98	9%
Average User Sessions/Weekday . . .	1,352	Windows 2000	83%
Number of Pages Viewed	924,116	Windows XP	2.8%
Average Number Of Pages		Windows 95	< 2%
Viewed Per Day	29,810	Windows ME	< 1%
Number of Documents Viewed . .	82,543	Windows NT	< 1%
		Macintosh	< 1%



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