USB 3.0 and SATA 3.0 for Your Computer

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Recently released updates to the USB and SATA specifications make your present computer obsolete again.

The new USB (Universal Serial Bus) 3.0 provides maximum data transfer rates up to 4.8 Gbps compared to USB 2.0 at 480Mbps. This is a 10 times speed increase. Other improvements are increased maximum bus power and current draw, new power management features, full duplex (two way) data transfers and support for new transfer types not available in USB 2.0, and new connectors and cables that are backwardly compatible with USB 2.0 devices and computers.

You will not obtain the benefits of USB 3.0 without new hardware devices to accommodate it. This means everything from motherboards to much of the other hardware that comes with or in your computer.

The new SATA (serial ATA) 3.0 protocol provides speeds up to 6Gbit/s compared to SATA 2.0 speeds up to 3Gbit/s which is a doubling of the speed. It requires new cables and connectors and is backwardly compatible with USB 2.0. You will not obtain the benefits of SATA 3.0 without new motherboards to accommodate it and new hard drives that can reach speeds of 6Gbit/s.

What is the practical significance of these major speed changes? If I were going to buy or build a new computer, from today forward I would not buy or build one that did not have hardware that includes the new USB and SATA specifications. This specifically applies to motherboards and hard drives. If I were going to update an existing computer I would investigate adding internal cards that will allow you to use the new USB and SATA specifications if, as, and when the cards become available.