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Last Bytes

by Greg Shultz

The Incompatible Little IBM

It's a pretty well-known fact that IBM set the burgeoning microcomputer industry on its steady path of evolution in August of 1981 when it introduced the IBM Personal Computer, which became known as the IBM PC. However, another fact that is all but lost in the annuals of computer history is that a little more than two years later, in late 1983, IBM introduced the ill-fated IBM PC Junior, known affectionately as PCjr.

Aimed at getting IBM a foot in the door of the home computer market, which at the time was dominated by such companies as Apple, Commodore, and Atari, the PCjr was billed as one of the most advanced home computers of its time. The PCjr included a 4.77MHz 16-bit Intel 8088 microprocessor, 64KB of RAM, two plug-in program cartridge slots, built-in sound, and a wireless infrared optical link keyboard. The PCjr relied on a television for video output. Running PC-DOS 2.1, the PCjr came with the BASIC programming language, as well as a host of home management, educational, and entertainment software. (An enhanced model released at the same time as the base model came with all these features, yet added another 64KB of RAM; a 5.25-inch, 360KB floppy diskette drive; and a color graphics card that allowed for the use of a color monitor.)

Although the PCjr was extremely popular during it's first year or so, the system unfortunately began a downhill descent due to the fact that a lot of its components were proprietary, thus, making the type of hardware expansion that the IBM PC was known for difficult, if not impossible. Furthermore, a lot of the software designed for the IBM PC wouldn't run properly on the PCjr. After these types of problems garnered a lot of bad press, sales dropped off, and IBM eventually stopped manufacturing the PCjr in early 1985.

The irony of the PCjr's demise is that its downfall was essentially caused by the fact that this little IBM computer wasn't IBM-compatible. ▮

Look Ma, No Hands!

While your hands are busy typing and moving your mouse as you work on your computer, your feet are just sitting idle under your desk. Why not put them to work? With the NoHands Mouse (www.footmouse.com) from Hunter Digital, you can use your feet to move the cursor across your display or to double-click an item. The NoHands Mouse was designed originally as an alternative for people suffering from carpel tunnel syndrome. The device features two foot pedals: one rotates 360 degrees, letting you place your pointer exactly where you want it, and you use the second pedal to click items. ▮

The Petabyte Hard Drive

As you may know, technological advances in the hard drive manufacturing industry have allowed the density, or size, of hard drives to essentially double each year since 1997. Unfortunately, with the current technology, this trend has just about reached its finale.

However, if State University of New York at Buffalo professors Susan Hua and Harsh Deep Chopra continue to have success in their experiments, petabyte hard drives could soon be as common as today's gigabyte hard drives. (One petabyte is equal to 1 million gigabytes.)

Hard drives store data as a pattern of magnetic fields consisting of bits that are positively (1) or negatively (0) charged. By packing these bits more densely, you can store more data on your hard drive. Unfortunately, a side effect of the packing technique is that the magnetic field weakens, making it difficult to reliably read the data; thus, hard drive manufacturers are having a difficult time continuing to increase the size of current drives.

Using a technology called ballistic magnetoresistance, professors Hua and Chopra have developed a nanoscale device designed to sense magnetic fields that are more than 100 times weaker than those current technology recognizes. This new technology would let hard drive manufacturers overcome the weakening magnetic field side effect and continue to pack data more and more densely, thus, allowing them to move past the gigabyte range and continue the tradition of doubling the density of hard drives every year, which means that by 2010 we could be buying computers with petabyte hard drives. ▮