Battery technology options are few

Despite recalls, PC makers stick with lithium-ion variety

By Bob Keefe
Cox News Service

SAN FRANCISCO — You'd think the possibility of setting someone's lap on fire would prompt the computer industry to find new technology for laptop computer batteries. But despite incidents of batteries catching fire and product recalls that will cost hundreds of millions of dollars, don't expect the standard lithium-ion batteries found in most laptops to go away.

"It's not going to happen," said Jim Akridge, who has spent more than 25 years in the battery business.

As the CEO of Valence Technology Inc. in Austin, Texas, Akridge's company is one of several that have developed what they say are safer alternatives to traditional computer batteries. Valence's products use a proprietary chemical mix of lithium and phosphates designed to keep from overheating and catching on fire.

Yet convincing computer makers like Apple, Dell and Lenovo, all of which have had to recall millions of batteries made by Sony Corp., to switch is tough, companies like Akridge's are finding.

Lithium-ion batteries have been around for decades. Sony made them a mass-market commodity beginning about 15 years ago. Today, they're used not only in computers but also in cell phones, hand-held organizers and myriad other electronic devices.

The batteries, typically made from a combination of lithium metal and cobalt oxide, are popular because they're lightweight and able to store energy for a long time.

But manufacturers and PC makers long have known that they also can be dangerous. Manufacturers of other electronics — GPS navigation systems, digital cameras, and even electric bikes — also have had to recall lithium-ion batteries because of safety issues.

The huge round of PC battery recalls in recent months apparently stemmed from a manufacturing slip-up at Sony that left cells contaminated with metal particles that can cause a phenomenon known as thermal racing, short circuits and ultimately, fires.

Safer battery technologies typically involve using other chemical combinations to get around some of lithium-ion's failings. Others eliminate lithium altogether.

While safer, other battery alternatives are generally more costly, more cumbersome and less efficient.

As a result, factories that make lithium-ion batteries are plentiful. Factories that can produce alternative types of batteries in enough volume to supply the computer industry don't exist right now.

"Battery technology moves very slowly," said Richard Shim, senior analyst with the IDC technology research firm.

"These other technologies . . . sound promising and

Recall totals

Some of the companies hardest hit by laptop-battery problems and the number they have had to recall worldwide in the past several months:

► Dell — 4.2 million
► Apple — 1.8 million
► Toshiba — 830,000
► Lenovo/IBM — 526,000

Sources: U.S. Consumer Product Safety Commission; companies

there are indications that something might be needed to replace lithium-ion, but it's going to take awhile."

For their part, an industry working group led by a Dell executive has started working on new standards for suppliers of batteries.