



Ranking Tendency

Life Expectancy

1 ▲ Dreamcast 18 months

Sega's new console-on-steroids comes with some pretty kick-ass features, including 64 audio channels, Virtual Memory System controllers, and support for networked gaming – not to mention 128-bit performance. But in an attempt to help Dreamcast survive the test of time, Sega also packed in some costly and less-than-absolutely-necessary hardware: an encoder for DTV sets, an upgradable modem setup for high-speed cable connections, and serial ports for future (but as yet unknown) add-ons. Meanwhile, the price of a standard game console has fallen well below \$150. With Dreamcast now retailing for the equivalent of \$240 in Japan, US consumers might opt for Sony's cheaper PlayStation, with its fuller library of titles – meaning Sega's dream will take on a decidedly Freddie Kruegerish cast.

2 ▲ Java Browsers 6 months

When Netscape abandoned its all-Java browser, Javagator, a group of independent developers called the Jazilla group used the company's open-source code to develop one themselves. And late last year, Sun indicated it plans to commercialize its own Java browser in much the same way Netscape intends to shrink-wrap Mozilla. Sun plans to aim the product at devices in our distributed-computing future. Sounds great, but Java is numbingly slow on today's PCs, and tomorrow's cell phones and other smart devices will be processor challenged. Think Web applets load slowly? Wait till you see how long it takes Jazilla to warm up your smart toaster.

3 ▼ Web Business-Model Patents 6 months

Juno patented an offline ad-delivery process, and Netcentives did the same with its ClickRewards scheme. Cybergold, Priceline, and Open Market have also rushed to patent biz models. Business-model patenting appears to be the latest, greatest way to gain cred. Why? Aside from setting up the possibility for infringement suits (a lucrative revenue stream – for lawyers), a patent is often viewed as a mark of technological legitimacy. But patenting an ecommerce business model, as opposed to a technology, is the equivalent of buying a Fry Daddy and claiming you're McDonald's.

4 ▲ Furrries 9 months

From MOOs and MUDs to Ultima Online and the Palace, fantasy and the Net share a long history. But the latest example is a lot less medieval and anthropocentric – and a bit hairier – than its predecessors. Furrries, groups of people (sort of) found on the Web at FurNation or on Usenet at sites like alt.lifestyle.furry, idolize animals to such a degree that they choose to adopt feral identities. And not just the personas of real animals, but also those of stuffed Pooh Bears and such. But as with Ultima Online and its PKs (player killers), this fur nation has spawned a darker subculture: Plushophiles are furrries who get off on plush toys – literally. This is one fantasy where shaved body parts are a real turn-off.

– Jesse Freund (hype-list@wired.com)

TOXIC WASTE

Nuking Nukes

The US Department of Energy predicts that we'll spend \$150 billion to dispose of radioactive leftovers generated during four decades of Cold War weapons production. Paul Brown, a physics PhD from Boise, Idaho, says he can do it for less than a quarter of that price – without burying hazardous waste. How? Give the nukes a taste of their own medicine: Blast them with radiation.

If this sounds simple, it is. Beam an element with a stream of alpha particles and it turns into another element. This happens routinely in laboratory "atom smashers," where, for example, beryllium is commonly converted into carbon, with heat as a by-product.

Brown showed that when nuclear waste is showered with gamma rays, it's transformed into compounds that become safe within a few months, rather than thousands of years. "It's textbook radiochemistry," he says. But after searching the annals of atomic literature, he couldn't find anyone who had proposed the idea.

Bob Park of the American Institute of Physics, who routinely debunks fringe science, says Brown's scheme is not far-fetched. John Schiffer, senior scientist and an experimental nuclear physicist at Argonne National Laboratories, confirms that gamma radiation "could convert long-lived radioactive isotopes into shorter-lived ones."

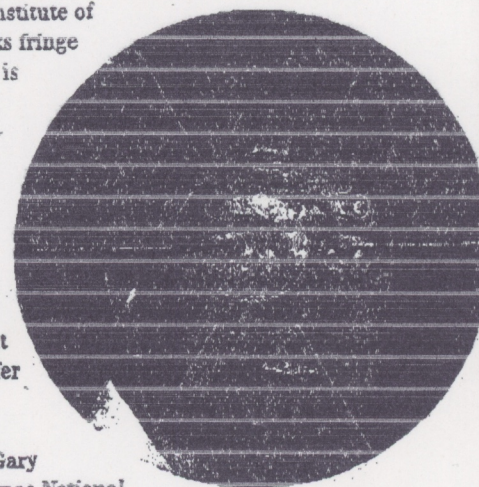
The approach is not without its challenges, however. Schiffer complains that gamma rays would result in an enormous amount of excess heat. Adds Gary Doolen, a physicist at Los Alamos National Laboratories, "It's also very expensive to generate high-energy gamma rays."

But Brown has thought about all this already. He says the excess heat could generate electricity – more than enough to run the whole operation. The inventor adds that a typical neutron-beam research project costs \$1.3 billion, while he hopes to build an entire plant for just \$5 million.

With a patent for his idea pending, Brown formed Nuclear Solutions, a company that will soon run tests at the University of Illinois or MIT. And, since the Department of Energy already has spent \$2.5 billion on "innovative waste-cleanup technologies," he's negotiating with the agency to give him his meager millions to build a pilot plant.

"Some waste products have half-lives of 24,000 years," says Brown. "There's no such thing as a steel drum you can bury that will remain safe for that length of time." Processing nuclear waste with gamma rays would be a miracle tool for regulatory agencies doing radioactive cleanup.

Brown's ultimate vision is of nuclear-power stations that neutralize their waste as soon as it's created. "I'm not an antinuke activist," he says. "I'm a realist. Obviously, we need a method to remediate nuclear waste – and ours really works." – Charles Platt



Ray man:
Physicist Paul Brown

For Jim Peter, Paul to 622-9278