

# RS BACKPACK

Babu



BY SHARIER

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BY BILL YATES & MEL CASSON



Beetle Bailey



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## S C i - Z o n e

By Cracker Jack <crackjack@yahoo.com>



### Memorable Pocket Knife

If the infinitely handy USB pen-drive has become the Swiss Army knife of computing, what do you call an actual Swiss Army knife armed with flash memory? Simple: call it the SwissMemory USB knife, and put it in every techie's wish list. Recently Victorinox released this nifty device which includes a blade, a red LED light, a nail file with screwdriver, scissors, a pen and 64MB of flash storage.

### 70 mega-pix Webcam

A quite unknown Swiss company named RoundShot has released an interesting new item, the 360 internet Livecam. The Livecam is a digital 360 camera, capable of 70 megapixels. The Swiss company claims the Roundshot Livecam uses a high-resolution digicam designed for pro-photography, as well as slit-scan technology which apparently allows for 'seamless panoramas' of up to 360 degrees. The cam is also capable of a high zoom factor, zooming up to 20x. According to the manufacturers, the cam has 'far-reaching' applications, most importantly in tourism.

weather stations, corporate websites, airports, sports clubs, construction sites and private residences.

### Surfing in a surf-board

For a decade, 'surfing' has come to mean browsing the net rather than riding ocean waves on a plank. But a surfboard has now been developed that lets surfers surf while surfing. The prototype board has been built by Devon 'shaper' Jools Matthews. It houses a laptop, solar panels, and video camera, and is to launch at the Intel GoldCoast Oceanfest. The world's first wi-fi board uses a high-speed net connection point - hotspot - positioned on the beach. Chip makers Intel has commissioned the unusual surfboard as part of the free sports and music festival in North Devon to show off how technology can be brought to the sea and sand. The board will have



its maiden outing on the waves when it is used by international pro surfer Duncan Scott at the event.

### New Atomic Particle Found

Scientists at the Department of Energy's Fermi

National Accelerator Laboratory will announce on Friday, June 18 the observation of an unexpected new member of a family of subatomic particles called "heavy-light" mesons. The new meson, a combination of a strange quark and a charm anti-quark, is the heaviest ever observed in this family, and it behaves in surprising ways - it apparently breaks the rules on decaying into other particles. As a rule, the more massive the meson, the shorter its lifetime before decaying into other particles. But not this time: this heavy meson lives three times longer than its lighter relatives. The discovery by the members of the SELEX collaboration uses data from their fixed-target experiment at Fermilab's Tevatron, the world's highest-energy particle accelerator. SELEX studies the results of protons colliding with solid targets of copper and diamond. While the SELEX experiment stopped taking data in 1997, an extended analysis revealed this new particle lurking within their data. In the spring of 2003, experiments at three electron-positron colliders - BABAR at Stanford (Cal.) Linear Accelerator Center, CLEO at Cornell University in New York, and BELLE at KEK in Tsukuba, Japan - announced the discovery of a new pair of charm-strange mesons. While these mesons had been predicted theoretically, their properties didn't match theory. They had such low masses that they could not decay in the preferred way, so they had long lifetimes. Following the 2003 announcements, SELEX began to re-examine its own results to seek out more eta particles and determine whether they existed in more interesting combinations. But before any results could be deemed conclusive, the collaboration had to prove that it understood the unique photon detector well enough to vouch for that type of data. Several

Russian collaborators within SELEX conducted painstaking tests of the detector, which they had built; their answer was "yes." The SELEX discovery adds yet another contradiction to the conventional predictions of meson behaviour. The known symmetries of heavy-light mesons predict that other active experiments, such as BABAR, CLEO and BELLE, as well as Fermilab's FOCUS experiment, will be able to see this particle and various partner particles in their data, expanding even further our picture of the strong force, and building on the SELEX result. The collaboration has submitted a paper describing the result - "First Observation of a Narrow Charm-Strange Meson  $D_s^{\star}(2632) \rightarrow D_s(\eta)$ " and  $D^0 K^+$  - to *Physical Review Letters*. The result was presented on June 18 in a seminar at Fermilab by physicist Anatoly Evdokimov of the Institute of Theoretical and Experimental Physics, Moscow, Russia.

### Apple Making Supercomputer for US Army

Apple Computer Inc. has announced the sale of 1566 dual processor 1U rack-mount 64-bit Xserve G5 servers to COLSA Corp., which will be used to build what is expected to be one of the fastest supercomputers in the world. The US\$5.8 million cluster will be used to model the complex aerothermodynamics of hypersonic flight for the U.S. Army. The supercomputer, named MACH 5, is expected to deliver peak performance capability of more than 25 TFlops/second. In comparison, the Virginia Tech supercomputer announced last year attained sustained performance of approximately 10 TFlops/second, according to Apple director of product management, server hardware, Alex Grossman. With those numbers, the MACH 5 would rank second only to Japan's \$350 million Earth Simulator computer.