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**Technology**

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## A Quantum Leap for Cell Phones

**A new no-buttons handset by Pilotfish and Synaptics signals that mobiles as we know them may soon be a thing of the past**

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It's likely to evoke the children's song inquiring, "Where's the button?" On Aug. 21, designer Pilotfish and sensor maker Synaptics are releasing a prototype of a cell phone, and the funny thing is, it doesn't have any buttons.

Instead, the Onyx device understands signs and gestures, thanks to the sensitive touch pad covering most of its surface. It opens and closes applications when swiped by one or two fingers. The phone recognizes shapes and body parts. Lift Onyx to your cheek and it will pick up a call. "The goal of this concept was to show people a completely different way of designing and making a phone," says Mariel Vantatenhove, senior product line director at Synaptics ([SYNA](#)). "We think that the market is ready for some sort of change." A sea change is more like it.

The cell phone as we know it—mostly those snap-shut clamshell types or the flat, rectangular candy bar devices—are in for a major makeover. Or so it seems from the barrage of prototypes from individual designers, boutique firms, and even large technology companies in recent months.

**SLAVE TO FASHION.** Earlier this year, Nokia ([NOK](#)), the world's No. 1 cell-phone maker, worked with 25 British college students to prototype their cell-phone visions. Among them: a cell-phone necklace whose beads light up to signal an

incoming call and an origami-like cell phone. Then there are the outlandish designs already on the market. For instance, consumers in Japan carry mobiles reminiscent of macaroons and cakes.

Mobile-phone makers are increasingly having to take cues from peers in the fashion industry. In mid-2005, the average person bought a new cell phone every 18 months. But by May of this year, the cycle had shortened to 17.6 months, according to a J.D. Power & Associates survey of 18,740 consumers. "Cell phones [are becoming] so increasingly personal, they tend to be a slave to fashion," says Richard Doherty, director of consultancy the Envisioneering Group. "And the fashion cycle for clothes is one season."

Recognizing this trend, CTIA, an association of wireless companies, has come to host "Fashion in Motion," a runway show for fashion couture, at its annual conference. The winner of this year's first-ever \$10,000 CTIA scholarship for a "'Fashion in Motion" product, Manon Maneenawa, designed the Triple Watch Cell Phone, a mobile that can be reassembled into a wristwatch or an alarm clock.

**PURPLE POWER.** Indeed, future cell phones may be closely linked to users' lifestyles and interests, such as gaming, politics, and college sports, says Doherty. Japanese consumers can already buy waterproof phones for use in the shower. And Motorola ([MOT](#)) designers are looking to "humanize" phones by letting the devices read users' emotions, says Jim Caruso, senior director of operations for consumer experience designs for Motorola phones. For instance, the phone might light up in a purple color when a loved one calls (see BusinessWeek.com, 7/26/06, "[Motorola Shows Its Mojo](#)").

These shifts in cell-phone usage are forcing handset makers to rev up their design engines. In 2005, up-and-coming cell phone manufacturer Pantech hired 11 renowned industrial design firms, including San Francisco-based Lunar Design, to brainstorm some 80 cell-phone concepts to inspire its internal designers. Each firm was flown to Korea for presentations. What kinds of designs did Pantech get? Lunar developed a handset that can swivel around into an easel-like position. The easel's front is taken up almost entirely by a display, used for watching video or for typing via an accessory keyboard.

The coming revolution is likely to engulf industry giants and boutiques alike. One outfit, Switzerland-based GoldVish, will debut its mobiles for the *über*-rich on Sept. 1 at the Millionaire Fair, a lavish event showcasing luxury goods like Rolls-Royce cars. GoldVish's cell phones were created by Emmanuel Gueit, a watch and jewelry designer whose credits include items for Harry Winston. The phones start at \$24,500 and go to \$1.26 million apiece. The company's most expensive device, fittingly named "Piece Unique," is handmade of solid gold and studded with diamonds. Press a precious stone to open a secret compartment that can be used to hold medicine or other valuables. "It's a jewel you can communicate with," explains GoldVish CEO Michel Morren.

**NIFTY NICHEs.** GoldVish and many other niche makers believe that as phones become an integral part of fashion, limited-edition designers will carve out a slice of a market dominated by Nokia, Motorola, and Samsung (see BusinessWeek.com, 8/3/06, "[Nokia's Magnificent Mobile-Phone Manufacturing Machine](#)").

GoldVish's research indicates that more than 15% of cell-phone users would like to have a more luxurious phone. In the next few years, the upstart hopes to grab 2% of the \$134 billion cell-phone market, Morren says. GoldVish is already ramping up operations in Europe and Asia, and by the end of 2006, expects to open offices in New York, Miami, and Los Angeles. Even Nokia has come out with a gold-plated model.

For a phone that's unique but won't deplete your Swiss bank account, Spark Fun Electronics last August introduced cell phones that look deceptively like old-fashioned rotary-dial phones (they even emit the same loud ring). So far, the Boulder (Colo.) company has sold 30 units. "You can take them to bars, they are so much fun to show people," says Nathan Seidle, the company's 24-year-old CEO. "A lot of people have put them into old, retro cars. People have gotten them for seniors, who don't really like cell phones because they can't see the numbers."

**"NOT A CELL PHONE ANYMORE."** New technologies drive many of the new designs. One example: Synaptics ClearPad, a new type of touch screen that will become commercially available later this year. Unlike today's touch screens, which aren't entirely transparent and often not very sensitive—we've all had to endlessly tap one with a stylus to get a response—ClearPad is clear, so it can be used as a sensitive overlay to a cell-phone display. Another innovation likely to change the cell-phone's appearance: flexible displays. An electronic ink screen prototype, developed by Koninklijke Philips Electronics and startup E-Ink, is thin and flexible like paper so it can be worn wrapped around a cell phone. Users can unwrap it to view a map on a larger screen. Eventually, the display could be used to watch video.

These designs are just the tip of the iceberg of the ideas floating around for a cell-phone makeover. As Brian Conner, a designer at Munich-based Pilotfish, says, "You can either design a chair, or an object to sit on. You can design a communications device, or a cell phone." Looking at Onyx, he says, "It's not a cell phone anymore."

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