

## COMPUTING

## Broadband to the People

**The secret to universal broadband** Internet access could be right above your head. Power lines can carry broadband in the form of high-frequency electrical signals, and some European and U.S. utilities are already testing such systems. The problem is that forks in the electrical grid reflect broadband signals and thereby degrade transmission. Pennsylvania



**POWER LINES** can in theory deliver faster Internet access than cable or DSL.

State University researchers simulated what would happen if lines were synched up with transformers and other electrical loads to minimize reflection. They found that signals should flow fast enough to give homes data-transfer rates of hundreds of megabits per second, tens of times faster than DSL or cable, they told the IEEE Consumer Communications & Networking Conference on January 5. The cost-effectiveness of broadband power lines remains to be seen, says lead researcher Mohsen Kavehrad, as it would interfere with some radio signals. —JR Minkel

## CLONING

## KC &amp; the Sunshine Cow

**Breeding cows for beef** is often slow because the qualities of a top-grade cut, marbling and tenderness, are unknown until after a cow is slaughtered. That may change soon thanks to a newborn calf born healthy to the first cow cloned from a beef carcass. The mother, KC, is named after the kidney cell from which she was cloned. Her calf, Sunshine, was born naturally in mid-December, lively and fit at 72 pounds. The technology

used to generate KC could also clone an animal from a freshly processed cut of beef, says Steven Stice, an animal scientist at the University of Georgia. Although cloned animals cannot legally enter the food chain, their offspring might soon: later this year the Food and Drug Administration is expected to weigh in on the safety of eating such animals, which an earlier FDA draft deemed safe. —Charles Q. Choi

## BIOLOGY

## Whales on a Bender

**A long-standing mystery** in marine biology is whether whales suffer from decompression sickness, a.k.a. the bends, after rapidly rising from the ocean depths. Biologists worked on the assumption the creatures were immune, but recent reports of beaked whales suffering acute bendslike symptoms after military sonar exposure raised the question anew. Now researchers from the Woods Hole Oceanographic Institution have examined 16 sperm whale skeletons collected since 1870 and found pockmarks and erosion in the bones of adult whales. The damage worsened with age and is consistent with the kind of bone injury that deep-sea divers suf-



**WHALES** are not immune to decompression sickness.

fer. If the bends is the culprit, whales have likely evolved behaviors to avoid the malady, such as gradual surfacing, says study co-author Michael Moore, and stressors such as sonar could sicken whales if they disrupt those behaviors. The study surfaced in the December 24, 2004, *Science*. —JR Minkel

## BRIEF POINTS

- Wet sand or soft clay is how the Huygens spacecraft portrayed Titan's surface when it successfully landed on the Saturnian moon on January 14.

Cassini-Huygens homepage:  
<http://saturn.jpl.nasa.gov/home/index.cfm>

- Retinal recordings explain why swordfish have a heating organ in the muscle to keep their eyes 10 to 15 degrees warmer than ambient temperatures: the warmth enables the fish to process visual information 10 times faster, improving the ability to spot prey.

*Current Biology*, January 11

- Regenerating hair cells of the inner ear, and thus restoring hearing, could be possible: hair cells proliferated in mice engineered to lack the *Rb1* gene, which helps to regulate cell division.

*Science Express Online*, January 14

Rats can distinguish spoken Dutch from Japanese. This ability, however, probably is a by-product of general perceptual facilities rather than an indication of linguistic capacity.

*Journal of Experimental Psychology: Animal Behavior Processes*, January