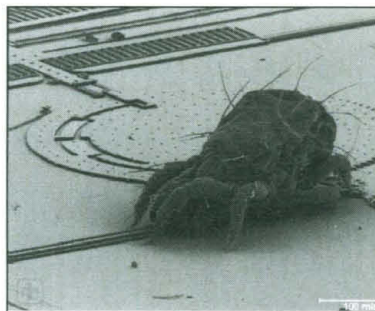


COOL IMAGES

A Mite Small

This spider mite, described as "a small white fleck to the human eye," is a Godzilla compared to the levers, gears, and latches in a Web gallery of micro-electromechanical systems at Sandia National Labs (www.mdl.sandia.gov/Micromachine). Scientists are looking to these miniature mechanisms etched from silicon for applications such as connections for optical fibers and nuclear weapons locks (*Science*, 16 October, p. 402). Sandia researchers have shown off their creations with dozens of scanning electron micrographs and movies—including clips like the World's Smallest Mite-Go-Round, in which mites whirl around on a spinning gear. Sandia's Paul McWhorter says his group began sprinkling dust mites on top of their wafers about a year ago—they now keep a supply of mites on a houseplant—to lend perspective to the devices' size and strength: "People had trouble believing they were real."



HOT PICKS

Brain food. Whether it's phantom limbs, Gestalt psychology, creativity, or Creole language, you can learn all about it at The MIT Encyclopedia of Cognitive Sciences. This new resource contains 471 backgrounders on topics in philosophy, linguistics, neuroscience, psychology, and other areas. mitpress.mit.edu/MITECS

Lesson in bonding. Students can get a feel for protein folding theory with these interactive demos on alanine, an amino acid. Rotate bonds to change alanine's energy state or help it form a helix, or learn more by following biomolecular modeling links. www.tc.cornell.edu/Exhibits/Alanine

Mutated mice. One way to study what genes do is to disrupt them with a tagged mutation. This group has posted hundreds of these "gene trap insertions" in mouse stem cells, mostly for secreted and membrane proteins, and plans to offer mice and stem cells to researchers. socrates.berkeley.edu/~skarnes/resource.html

NET NEWS

Brazilians Flock to the Net

The early days of the U.S. Internet boom are being replayed in Brazil, where the number of Internet surfers is growing at a phenomenal rate. Only 3 years after the Internet became widely available in Brazil, 3.5 million (2.2%) of its 160 million citizens regularly sign on, according to a study released last month—up from 250,000 in 1996.

That estimate is based on a questionnaire survey of 15,000 people by the Brazilian Institute for Public Opinion and Statistics, which also collaborated with the Cade? search engine on a Web survey of 50,000 users. The results show that Brazil's surfers, like Netizens in the United States a few years ago, are mostly young (79% are between 15 and 39), male (71%), and single (64%). More than 40% have finished high school, and one-fourth are college graduates. Most respondents logged in from home, mainly to get information from the World Wide Web, especially news

NETWATCH

edited by JOCELYN KAISER

and science; one-third use it for e-mail. As a result of using the Internet, almost 30% watch less television, 12% sleep less, and 7% have cut back on their reading.

Little reliable research has been done on Internet use in other developing countries, experts say. But according to Andy Scherrer, a statistician with Matrix Information and Directory Services Inc. in Texas, a survey last January of numbers of Internet host computers around the world found that Brazil ranked 20th—above Russia, India, and China.

SITE VISIT

A Renaissance Science Feast

Flying machines, water-drawing bellows, and other inventions from Renaissance scientists and engineers come to life at an Italian Web site run by the keepers of the famed Medici and Lorraine collections of scientific instruments.

The site, from the Institute and Museum of the History of Science in Florence, offers a tour of the museum's room on Galileo Galilei that showcases the inventor, scientist, and heretic. Posted are photos of several of Galileo's inventions, from lodestone and clock's pendulum to telescope and lens—as well as a bizarre display of one of his preserved fingers.

Hyperlinks take readers to the findings made with each device and add historical context. Visitors can also tool around the exhibit in virtual reality.

Another Web section features the "Mechanical Marvels" of Leonardo da Vinci and his contemporaries, an exhibit now traveling the world. Dozens of da Vinci's plans for flywheels and crankshafts, helicopters, water pumps, and even robots can be viewed, along with anatomical drawings of the human body. Also explained is the architect Brunelleschi's strategic arrangement of bricks for constructing the massive dome of the Florence Cathedral.

Scholarly surfers who read Italian can access the institute's huge bibliography of documents. Another feature is Galileo's "Notes on Motion" (*Science*, 12 June, p. 1663). And there's more to come: Institute director Paolo Galluzzi says new material starting next February will cover 18th century French chemist Antoine Lavoisier and others.



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