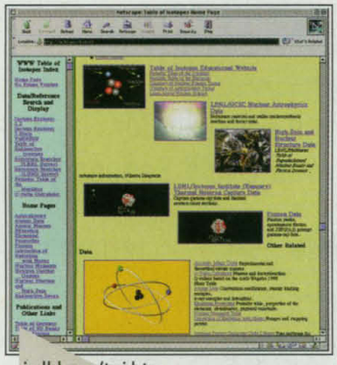
SITE VISIT

Isotope Bonanza

If you thought the periodic table was hard to fathom, glance at a table of isotopes. Each atomic element (defined by its number of protons) comes in different flavors, depending on the number of neutrons. Scientists have tallied more than 3600 isotopes, the majority radioactive, and scores of new isotopes are discovered every year. Want a rundown? The Isotopes Project at Lawrence Berkeley National Lab in California has a Web site for you.



ie.lbl.gov/toi.htm

The site began in 1995 as an online supplement to the classic reference book *Table of the Isotopes* (*TOI*), first published by the late Glenn Seaborg in 1940. One way to see *TOI* data is to click on an element in the periodic table. Another section, the "Table of Radioactive Isotopes," is meant to help people in fields like nuclear medicine and chemistry quickly find the data they need—by searching for a radiation energy, for instance.

For physicists, the site provides Isotope Explorer, software for viewing nuclear data in tables or graphs; an up-to-date bibliographic database; and specialized pages, such as data on isotopes in stars. There are also educational links, including a glossary with animations of decay reactions.

The Isotope Project's data page could use a design overhaul—the frames format especially is confusing. But altogether, the supply of up-to-date information is a glowing example of scientific dissemination on the Web.

HOT PICKS

Keeping abreast. Looking for background on apoptosis in breast tissue, or need to know how to milk a mouse? Try Biology of the Mammary Gland, a Web site brimming with information on breast development and cancer. It includes reviews; a histology atlas; techniques; transgenic mouse models; and info on the Mammary Genome Anatomy Project, which is studying the genes involved in breast cancer. mammary.nih.gov

Evolving science. The National Academy of Sciences, which recently updated its statement on science and creationism, offers this Web page of links and resources on the topic—from books to court cases to sites on human fossils and evolution. www4.nas.edu/opus/evolve.nsf

NET NEWS

Internet Patents Choking the Web?

Every day on average last year, the U.S. government issued nearly 50 patents on Internet tools and other software. But this apparent blitz of creativity may belie a big problem: Many of these inventions, some critics charge, aren't original enough to have warranted a patent and could hinder the Internet's growth by blocking free, unpatented standards.

The latest dustup is over a patent awarded last January to Seattle-based Intermind, for its software to help Web surfers track how sites they visit use their personal data. The company claims on its Web site (www.intermind.com) that its patent may be infringed by an "open-source," or freely shared, privacy protocol developed by the World Wide Web Consortium (W3C), an industry and academic group that comes up with standards like HTML, the language for writing Web pages.

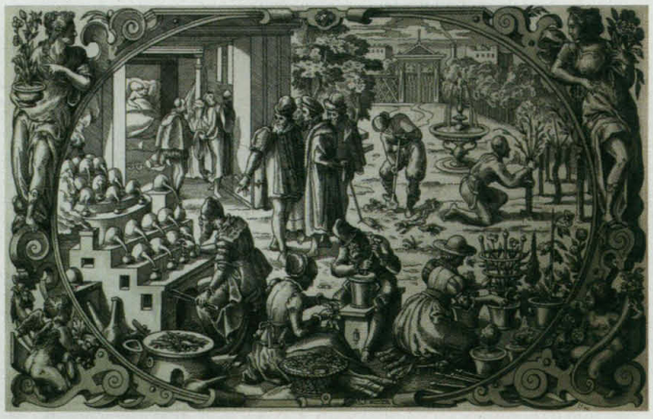
W3C struck back earlier this month, launching an appeal for people to send it evidence of "prior art," or earlier technology that might help it challenge the patent (www.w3.org). (Intermind says it has already done a thorough search.) "The success of the Web has come about largely because of a commitment to open source," says W3C spokesperson Janet Daly, pointing to the Web protocol, which inventor Tim Berners-Lee "gave away." Berners-Lee himself this month suggested companies forge an ethics code to refrain from patenting such widely used technologies. Intermind president Brian McManus disagrees, saying patents mean "recognition for the amount of money and effort that has gone in."

Some experts lay part of the blame with the U.S. Patent and Trademark Office (PTO). Half of all software patents don't cite any prior art, which means neither the applicants nor the PTO has shown the inventions are novel, claims Greg Aharonian, editor of *Internet Patent News Service*. PTO official Steve Kunin says the problem is that examiners have no easy way to dig through old computer programs that don't show up in journal databases. The office plans to hold hearings starting in June to seek advice.

COOL IMAGES

Alchemy and Old Science

From herb garden to distillation flasks to sickroom, this 16th century engraving captures the allure of medicinal chemistry in Renaissance times. The image is one of hundreds of historical pictures of labs, apparatuses, and scientists, mostly from before 1850, posted at the Edgar Fahs Smith Collection Web site at the



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University of Pennsylvania. Portraits include a youngish astronomer Nicolaus Copernicus (1473–1543), 17th century chemist Robert Boyle wearing a long curly wig, and Dmitri Mendelyeev (1834–1907) at the lab bench. Also posted are original texts of a 1598 "Treatise on Metallurgy" and John French's 1651 "Art of Distillation," which has methods on everything from making cordials to fractionating tree sap, perhaps: In French's words, "How to rectifie [*sic*] all stinking, thick black Oils that are made by a Retort, and to take away their stink."

www.library.upenn.edu/etext/smith

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