

ences is part, has committed to providing funds for operating costs and science support.

In future years, NSF would like to expand EarthScope with two instruments that would give an even broader view of Earth. The Plate Boundary Observatory (PBO) would place a dense concentration of instruments along North America's major tectonic plate boundary from Alaska to Mexico, looking for the stress buildup that drives earthquakes. And over it all would be InSAR, a satellite-borne Interferometric Synthetic Aperture Radar that would check strain accumulation every 8 days with 100-meter resolution. EarthScope planners hope PBO might get under way in 2002 or so and InSAR soon after that.

Support for EarthScope ranges from enthusiastic among geophysicists to guarded among geologists. "We're beginning to sense that, for some of our problems, the only solution is complex, multidisciplinary studies," says seismologist David Simpson of IRIS, a consortium of seismological research institutions in Washington, D.C., that is expected to put in a bid to build and operate USArray. "These are big problems; they've got to be attacked in an integrated big-science way. EarthScope engages a much, much larger community than just the seismologists." Despite his reservations, Burchfiel agrees that "there's a lot of great science to be done, [but] it's science in a somewhat different mode than some people are used to. The geophysics community is clearly trying to integrate geology and geophysics for better science. That's the way it has to go."

Whether it goes that way as soon as the project's backers hope depends first on winning a spot in the president's budget that appears in February, followed by a congressional nod later in the year. In the meantime, everyone would probably agree with Zimmerman's bottom line: "This is not an easy thing to pull off."

—RICHARD A. KERR

DATABASES

Scientists Decry Antipiracy Bill

Responding to a furious lobbying campaign, the House last week put off a vote on a bill that critics say could severely hinder how everyone from molecular biologists to environmental scientists uses electronic databases. Scientific groups are hoping a less restrictive proposal emerges when Congress returns in January.

The issue arose 3 years ago, when the World Intellectual Property Organization floated a draft treaty that would impose civil and criminal penalties for using information in a commercial database without the database owner's approval. The initiative was put on the back burner, however, after

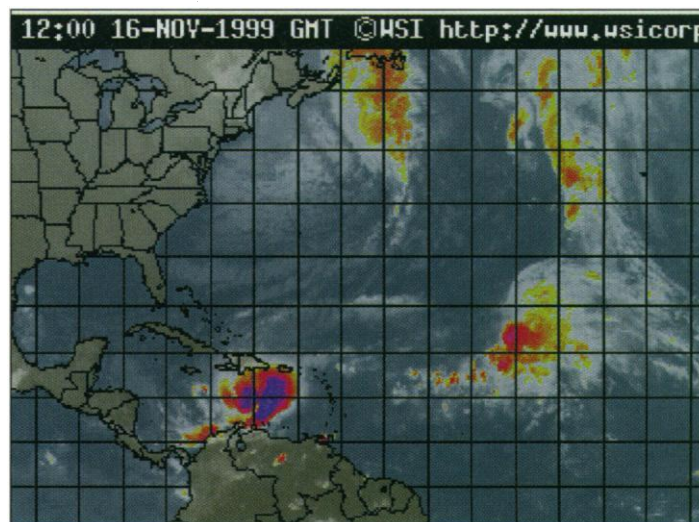
the U.S. National Academy of Sciences and other organizations complained that the treaty might undermine "fair use," a legal privilege that has long allowed open access to many kinds of data for educational and research purposes (*Science*, 25 October 1996, p. 494). Most troubling to these groups was the prospect that companies which repackage data freely available from the government—weather statistics or gene data, for example—could claim ownership of the raw information.

Congress has since struggled to forge a consensus on how to protect commercial databases without overly restricting academic access (*Science*, 14 May, p. 1129). The latest overture, Representative Howard Coble's (R-NC) Collections of Information Antipiracy Act (HR 354), would prohibit for 15 years or more the use of data in a way that would harm a database's market. Backing the bill, which was approved by the House Judiciary Committee in May and was headed for a possible floor vote last week, are groups such as the National Association of Realtors, which wants to protect its Multiple Listing Service, and Reed Elsevier, which owns LEXIS-NEXIS and many scientific journals.

University, library, and scientific groups, however, contend that Coble's bill is deeply flawed, particularly its definition of databases as "collections of information." That sweeping term, critics say, could encompass tiny collections such as a handful of species names or even individual facts. And that could allow database owners to impose fees or other constraints on researchers hoping to create new data sets or manipulate the information—for example, by plugging weather data into a climate model. Another problem, they say, is that the bill would permit nonprofit uses of data "that do not materially harm the primary market," without explaining what would constitute "harm." According to a 1 November letter to House members from Association of American Universities (AAU) president Nils Hasselmo and signed by 12 other groups (including AAAS, *Science's* publisher), HR 354 "would place

a shroud of uncertainty over today's customary and accepted practices." An investigator who drew on a commercial database—which could mean any of Reed Elsevier's journals, for instance—could wind up violating copyright law if he or she let postdocs and grad students incorporate the data into their work, says AAU executive vice president John Vaughn. "We don't want to have to bring lawyers into the lab," he says.

The AAU and other groups have thrown their weight behind an alternative bill, HR 1858, crafted by the House Commerce Committee. HR 1858 would, among other differences, protect collections of facts but not discrete facts themselves; and it would allow more leeway for researchers, penalizing them only if they misuse data as part of "a consistent pattern engaged in for the purposes of direct commercial competition." The bill's approach is more in line with an academy report released last month, "A Question of Balance: Private Rights and the Public Interest in Scientific and Technical Databases." However, the Judiciary Committee bill, which is favored by House Ma-



Storm brewing. Scientists say antipiracy bill would place restrictions on access to information in commercial databases, such as this weather center run by Intellicast.

jority Leader Dick Armey (R-TX), has dominated discussions so far.

With HR 354 failing to pass before the House adjourned, some observers expect members to try to work out a compromise bill. The Senate also appears eager to move on database protection: Orrin Hatch (R-UT), chair of the Senate Judiciary Committee, last January signaled his intention to open debate by introducing several proposals into the *Congressional Record*. "We think if something happens, there could be fairly quick action," says Skip Lockwood of the Digital Future Coalition.

—JOCELYN KAISER

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