Europeans Look IBM Gift Horse in the Mouth

Proposal to establish a European academic computer network linked with the U.S. BITNET system raises concerns about IBM's move

Paris. Proposals from International Business Machines (IBM) to set up a multipurpose network connecting mainframe computers in more than 60 universities and academic research centers spread across Europe have become the latest focus of tensions between the computer giant and various European governments over the company's plans for expansion in the telecommunications field.

IBM has offered to cover the full costs of leasing international lines for an initial 4-year period to enable the universities to set up what it calls the European Academic Research Network (EARN). It will also provide both the hardware and sofware needed to put the network into operation. As well as allowing European academics to communicate with each other, the network would put them in direct contact with North American research workers through a connection with BITNET, another IBM-supported system which currently links 68 U.S. and Canadian universities through a central facility at the City University of New York.

Although some governments have indicated that they have no objection to the project, others are taking a long, hard look at IBM's proposal before giving it the official go-ahead. They are delaying giving the company permission required to operate leased lines. It is widely accepted that several governments fear IBM could undercut their own efforts both to encourage the use of public rather than private information networks, and to stimulate national telecommunications and electronics industries.

Plans for the European network were first put forward in 1982 by IBM, whose computers, unlike those of almost all its European competitors, are not routinely able to communicate with each other through the standard public telecommunication channels. A board of directors, made up of one member from each of the 15 countries expected to participate, as well as the European Laboratory for Particle Physics (CERN), was set up at the beginning of this year.*

According to Herbert Budd, director of scientific programs for IBM Europe, the proposal was first raised not with the intention of gaining immediate sales for IBM equipment, but with the purpose of offering European academics a facility that had already been available in the United States through BITNET and other networks for several years. Budd describes EARN, when linked to BITNET, as potentially "the biggest noncommercial network in the world."

Current plans are that in several countries, such as Britain and Sweden, EARN will work through academic networks that have already been established. In others, including Ireland and Switzerland, where no networks have previously existed, IBM is helping to put them in place. In the middle are France, Germany and Italy, each of which has regional networks that will be integrated into EARN.

> The entire system is potentially "the biggest noncommercial network in the world."

Any academic whose computer is able to run IBM's RSCS (Remote Spooling Communication Subsystem) software will be able to make use of EARN by linking up with a central "gateway" computer, one of which is being identified in each member country. This gateway will be linked by leased telecommunications lines to a main computing center in Rome, which in its turn will be linked into BITNET (the one line that has so far been installed).

Uses of the network will include online access to data bases distributed across Europe, as well as facilities for computer conferencing. The various stages through which communications will pass mean that, at least for the present, contact between research workers will be on a "store and forward" system.

Despite some limitations which this will impose, the whole system will have major benefits for European academics, suggests Denis Jennings, director of the computer center at University College Dublin and chairman of EARN's Board of Directors. "It's like global office automation for the academic community," he observes. "For example, it will greatly enhance the ability of academics to work on joint projects at a distance, making it easier for them to collaborate on scientific papers, and so on."

Even IBM's critics acknowledge that its offer to rent the leased lines and make the necessary equipment available—no figures have been given, but running costs alone are very likely to amount to more than $1 million a year—is generous.

Yet the gift horse is being looked closely in the mouth. Some computer users, for example, have noted that EARN has been at least partly conceived as a way of giving IBM computers a communications ability which most other research computers already have through public networks. One British physicist suggests that this is partly to blame for what he describes as an "underwhelming" initial response to the proposals from the European academic community.

The main obstacles that the company has run into in getting EARN accepted, however, are a direct reflection of the commercial conflicts between IBM and its smaller European competitors (often backed by national governments) as each struggles for the biggest possible slice of the expanding telecommunications market. Two issues have proved to be particular sticking points.

The first is whether academic computing should be treated as a private or a public activity. Both Budd and Jennings argue that a university should be treated as a single user and be given the same rights to unlimited use of a dedicated groundline, leased at commercial rates, as is currently offered to private corporations—the approach on which BITNET operates in the United States.

In contrast, most European governments, which, unlike the United States, have traditionally considered telecommunications in all forms to be primarily a public responsibility (as well as an important source of revenue), are committed to the idea that as much data communication as possible should be carried out through public networks.

The second issue reflects the recent decision of 12 major European computer manufacturers to adopt common, nonproprietary standards for computer-to-

*Countries expected to be EARN members by the end of 1984 are Great Britain, France, West Germany, Ireland, Switzerland, Italy, Austria, the Netherlands, Belgium, Spain, Greece, Israel, Denmark, Sweden, and Norway.

computer communication. This strategy has explicitly been adopted to strengthen their ability to compete with IBM in the European telecommunications market (governments are being urged to adopt the same standards for their computer purchases), and is being eagerly supported by the Commission of the European Economic Community in Brussels.

Where networks are established linking public institutions such as universities, argues the commission, these should make use of a seven-layered set of design standards known as the Open Systems Interconnection (OSI), currently being developed by the International Standards Organization.

IBM has agreed, in principle, to move toward these common standards as part of a broad agreement reached with the EEC commission last month to head off antitrust action against the company. However, at present IBM has its own communications system that works on proprietary protocols, and many European manufacturers fear that if these become widely used by IBM customers, which often include governments, it could make the task of competing with IBM more difficult.

These two issues have led to some hard bargaining between IBM, EARN's Board of Directors, and the Administrative Conference of European Posts and Telecommunications (CEPT), an advisory body that seeks to coordinate the activities of the various national postal and telecommunications authorities in Europe.

A meeting held at the end of June between the EARN board and the CEPT hammered out a compromise, under which the advisory body agreed to recommend to each individual authority that the network should be allowed to start operation. As a result, various lines connecting the "gateways" are currently being installed to order.

In return, several concessions were made by the computer users. One was their acceptance that, as well as charging rent for the leased lines, the postal and telecommunications authorities would have the right to demand a volume charge on top, covering the data flow along the lines. In practice, says Jennings, it is expected that most authorities will set their charge rate at zero. Budd of IBM warns that excessive charging could jeopardize the whole project; "we want to invest in a network that European academics can run and fund themselves," he says, adding that the company is "not prepared to contribute an astronomical sum" to make EARN a success.

A second compromise has been reached over the potential conflict between IBM's communications protocols, which EARN will initially be based on, and the desire of European governments and manufacturers to implement the OSI standards currently under development. Picking his words carefully, Jennings says that "I would hope that we would eventually adopt the detailed standards that are coming out of the European standardization work." A special subcommittee to map out a plan for moving toward an open system was established by EARN's overseeing board when it met in Rome earlier this month.

How these commitments on both sides work out in practice remains to be seen. Already several governments have indicated that they will be prepared to let EARN go ahead. Britain's Department of Trade and Industry, for example, is expected to issue a license in the near future for the EARN linkage between the British "gateway" computer at the Science and Engineering Research Council's Rutherford Laboratories and CERN, which in turn will be linked to Rome. In Germany, EARN is also likely to get the green light—but on condition that it slowly evolves into a national OSI-based system currently under development, the Deutsches Forschung Net.

Other countries may be more problematic. France, in particular, is currently exploring several possible configurations for public research networks—including the use of its recently launched but underutilized satellite Telecom 1—and has long been hostile to private developments in the field of telecommunications. However, as one senior computer scientist admits, "there are many research workers in this country who would like to see EARN go ahead."

IBM argues that, having offered to make the technology available, it is now up to the academics to keep pressure on national telecommunications authorities to grant the operating licenses. "I think it is a users' problem, they have to work it out with those authorities," says Budd.

Jennings agrees: "My primary concern at the moment is to get the network up and operational," he says. Both claim that speed is a top priority, and that the lack of such a network at present places European academics at a disadvantage compared to their American colleagues. "EARN must be a success today, not tomorrow, if we want to eliminate the gap between American and European academic research," says Jennings.

—DAVID DICKSON

Chinese Express Views on Mosher to Stanford

Stanford University president Donald Kennedy recently got more than he asked for when the Chinese government responded to his request for information concerning Steven M. Mosher. A letter from the Chinese Academy of Social Sciences hints that if Stanford does not "properly handle" the Mosher affair, cultural and academic exchanges between the United States and China would be damaged.

Mosher was expelled last year from the university's anthropology department for allegedly engaging in "seriously unethical conduct" while conducting field research in southern China. Mosher argues that he was ousted for political reasons. His appeal to Stanford concerning the dismissal is now in its final phase.

In May, Kennedy wrote to the Chinese Academy of Social Sciences, asking more questions about Mosher's activities while he conducted field research in China in 1979 and 1980. The Chinese replied in June. Mosher recently released the 1-1/2 page letter and has called attention to a passage that he characterizes as "a veiled threat." In the letter's last paragraph, academy official Wang Ping says, "During and after his stay in China, Mosher's behavior seriously damaged the cultural and scholastic exchange between China and the United States. . . . For the future normal and beneficial exchange between our two countries, I trust that you will make a correct judgment, based on the facts, and properly handle this matter." Mosher argues that this lends further credence to his argument that he was dismissed from Stanford under pressure from the Chinese at a time when the country had just opened its doors to foreign social researchers.

Kennedy said through a university spokesman, "We didn't ask [the Chinese] for help in deciding the case. All we asked them for was information. We got part of that and we propose to decide the case ourselves."

It is unclear what information the Chinese provided because, in the letter, the Academy apparently declined to answer questions posed by Kennedy. "Regarding the several questions