EUROPEAN COMPUTER NETWORKS

New network raises anxiety

Munich

PROVIDERS of European academic computer networks glimpsed the future in Europe last week and were not happy with what they saw.

A fledgling network named IXI (International X.25 Infrastructure), sponsored by the Eureka project COSINE, faces significant obstacles before it can become a worthy successor or partner to existing networks such as EARN and EUNET.

The scepticism of EARN and EUNET managers toward IXI, unveiled at the RARE 'Networkshop' in Trieste, Italy, on 9 May, was tempered with the knowledge that they will probably have to learn to live with the new network.

Powerful forces brought about the creation of IXI. The backers of the network include the association of research networks known as RARE (Réseaux Associés pour la Recherche Européenne)* and the Eureka project COSINE (Cooperation for Open Systems Interconnection Networking in Europe). RARE represents national networks such as DFN in West Germany, JANET in Great Britain and REUNIRE in France.

GERMAN COMPUTER NETWORK

Lower prices wanted

Munich

LESS expensive services for users are at the top of a list of requests submitted by the West German computer research network organization DFN (Deutsche Forschungsnetz) to the West German postal ministry. The ministry has already agreed to provide a network for researchers at transmission speeds up to 64,000 bits per second (b.p.s). A network for speeds up to 2 million b.p.s should be available within two to three years. Negotiations are still going on regarding a high-speed network for speeds up to 140 million b.p.s.

Telecommunications services will be deregulated in West Germany from 1 July, and Martin Wilhelm of DFN says that DFN has already looked at a relatively expensive offer from a private network.

But DFN, convinced that the postal ministry will offer better quality, has chosen to wait for the ministry to install and test its own 2 million b.p.s. network.

Other items on the request list include lower tariffs for local-area networks and continued good-faith participation in international negotiations to establish a European X.25 network for researchers (see above). DFN points out that researchers and the ministry have a common interest in the development of new data services and equipment. But whether the ministry will accede to the demands "will only come out in time", said Wilhelm. Steven Dickman

RARE and COSINE are negotiating with the PTT-Telecom of the Netherlands to install IXI in 19 European countries. Negotiations may be completed within the month. IXI will have a four-month start-up phase followed by one year of operation.

After that trial period, RARE and COSINE directors and the national networks they represent hope to know whether it will be feasible to use IXI as a basis for future academic networks.

The new network will eventually offer an X.25 backbone linking the data networks of as many as 19 European countries. The initial operating costs, estimated at 5 to 6 million ECU (1 ECU = \$1.09), will be shared by the member states in proportion to their gross domestic products and by the Commission of the European Communities. Eventually, IXI will provide a "harmonized X.400 service" for electronic mail and a pilot service for file transfer, as well as a gateway to North American research networks.

The main criticism voiced by managers of EARN (European Academic Research Network) and EUNET (European Unix Network) against IXI is that it costs too much. Dennis Jennings of Ireland, formerly president of EARN and now a board member, points out that EARN operates for about 2 million ECU a year. He is afraid that IXI will not be "cost-effective".

The chairman of the COSINE policy group, Peter Tindemans of the Netherlands, disagrees. He points out that many of the costs of operating EARN are hidden, borne by corporate subsidies or national network organizations. The real costs of EARN, he says — especially considering the initial investment in it made by IBM — are much higher. In the long run, says Tindemans, "ours will be a cheaper set-up".

EARN user Brian Carpenter, head of the communications group at CERN in Geneva, supports Tindemans. "It might be wise to pay more [for IXI] in order to raise the standards." EARN is frequently congested and cannot always provide the quality of service expected, he says.

A second worry is that IXI is supported by postal authorities (called PTTs) in each country. Although even Jennings agrees that academic networks need the cooperation of PTTs, which provide the leased telephone lines over which data is transmitted, he is worried that they will play too strong a role in operating IXI.

Because most PTTs are monopolies, researchers wonder if PTTs will take advantage of them.

A related fear concerns possible exploitation of IXI users by national network organizations such as REUNIRE and DFN. EARN has been mostly run by volunteers, whereas the national net-

SOVIET SUBMARINE

Search off Norway for Komsomolets

London

FOUR Soviet ships — the research vessel *Akademik Mystislav Keldysh* belonging to the Soviet Academy of Sciences, the hydrographic survey ship *Persei* and the rescue vessels *Georgii Titov* and *Mikhail Rudnitskii* — are trying to locate the Soviet submarine *Komsomolets* which sank in the Norwegian Sea on 7 April with the loss of 42 lives. According to the Red Army newspaper, *Krasnaya Zvezda*, the manned seabed exploration craft carried by the *Keldysh* will be used to photograph the sunken vessel. It stated emphatically that neither the Soviet Union nor the United States has the technology to raise a wrecked vessel from a depth of 1.5 km.

The loss of the *Komsomolets* has drawn attention to Soviet deficiencies in air-sea rescue techniques. *Pravda* has suggested that some of the money saved by Mr Gorbachev's promised defence cuts should be spent on improving the situation. And one of the new people's deputies, Gavriil Popov, who was elected by the Union of Scientific and Engineering Societies, has made it clear that in his opinion high-level bungling and cost-cutting on safety made the death-toll higher than it would otherwise have been. Vera Rich

works are professionally managed. Although IXI would certainly still need volunteers, especially in operating electronic mail, databases and other high-level services, many such services would be sold to users by IXI or its member networks.

Intensifying this fear is the suspicion that the interests of European computer equipment suppliers are being placed ahead of those of researchers. EARN was widely perceived as a "plot to sell IBM machines" from the United States to European users, says one network user. IXI, users fear, may allow a backlash, to the detriment of researchers. Daniel Karrenberg, network manager of EUNET in Amsterdam, says that the goals of IXI have "disproportionately more to do with European corporations and PTT needs than with user needs".

Tindemans requests patience from network users during the pilot phase of IXI. Eventually, he foresees a "simple situation" in Europe, where COSINE provides the infrastructure for basic network services and networks such as EARN operate at the national level.

EARN and EUNET have announced that they will take part in the pilot phase of IXI. Users wishing to influence the development of future networks are urged by COSINE officials to "make their requirements known" to the RARE secretariat.

Steven Dickman

*Secretariat, c/o PO Box 41882, NL-1009 DB, Amsterdam, The Netherlands.