

Published on behalf of
the DGXIII:
Telecommunications,
Information Industries
and Innovation
Responsible Editor:
Peter Popper
European Institute for
Information
Management
13, rue de Bragance
L-1255 Luxembourg
Production:
Éditions Guy Binsfeld
14, place du Parc
L-2313 Luxembourg
ISSN 0257-4373

Esprit Information Exchange System

iesnews

Issue No 7, December 1986

LATE NEWS

OSI Standards gain ground in the U.S.A.

The National Bureau of Standards is making strong efforts to persuade manufacturers and users, including governmental ones, to adopt OSI protocols to retain international marketability of products. This is seen as a direct result of European initiatives.

Videotex Usage increases in France

According to recent data, some Paris newspapers are now deriving more than 20 % of income from Videotex usages, which is increasing by over 10 % each month.

Electronic Mail Interconnections

In anticipation of X-400 implementation next year, four leading UK electronic mail services have commissioned a software house to develop programs to allow messages to be forwarded between the four systems (Telecom Gold, One-to-One, Comet and Easylink). This will allow PCs to act as message switches. Tests are underway.

The 1986 I.E.S. workshop was held on the 2 and 3 October 1986 with the objective of reviewing the status of I.E.S. and making proposals for the future. On the first day, presentations were given on I.E.S. and its relationship with other publicly-funded computer networking activities both inside and outside the Commission. On the second day, the workshop split into two working groups, one to consider the short-term planning aspects and the other to consider the strategic objectives of I.E.S. and how they could be met. The conclusions confirm the process of redirection started earlier in the year. This I.E.S. NEWS article contains a description of the content of the presentations referring to articles from previous issues where appropriate and a summary of the findings of the two Working Groups from the chairmen's reports.

THE 1986 I.E.S. WORKSHOP Report of Proceedings Presentations

Some items presented on the first day have already been covered in previous I.E.S. NEWS articles in some detail. The reader may refer to the following for information on these subjects:

EuroKom News

No. 3, p. 12 No. 4, p. 8 No. 5, p. 8

RARE/COSINE

No. 4, p. 4 No. 4, p. 10 No. 5, p. 4

New I.E.S. services

No. 4, p. 16 No. 6, p. 2.

Community-funded networking activities related to I.E.S. were briefly described, in particular INSIS (No. 3, p. 4), the purpose of which is to improve communications between the Member States and the Community institutions through the provision of electronic messaging, videotex and videoconferencing based on international standards and CADDIA which is concerned with the automation of data and documentation for imports/exports in agriculture.

LIBRARY

LATE NEWS Electronic Publishing Conference

The November Conference, organised by DG XIII, was a great success with more than 300 participants. Proceedings will be available in early 1987 (Publisher is Kogan Page).

IT Mergers

Many mergers, national, international and transdisciplinary, have been reported in recent weeks. When the dust settles, a new Who Owns Whom may be needed.

Transparency in European Host Interconnections

Using OSI layer 7 protocols, switching between hosts for file interrogation has been implemented. Thus logging in to ESA/IRS allows users also to connect with files held on INFOLINE and at Vienna International Centre (UNIDO and IAEA). Billing is from a single source.

Cosine Secretariat

At a meeting in Brussels in November, the Commission agreed to take on the responsibilities of providing the secretariat for Cosine.

THE 1986 I.E.S. WORKSHOP

Report of Proceedings

The final presentation of the first day described current thinking in the area of I.E.S. planning. The global objective of I.E.S. is to assist good technical execution of the ESPRIT R & D projects, to disseminate information on ESPRIT and the IT community and to provide support to program and project management. Services to meet this global objective should be based on OSI standards in order to interconnect the heterogeneous equipment used by ESPRIT participants. Meanwhile, until industry-supported products implementing OSI standards are available, the non-OSI services referenced above, including EuroKom and the UNIX server have been offered to ESPRIT participants and are currently used regularly by about 1 000 users. These services will continue to be supported and extended where appropriate until an I.E.S. based on OSI standards, can be implemented.

As a result of the immature state of OSI standards when I.E.S. was initiated, strong support has been given during the first three years to projects developing OSI conformant software which have also contributed to the definition of functional standards, particularly at the application layer. This technology-push program is now reaching a successful conclusion as industry-supported products are now appearing in the market place and on which I.E.S. can be based. The strategy for the future, therefore, would be to put less emphasis on this technology-push program and more on the exploitation of emerging products in order to provide the required service to ESPRIT participants. Attention will be paid to the smooth migration of users from currently offered services to future services based on OSI standards.

The Tactical Planning Working Group

The Tactical Planning Working Group concentrated on evolution of mail and conferencing services currently offered through UCD Dublin, both in the area of providing an improved service and better integration with the emerging message-handling services based on OSI standards. EuroKom is currently used by about 30 % of ESPRIT participants on a once weekly basis at least. When the distribution of users is analysed it becomes clear that the normalised density falls off with distance from Dublin. This undesirable effect may be due to the „remoteness” of the service, or to reduced availability across a number of European networks. Every attempt should be made to encourage distant users into effective use of EuroKom by, say improved marketing or by improving reliability of access across European PTT networks. However, due to the large number of potential users, consideration should also be given to the provision of further conferencing sites in other parts of Europe, linked together and managed in a coordinated way.

The second major item addressed by the Working Group was the current lack of compatibility of EuroKom with the emerging message handling standards. In this

context the decision to provide an X-400 gateway to EuroKom was endorsed. In the slightly longer term an X-400 mail service should be provided giving users with minimal terminal facilities access to the X-400 world. EuroKom users would have access to these users through the X-400 gateway referred to above. This requirement was also established by the Strategic Planning Working Group.

The Strategic Planning Working Group

This Working Group came to radical conclusions concerning the future direction I.E.S. should take. However, the original strategic objective adopted by I.E.S. of basing services on European norms of international standards was reaffirmed. Since not all user systems incorporate these standards, conversion services to and from Open Systems must be provided in the short term.

I.E.S. is required to support the development and provision of Information Services and „Third Party” services consisting of

- interpersonal electronic mail
- electronic conferencing services
- document transfer
- binary file transfer
- security services (electronic)
- open systems conversion services
- voice messaging (possibly)

The services would be supplemented by OSI conformant capabilities in hosts, terminals, concentrators and systems such that they may freely exchange data and tasks with other hosts and terminals regardless of location, supplier or ownership and thus create a general purpose data interworking environment.

The most important conclusion of the working group concerned the scope over which I.E.S. should supply these services. Although currently required to serve only the ESPRIT community, other programs within the Commission supported R & D framework activities would benefit from the provision of such services. Thus the scope of I.E.S. should be broadened to include the provision of infrastructure for all R & D framework activities. Further, since EUREKA projects also require the same type of infrastructure, I.E.S. should offer their services to these projects.

A second fundamental proposal concerned the provision of the telecommunications infrastructure which, as stated above, would be based on OSI standards. It was recognised that the objectives of COSINE as proposed within EUREKA substantially overlapped the objectives of the I.E.S. in this area and therefore to avoid duplication of effort it should be investigated if and how far the COSINE project will be able to provide the functions I.E.S. requires for the provision of the above specified services on the required timescale. If COSINE cannot deliver, then other means must be found. Once suitable services are in place, a condition of funding for any project within the framework program should be that equipment purchased for interworking must conform to the standards specified.

Conclusion

The Workshop concluded on the second day by bringing together the two Working Groups in order to arrive at a common set of conclusions. There was agreement that emphasis should continue to shift from development oriented work to provision of services. The two major recommendations were :

- The creation of a communication infrastructure for I.E.S. should if possible now be pursued in the context of COSINE
- The scope of I.E.S. should be widened to other Community programs and also be offered to EUREKA

It was stressed that their implementation would potentially bring together the efforts of the I.E.S. and the COSINE project to provide services in support of a wide range of R & D activities, whilst at the same time creating the market pull required to give OSI the start it needs before more widespread acceptance in the industrial world at large.

Our Questionnaire

The response you have made to the questionnaire circulated with the last issue has been far greater than expected. We are busy evaluating the replies, but if you have not yet sent in your copy, this operation is still on-going. It is our intention to report in the next issue on your assessment of the newsletter in detail. In the meantime, thank you all for your reactions and the many helpful suggestions. We shall certainly try and implement these in the months to come.

COSINE:

a EUREKA Project for — Cooperation for Open System Interconnection Networking in Europe

During the EUREKA Ministerial Conference in Hannover in November 1985, a German proposal for building up a European-wide communications infrastructure for use by the research community was accepted as an EUREKA project and later named COSINE.

The RARE Association (Réseaux Associés pour la Recherche Européenne) is an international body which specifically addresses the communication needs of the R & D community, and was asked to produce an outline plan for the setting up of COSINE, the main aim of which is the rapid establishment of an environment to make data communication services available to users from academic and industrial research organisations. The service will be based on the international ISO/OSI standards and CCITT recommendations in the form of functional standards defined by CEN/CENELEC and CEPT. Use will be made as far as possible of common carrier services and operation will be based on commercially available products. The project is intended to create a 'market pull' for OSI products and to speed up the transition from interim protocols to the use of ISO/OSI standards.

COSINE has found wide support, and participants in the project, apart from the Commission, are Austria, Federal Republic of Germany, Finland, France, The Netherlands, Spain, Sweden, Switzerland and the U.K.

RARE has prepared the outline plan in a distributed manner, using the conference and other facilities offered by EuroKom, and this was accepted by the first meeting of the COSINE Policy Group in Bonn in June, 1986. A basic mechanism for the conduct of the project was worked out during this meeting and a progress report prepared for the EUREKA Ministerial Conference in London at the end of June.

After describing the background to the COSINE Project and the RARE Association, and the objectives of COSINE as a working OSI infrastructure for Research and Development activities, the outline plan presents an operational model for the infrastructure, which clarifies the relations between the national and the international activities.

The international activities, such as the choice of common specifications and functional standards, the design of directory and information services, gateways and security aspects, etc., have implications for the national activities which will be expected to act within a framework agreed at international level. National networks will also need to contribute information and tools for use internationally.

In addition, the more technical aspects of addressing and routing, directory and information support, certification and testing, terminals, message handling, file transfer, access and management, accounting and use of high-speed networks, etc., are covered in the main body of the report and in a series of technical annexes.

The plan also outlines basic time scales and costs, and can be considered as an excellent basis for the detailed planning which is to take during the Project's definition phase.

The results of the RARE working groups efforts on the definition phase were discussed with representatives of CEPT, the PTTs, standardisation bodies and industry during a workshop held in Brussels during November.

Despite differences in technical and geographical scope, there is an apparent overlap between the basic aims of COSINE and those of the ESPRIT I.E.S., and this is being carefully monitored by the Commission, as a participant in COSINE, so as to ensure that the tools and services developed within I.E.S. can be built on, thus capitalising on previous and on-going efforts and avoiding any harmful duplication of effort.

Indeed the two are complementary, as it is possible to view the COSINE Project as the creation of a broad market for OSI-based products from industry, in other words as a "market pull" project, complementary to the "technology push" approach used hitherto in the ESPRIT I.E.S. and indeed in many other Community programs: both are contributing to the future European open computer communications infrastructure.

N. K. NEWMAN
CEC — DG XIII, Brussels

ULTRAWIDEBAND COHERENT OPTICAL LAN

UCOL

Introduction

It is widely accepted that a modern integrated working environment (such as a factory, an office or a university) requires an efficient computer-based communication system to allow users to exchange information such as text, data, graphics, voice and moving images.

So far, local networks and PABXs have supported the private communication systems just described, but until recently transmission media such as coaxial cables and twisted pairs have limited the integration of services to voice and data.

Over the last few years the rapid development of fibre optics technology has allowed designers to increase data rate and geographical coverage of such systems to build wideband integrated services local area networks.

New market perspectives make this technology attractive but technological and architectural problems still need to be solved. The Esprit project "Ultra wideband coherent optical LAN" is an attempt at defining a solution exploiting coherent optics technology.

The prime objective of the UCOL project is firstly to establish the feasibility of an ultra wideband local network using coherent optical techniques and secondly to identify the most appropriate system structure and component types for such a network. In order to achieve these objectives, applications and an evaluation of coherent optical transmission and possible UCOL structures were examined initially, while a further approach was directed towards the theoretical assessment of appropriate components and subsystems performance.

Current and future work is leading to define a feasibility model which should be the basis of a demonstrator.

Coherent optics

Progress in active optical components development has led, in the last few years, to the investigation of coherent optical techniques, where the amplitude, phase or frequency of the optical source is modulated (ASK, PSK or FSK). Using coherent detection, the data rate that can be achieved for a given length of link is much greater than that available using

direct detection and furthermore it is in principle possible to achieve a multichannel capability by frequencies. This characteristic in particular makes coherent optics very promising for optical networks.

Moreover, the greater sensitivity of coherent optical detectors allows the network to cover a wider geographic area, without the regeneration of optical signals, than that normally provided by optical networks.

Suitable components are an important issue: key components such as stabilised optical sources, modulators, polarisation controllers etc. are becoming available rapidly.

Further progress in the development of a coherent optical LAN relies on enhancement of today's components both by means of optoelectronic integration and new coding and modulation techniques (for instance PSK-PPM). The integration of several functions into self-contained optoelectronic units is a fundamental requirement.

The monolithic integration of a laser amplifier and a modulator would probably increase the modulation bandwidth as well as the overall efficiency.

Within the transmit unit, isolators compatible with optical fibres and semiconductor lasers are essential for stable operation of laser amplifiers. At the receiving end, integration of detector and laser preamplifier is very promising both in terms of speed and noise. In particular the hybrid integration of an optical filter with the laser preamplifier detector block could be very useful to reduce spontaneous emission noise and intermodulation noise. Problems related to optical alignment and power levels could be eased by integrating the

UCOL

detector and local oscillator.

Within this project a number of possible network architectures has been studied as a result of the preliminary work on systems and subsystems that has been carried out. Eventually, the most promising configuration will be selected through an in-depth analysis of the aspects which are more likely to constrain severely overall system design.

Network technology

The use of coherent optics suggests the use of a basic broadcast topology, essentially a star topology, implemented by means of optical star couplers, as a relatively large number of physical access points can be accommodated over the same physical star because of the enhanced power budget that this technology allows. For example it is reasonable to assume that more than one hundred users can be allocated in a star which could then be associated with other stars, thus forming hybrid structures. The system would then be configured as a multiple star system using a set of specialised units (bridges) to link a single star subnetwork to another. Each star connects users located inside a small area, while the connection between more distant users is made using longer fibre links.

Switching capabilities and access protocols

A very important constraint that has to be considered in designing UCOL is the current slow swit-

ching speed of optical transmitters and receivers from one frequency to another. This is a serious constraint as it does not allow packet-switching between frequencies.

The switching capabilities of the network can be based on frequency switching and packet-switching. Frequency switching is achieved by implementing a frequency allocation scheme that defines which users are operating on a certain frequency channel, at a given moment.

It is important to note what frequency allocation can be made dynamically as a function of the instantaneous traffic distribution in order to optimise the network performance. In fact frequency allocation determines the virtual network configuration; changing the frequency allocation scheme it is then possible to alter the functional configuration of the network without any physical rearrangement.

Furthermore, physical access points could transmit and receive at the same instant of time over two or three frequencies embedding several optical transmitters and receivers within the same station.

An F.D.M. scheme is required to allocate frequency channels. The work undertaken to that purpose showed that signalling and control traffic should be contained within one particular channel, rather than distributed over several. Such an approach follows the well-established principle of common channel signalling.

A frequency-allocation scheme is now under study from the theoretical point of view; further work

is necessary before proceeding to a numerical simulation. Within a physical subnetwork of UCOL (a single star) users are grouped according to the frequency-allocation scheme.

Such groups define virtual subnetworks, which need to be accessed following a T.D.M. access scheme that regulates traffic within the virtual subnetwork avoiding collisions at the star centre and allowing packet-switching operations, similar to those used in existing local networks (e.g., CSMA/CA) and token based protocols. The basic principle of the proposed T.D.M. protocol is that a scheduling algorithm regulates the transmission cycle within each virtual subnetwork by knowing the queue status information supplied periodically by the users which are part of the virtual subnetwork.

Particular attention has been directed to optimise the information flow at the star centre, allowing a continuous stream of data. This is accomplished by measuring the distance from each user to the star centre, so that any user scheduled for transmission can begin transmission before the end of the previous transmitted packet. This ensures flow continuity through the star centre. Operating in such a way it is also possible to transmit sequentially the queue status field, minimising the overhead due to the subprotocol needed to regulate the queue status transmission.

UCOL

Conclusion

New trends in information technology make it desirable to integrate different services on a single physical structure. Information exchange between different classes of users is also necessary within the same network. This implies that the concept of LAN has to be reviewed.

Today LANs already interconnect with the public network and handle information which has not been generated locally. As a consequence a LAN is to be viewed as a subset of a very complex system and as such it has to be able to meet not only local requirements but also those originated elsewhere within the system. An advanced LAN will have to be able to accommodate new services in order to match the corresponding growth in the public network.

The activity within this project is developing along lines which take into account these requirements for a future network. Introduction of F.D.M. on the one hand increases the bandwidth of a physical channel, on the other it offers one more degree of freedom in dimensioning the system and allows interaction of services. Issues related to the management of an F.D.M. network have been studied and a method to study the subject in more detail has been proposed that is based on the isomorphism between the management scheme of the F.D.M. network and an appropriate equivalent virtual network.

Adopting this approach a strategy has been outlined for a UCOL capable of meeting future requirements. The resulting system is

intended to comply with the OSI model and to be independent of the specific characteristics of each service and to a significant extent of the evolution of future services.

As a consequence it is expected to provide a communication environment capable of meeting every request of the upper levels with regards to the quality of service.

This can be obtained by exploiting

the additional degree of freedom offered by F.D.M. in order to make possible both the integration of different types of information as well as a virtual reconfiguration of the UCOL following traffic distribution variations.

A. FIORETTI
(Industrie
FACE STANDARD S.p.A.,
POMEZIA, ITALY)

New write-protected conferences providing announcements on meetings worldwide in the field of Information Technology are now available on EuroKom. You can choose from the following list of conferences:

1. Architectures Meeting Announcements
2. Artificial Intelligence Meeting Announcements
3. Biomedical Computing Meeting Announcements
4. Business DP Meeting Announcements
5. CAD/CAM Meeting Announcements
6. Education Meeting Announcements
7. Electronic Publishing Meeting Announcements
8. Future Generations Computing Systems Meeting Announcements
9. General Interest Meeting Announcements
10. Graphics Meeting Announcements
11. Hardware Meeting Announcements
12. Human Factors Meeting Announcements
13. Information Regulation (and) Policy Meeting Announcements
14. Videotex Information Services Meeting Announcements
15. Knowledge Engineering Meeting Announcements
16. Microelectronics Meeting Announcements
17. Microprogramming Meeting Announcements
18. Modeling (and) Simulation Meeting Announcements
19. Network (and) Communication Meeting Announcements
20. Parallel Computing Meeting Announcements
21. Performance Analysis Meeting Announcements
22. Personal Computing Meeting Announcements
23. Robotics Meeting Announcements
24. Satellite Communication Meeting Announcements
25. Security Meeting Announcements
26. Signal (and) Speech Processing Meeting Announcements
27. Software Engineering Meeting Announcements
28. Standards Meeting Announcements
29. Theoretical Computer Science Meeting Announcements
30. VLSI Meeting Announcements

Each of these conferences will receive a new notice about once a month giving the complete updated set of meeting announcements for the specific subject area. It will be sufficient for the interested user to list only the last notice in the relevant conference.

Since the conferences are write protected, comments on entries will be directed to a shared superconference called "IT Conference Announcements".

The information for these conferences is provided by Elsevier Science Publishers B.V. in Amsterdam.



Esprit Technical Week — in Retrospect

The EuroKom team was out in force at the recent ETW event in Brussels. Six of our staff were on duty throughout the meeting at a purpose-built stand in the Palais de Congres, demonstrating the various facilities now available through the EuroKom service. For the technically-minded, personal computers from Olivetti, Siemens, ICL and Bull were linked to the Belgian X-25 network through a Local Area Network, and running demonstrations were conducted showing electronic mail, telex inter-connect, the Eurocontact database, and the linkage to the UNIX/EUNET network through EUROIES.

Many users had arranged to pick up their copies of the new manual at ETW, and our documentation desk was kept busy right through the three days. The general reaction to the manual has been very positive so far, and we are now working on the additional material describing the new features announced in September.

ETW provided us with a rare opportunity to meet a large body of users, and we had many productive and thought-provoking discussions, both on the stand and during the workshops that followed the meeting. The ideas and comments put forward are now being folded into our planning for the next round of EuroKom enhancements, which should be published here early in 1987.

Our thanks to the many users who took the time to visit the stand, and make their views known. We look forward to seeing you on a more regular basis during 1987; our future plans include a series of user meetings, in the various Community countries, to provide users with a regular opportunity to contribute to EuroKom developments.

EuroKom and X-400

Just before ETW, a project was agreed with the Commission to provide an X-400 gateway to EuroKom, and the work commenced in October. The UBC (University of British Columbia) EAN software has been installed on the EUROIES UNIX host machine, and is now working successfully. The work of integrating this software into the EuroKom mail interface is now underway, with a completion target of March, 1987. This gateway will provide an important link to the many EAN sites now available around Europe, and will be our first step towards a full CEN/CENELEC conformant X-400 gateway, which we plan for mid-1987.

New Unix Documentation

To follow through on the successful re-write of the EuroKom manual, we have now commenced a

total re-write of the manual for the UNIX service. The objective is to produce this manual in the same style as the latter, and the current box and binder were initially designed to allow space for the UNIX material. As the work is still at the preliminary design stage, we are not yet in a position to give a completion date, but we will be disappointed if the manual is not going to press by February 1987.

Another „News“ Conference

The News Conferences have proved extremely popular so far, and we are announcing, as this issue goes to press, a further news facility. Following is the text of the announcement just going into EuroKom:

Standardisation is one of the corner-stones in the creation of a unified market in Information Technologies and Telecommunications. Although the Commission is not a standardisation authority, it is taking a very strong interest in standards, and is pursuing a policy of support, promotion, and application of international standards as set by the competent authorities, e.g. CEN/CENELEC, CCITT, ISO, etc.

In order to keep EuroKom users up to date on developments in this important area a News Conference has been created entitled



EUROPEAN STANDARDISATION NEWS

which will contain news and information on this subject. Specifically, this conference will report on major developments in the formulation of European Norms, related actions within the European Institutions, activities within pertinent community-funded projects, and will provide an overall awareness of the processes and impact of the standardisation efforts.

Like the earlier news conferences, special correspondent now has the responsibility to assemble the material on standardisation and provide it to us for dissemination. Please note that we simply pass the material along, with some basic editing and proof-reading. We are not in a position to answer questions on the various aspects of the standardisation work, although CEN and CENELEC now have a number of EuroKom users, and we expect further developments in this area, of interest both to EuroKom users and the standardisation community.

EuroKom Price Changes

By now, we hope all users will have been informed of the recent price changes. We mailed to all current users during October, and we also placed the text of the announcement in a file on the sys-

tem. Reaction so far has been very supportive; those users who responded accepted fully that for the service to continue to grow and expand, we need to ensure that our price structure is realistic. Briefly, the changes are as follows:

- The connect-time charge changes to 25 ECU per hour, and this rate now applies to all categories of user.
- There is a minimum monthly usage charge of 25 ECU per user, and
- There is only one discount break, at 250 ECU in a given month.

The other significant (for us) change is that the usage statistics will now be available in a file called USAGE DETAILS in each user's directory, rather than being mailed every month. This will save ourselves and users the task of handling and filing these relatively bulky listings.

Only one item caused some confusion in our announcement on price changes — the 'reconnection fee'. Although this has always been in effect, most users did not seem to be aware of it, and many misunderstood the term.

If a user is disconnected for non-payment of his EuroKom in voice (a very rare event), we have always had the option of charging a fee when he eventually pays, and wishes to be reconnected. This is the reconnected fee to which the new Price Schedule refers. A number of users assumed that the re-

connection fee is charged each time they log back into the system — an interesting idea, but this is not our intention, now or in the future!

And Finally . . .

Since this is the last IESNEWS for 1986, we would like to take this opportunity to wish all of our valued users a happy Christmas and a prosperous New Year. 1986 has been a time of substantial change and growth for EuroKom, and we expect even more dramatic changes next year (with EuroKom likely to become a multinational!). We considered putting out a graphic banner with a Christmas message, but we know of at least a couple of users who would complain that they were paying for their Christmas message, so we are currently ordering a couple of thousand conventional cards, which will go out by surface-mail in December.

Further Information :

EuroKom
Help Desk
Tel. No 0035-31-69-78-90
UCD Computer Centre
Belfield,
Dublin 4
Ireland

COST 11ter Project on Teleinformatics

COST 11ter is a project for cooperative basic research in teleinformatics in Europe. It is a continuation of COST 11, which in 1973 resulted in the setting up of a communications subnetwork with nodes in London, Paris, Zurich, Milan and the JCR Ispra Establishment, and COST 11bis, which ran from 1980 to 1984 and covered detailed areas of teleinformatics (e.g. computer-based message systems, service and protocol specifications of OSI layers).

Under COST 11ter specific areas of work of special interest to I.E.S. are those related to the seventh layer (the application layer) of Open Systems Interconnection. Other topics include management of distributed data bases, computer-assisted human communication services, graphics applications with special emphasis on evaluating the effect of possible standardisation on the service providers. A fuller description of COST 11ter subprojects can be found in IES News Issue 2 (Winter 1985). Since that article was published there have been a number of changes and additions which are of interest. We present them below.

1. **DSM — Distributed Systems Management in Wide Area Network**

The project coordinator/contact person is
Dr. A. Langsford
AERE Harwell
Oxfordshire OX11 ORA
(Tel.: +44-235-24141 Ext 2374)

2. **AMIGO — Advanced Messaging in Groups**

The project coordinators/contact persons are

H. Santo
GMD
F3 Institut
PB 1240
D-5202 St. Augustin
(Tel.: +2241-14 27 13)

Dr. R. Speth
CEC DG XIII — COST 11ter
200, rue de la Loi
B-1049 Brussels
(Tel.: +32-2-23 60 416)

3. **Security Mechanism for Computer Networks**

The project coordinators/contact persons are

Dr. S. Muftic
IRIS — Energoinvest
Obala 27 July 69
YU-71000 Sarajevo
(Tel.: +71 41 69 93)

Mr H.F. Weegenaar
Centraal Beheer OEA
P.O. Box 9120
NL-7300 Apeldoorn
(Tel.: +31-55-792107)

4. (Human Factors in Teleinformatic Systems (name changed to :) **Man — Machine Interface for Telematic System**

The aim is the development of man-machine interfaces, concentrating on user modelling for the definition of the requirements of users in an OSI applications environment and language for defining user interfaces.

The project coordinator/contact person is
Dr G. van de Veer
Free University of Amsterdam
De Boelelaan 1115 Prov. I. 126
NL-1081 HV Amsterdam
(Tel.: +31-20-5483869)

5. **OSIS — Open Shop for Information Systems**

The project coordinators/contact persons are

Dr E. Raubold
GMD
Rheinstr. 75
D-6100 Darmstadt
(Tel.: +6151-8691)
Dr. K. Riharczek
Fabriciusring 15
D-6380 Bad Homburg
(Tel.: +6172-42177)

6. **FDT — ABM — Formal Description Techniques — Architectural and Behavioural Model**

The project coordinator/contact person is
Prof. G. Le Moli
CREI Politecnico
Piazza Leonardo da Vinci 32
I-20133 Milano
(Tel.: +2-296826)

In addition there are now two new subprojects.

7. Satine—2 Satellite Links to Interconnect Local Area network

The goals of this project are the definition of a system to interconnect various local area networks by a Megabit/sec satellite channel which is able to handle various types of service such as computer traffic, voice and video; and the development, implementation, testing and optimisation of a new and effective time division multiple access scheme (TDMA) which handles such traffic efficiently on a satellite channel. The European Communication Satellite is to be used for these tests. A pilot system of several stations in various European locations will be set up to demonstrate the usefulness of the system..

The project coordinator/contact person is

Dr M. Hine
CERN
DD
Ch-1211 Geneva 23
(Tel.: +22-83 23 94)

8. Information Management in a Multiservice Environment

A study will be made of the use, within an organisation, of the various types of information service provided by ISDN connections with the goal of describing a new job functions: an information distribution manager. Description and ana-

lysis of the information flows within organisations and between them and bridging functions between various categories of information will permit of a task level description of this new function

The project coordinator/contact person is

Mr. H. Strasses
ITT Austria
Scheydgasse 41
A-1211 Vienna
(Tel.: +43-222-38 00 742)

Details of the participating institutions for each of the above topics can be obtained from the respective contact persons or Dr. R. Speth (see above under 2.).

Acronyms Again

- BICEPS** Bio-Informatics Collaborative European Programs and Strategy
- CADDIA** Cooperation in Automation of Data and Documentation for Imports/Exports and Agriculture
- COST** European Cooperation in the Field of Scientific and Technical Research
- CTS** Conformance Testing Services
- DRIVE** Dedicated Road safety system and Intelligent Vehicles in Europe
- EHA** European Harmonisation Activities.
- INSEM** Institutional Electronic Mail System
- INSIS** Inter-Institutional Integrated Services Information System
- MAP** Multi-Annual Programme
- ODETTE** Organisation for Data Exchange by Telecommunications in Europe
- OVIDE** Organisation de Videotex pour les Députés Européens/ Organisation of Videotex for Members of the European Parliament
- RARE** Réseaux Associés pour la Recherche Européenne
- TEDIS** Trade Electronic Data Interchange System

**WHAT IS THE
I.E.S. HELP LINE?
WHAT CAN WE
ANSWER?
WHAT WERE THE
QUESTIONS?**

By the time you read these notes, the I.E.S. Help Line will be 5 months old. The service was set up as part of the ESPRIT/I.E.S. activities for participants of IT Research projects and other related Community Programs, to give centralised assistance from a common enquiry point on the IES Services and the associated infrastructure.

I.E.S. users and those interested in I.E.S. have only to remember a single telephone number

+ 352 / 45 30 30

to enquire on all I.E.S. Services between 9 a.m. and 6 p.m. five days a week.

For more specific technical issues, users are referred to existing assistance facilities like :

— The UCD Helpdesk, for EuroKom, EUROIES and EUROCONTACT
Tel. + 353 / 1 - 697 890

— The INFORMATION MARKET DEVELOPMENT GROUP (EURONET DIANE/ECHO) specialising in all problems concerning :

Database interrogation, Hosts, Euronet Diane, Common Command Language and other problems with information retrieval, also telecommunications, network problems and questions concerning different electronic mail systems and file transfer services

Tel. +352 / 48 80 41

THE I.E.S. HELP LINE: a progress report

— The ECAT staff, in charge of the computerised online translation (COTEL) for European languages.

Tel. +352 / 43 83 88

The I.E.S. Help Line Staff is working closely with these organisations.

**In one word, the
I.E.S. Help Line
is the gateway
between
you and the
Information
Exchange System
Services**

**What can we
provide?**

— General information on ESPRIT and links to Commission management teams of this program

— **General information about I.E.S. and its services :**

Eurokom
EUROIES
EUROCONTACT
EUROKOM NEWS
I.E.S. DATA
COLLECTIONS
COTEL
I.E.S. NEWS

More precisely :

A first level of answer concerning

- the content
- the registration procedures — pricing
- documentation about the services (sent on request)

Typical questions to which you can receive instant answers over the telephone include :

- How is it possible to enter into contact?
 - with Esprit partners
 - with eventual partners
- How can we reach the relevant service within DG XIII?
- How can machine translation for a number of European languages be of use?
- What are the technical requirements for online translation?
- What is Esprit project No 710?
 - Who is the main contractor in the project?
- How can you reach via electronic mail Mr Dupont whom you know he is one of the UNIX nodes in the European Network?
- What are the rough communication rates for an EuroKom connection
 - from Marseille? from Brussels?
- How can one access the I.E.S. DC data collections?

How much does the service cost?

- How does one subscribe to I.E.S.NEWS (currently free)?
- What the best way to access our X-network (X = national network name)?
- Where do I get information about what information sources are available in Europe?
 - What is Diane?
 - What is ECHO?
 - How can I access it?
- How can I send a mail message to someone in EuroKom if I am not a registered user of this service?
- How can I transfer a file (format xy) from one host to another?
- How can I obtain the Kermit file transfer protocol which is in the public domain?
- Why should I consider to join the EuroKom service if I am interested in European Community Research programs in the field of Information Technology?
- I cannot connect to EuroKom and their Help Desk line is busy. Is the system down or is it a PTT problem?

German. People wanted to know about ESPRIT in general and the services offered by and through I.E.S. As regards the services, many callers wished to find the best way of using these. The next area of concern was telecommunications in general and a few specific local problems in particular. Some questions related to equipment required to use EuroKom or how to access and use the databases provided on ECHO.

The I.E.S. Data Collection was also of interest to some callers. Trivial items dealt with involved changes to mailing lists and requests for Conference Announcements to be included in future issues of IES NEWS. Costs of the services was another user preoccupation.

One of the heartening features has been appreciation of the service offered.

We, the Help Line staff, look forward to hearing from more of you, and possibly meeting you face to face in the future.

IES News is your newsletter. We want your comments, views and contributions. The next issue will again have a Correspondence column.

All communications to

Peter Popper
c/o European Institute for
Information Management
13, rue de Bragance
L-1255 LUXEMBOURG

or via EuroKom.

WHAT WERE THE QUESTIONS?

During 5 months, there have been calls from most of the Community countries. Conversations took place in either English, French or

Letters to the Editor

Amsterdam, 1986

Dear Sir,

Your publication „IES NEWS” is very much appreciated in the Netherlands by the Foundation for Modern Media, SMM, in which Dutch publishing and graphics industries cooperate in order to get Gutenberg's (or Laurens Janszoon Coste, as our national pride has it) legacy reasonably unscathed and transformed into this blissful electronic, imminent future of ours, in Europe and in the world.

Digesting the columns and the information you provide to us with such commendable precision and timeliness, I would like to present you with an observation or two which have been nagging my Foundation for quite a while within the framework of the ESPRIT program.

On the basis of the information under the heading “Late News” of Issue No. 3 one must come to the conclusion that in Europe the investment in the telecommunication infrastructure and in information technology at large is reaching unprecedented levels: some 2 thousand millions Dutch Guilder per annum, as provided so generously by the Commission, represent in total probably more than 5 Financial thousand millions per year.

The point of this letter is not so much that such a level of expenditure is far too high. It can be argued plausibly that it is, in many respects, still too low in order to increase Europe's strategic strength for the type of future I alluded to. What I am worrying about is that the way in which this money is invested is so dangerously askew and so threateningly lob-sided.

Dreaming about beautiful networks, lovely standards and glamorous glassfibre, the powers that be seem to be obsessed by horsing and racing around and about faceless bits and transparent things at ever accelerating paces and in ever-increasing quantities.

In comparison, scant attention on the European level is given, it would seem to me, to provide for the futuristic digitised zombies whizzing across transborder-dataflow fences in great glee, societal and individual relevance and value. After all, I must assume that we all share the hope and belief that tomorrow's information provision will genuinely improve the quality of life of individual Europeans.

The investment process, as it is on its way right now, reminds one of the building of a metropolitan urban structure in terms of a breathtakingly efficient transportation infrastructure, but without houses and buildings in it, — and emptied from all people living there. Before too long we will be able to move anything at all signal- and data-wise, only to be faced with the ultimately relevant question: “What shall we transport?”

With an unabating, unchanging technocratic monomania, and without a sufficiently fundamental study of this core question, Europe will find itself in the pretty shoes of Catherine the Great, Empress of All the Russias, being shown around in the unprecedented, but card-board progress of her distinguished reign.

Come to think of it, the situation seems devilishly opposite to Europe's agricultural predicament: too much food for too few stomachs, at too high costs to store the surplus. When it comes to information, we will be faced with a structure in which there is too little food for too many minds, at too high a cost to move the shortage.

One is inclined to ask oneself the question, then, whether Europe can afford to duck the core question any longer, as she seems to do now. Being entirely oblivious of the other, informational, side of the coin will ultimately ossify the prestigious and pricey primary side, if that side can claim any primacy at all, which some of us would doubt indeed.

What we need are at least a few developments and programs which will start from, and centre around, information provision on a level of European societal relevance, as it can be opposed to, and balanced with, the continent's procurement of electronic devices and systems.

This need is globally even more pressing, because of the responsibilities Europe has created for herself as a world-wide information provider and communicator of polyglot and polycultural repute; a position reached over the incidents and coincidences of centuries, with the potential to gain further strength in the foreseeable future.

Clearly there is a rôle here for all market-oriented information providers. There is a lot of work to be done. Publishers must learn to work together with the banking

world, and the banks with insurance companies. The "local" aspect of all communication and information provision must become discerned and disentangled from the "global" aspects. Europe is for that type of work the best test-bed on a worldwide basis. It is a basis that our esteemed global competitors can not reasonably hope to create or simulate.

Work is done in a laboratory, as a classical language has it. Wouldn't it be appropriate to start efforts to create a European Central Laboratory for Information Provision Studies (ECLIPS), in which European publishers and information providers cooperate on a precompetitive level, cosponsored by the Commission, in order to put some real-world muscle, flesh and grey matter on the splendiferous skeleton as provided by the Great Multinational Digitisers?

One final remark, perhaps. Too often the Diversity which is Europe has in recent years been viewed as a great, if not the major, economic handicap. It is time that diversity should be presented, perhaps not to those who sell blithe bits and black boxes, as a definite cultural asset, — which is, after all has been said and done, an exploitable one.

Looking forward to the happy discovery on the pages of your publication in the near future also for information that would fuel my Foundation's spark of hope for the future of all information provision for Europe, I remain,

respectfully yours.

Willem Dijkhuis,
Director,
Foundation for Modern Media,
SMM,
391 Keizersgracht,
1016 EJ Amsterdam,
The Netherlands.
Tel. (31) (20) 223694.

ESPRIT Conference 86 Videocassettes

The ESPRIT Conference is the major public event of the ESPRIT programme. It is therefore, of interest to all participants in current ESPRIT projects, and also all others who would be interested by ESPRIT work. However, the restricted number of places available, meant that not all who could benefit from attendance were able to do so.

The PLENARY SESSIONS and the OPEN FORUM at this year's ESPRIT Conference were recorded and these are available for purchase on videocassette so that they can reach a far wider audience.

There are 11 videos available. These cover:

1. The IT Forum (approximately 3 hours recording) incorporating the speeches of:

M Carpentier, Director General
DG XIII

K H Narjes, Vice President of
the CEC

D de Benedetti, Chairman, Ing.
C. Olivetti & Co. SpA

K Luft, Chairman, Nixdorf AG
FR Germany

J M Cadiou, Director Informa-
tion Technologies ESPRIT DG
XIII

G Pattie, President of the Re-
search Council Minister for In-
formation Technology, United
Kingdom

2. The Plenary Sessions (9 tapes of 1 hour recording each) covering the presentations on the following projects:

- 1 Towards a silicon compilation system for VLSI digital signal processing.
- 2 Knowledge based realtime supervision in CIM — the workcell controller.
- 3 A basis for a portable common tool environment.
- 4 Message passing architectures and description systems.
- 5 Broad site local wideband communication system.
- 6 Document editing and entry based on the standardised office document architecture.
- 7 Using a KBS in telecommunications.
- 8 Software environment for the design of open distributed systems.
- 9 Strategic project for European Cmos technology research and exploitation.
3. The Conference Highlights (approximately 3 hours recording) covering the main items of the Conference Plenary Session Programme.

The tapes are available on PAL or SECAM and can be obtained (Prices £ 95 each for the 3 hours tapes, £ 45 each for the one hour tapes) from:

Sales Administration
The National Computing Centre
Limited
Oxford Road
Manchester M1 7ED
United Kingdom
Fax + 44 61 228 2579
Telex 668962 NCC MANG

As reported previously (see issue 3, pg 16) the RACE Definition Phase is about to end. The Commission has now approved for submission to the Council, the main phase program. In analogy to the ESPRIT program, RACE will be funded 50 % by the Commission and 50 % by the participants, with contracts to be awarded to international consortia. In further similarity to ESPRIT, there will be annual calls for proposals, but for RACE, companies established in EFTA countries outside the Community may be allowed to participate based on modalities to be negotiated. Furthermore, agreements may be concluded with non-member states participating in COST to ensure harmonised action between RACE and similar programs running in such countries.

Future Events

Comp Euro 87. I.E.E.E. and Gesellschaft für Informatik, Hamburg, May 15 - 17, 1987

Corporate Electronic Publishing. Infoplan, Frankfurt, June 10 - 12, 1987

Theoretical foundations of computer graphics and CAD. NATO, Leeds, July 4 - 11, 1987

Software Engineering for Real Time Systems. Instn. for Electronic and Radio Engineers, Cirencester, September 28 - 30, 1987

Jeunesse-Europe-Technologie. Autrement. Strasbourg, September 1987

Terminology and Knowledge Engineering. CEC and Infoterm, Trier, September 29 - October 1, 1987

Race:

The Real Work is about to start

The specific aim of RACE is to make a major contribution to the introduction of Integrated Broadband Communication (IBC) with due allowance for the evolving ISDN services. The three parts of RACE are:

1. IBC development and implementation strategies.
2. IBC technologies.
3. Prenormative functional integration.

The work proposed will be prenormative and precompetitive with an initial financial allocation of 800 million ECUs, subject to Council approval. A first review of the program will be made after 30 months.

A further submission to Council concerns SPRINT, for which 11 million ECUs have been ear-marked for a two year transition phase to allow detailed preparation in cooperation with economic operators in member states of a more consistent innovation promotion program for Europe, to commence in 1989.

Future Events

Telework: New Work Organisation based on IT. W.B. Korte, Bonn, March 19 - 20, 1987

VDM Europe. CEC, Brussels, March 23 - 26, 1987 (Note change of date)

Optica 87. Learned Information, Amsterdam, April 14 - 16, 1987

Value Added and Data Services. Online, London, April 28 - 29, 1987

Information, Documentation, Knowledge Transfer. Assoc. française de documentalistes, Strasbourg, May 12 - 14, 1987

Expert Systems and Their Applications. Agence de l'Informatique, May 13 - 15, 1987