

DGXIII  
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Information Industries  
and Innovation.



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*News Review*

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## INTERNAL MARKET

### Council go-ahead for IMPACT 2

The Council of Ministers has given the go-ahead to the four-year programme Impact 2 (*Information market policy actions - 1991-1995*) intended to improve the supply and use of information services across frontiers in the single European market.

With a budget of 64 million ecus, Impact 2 constitutes the main phase of the Impact initiative, the introductory phase of which was implemented in 1989-1990. The overall objective of this programme is to establish an internal market for electronic information services and to improve the competitiveness of European companies by promoting the use of advanced information services.

With an annual growth rate of 20% for on-line services and new electronic/optical information products such as CD-ROM, the year 2000 is expected to see a global market of 100 billion ecus for the world-wide electronic information services industry. A report to the Council and the European Parliament on the launch phase of Impact confirmed that the Community had a leading role to play in supporting the development of the European information services industry and market. The long-term viability of investments in new information technologies and advanced communications networks should also be secured, the report stressed, by encouraging the development of electronic information services such as databases and image banks.

On the basis of what has been achieved during the launch phase, the Impact 2 programme will thus concentrate on four lines of action in which special attention will be devoted to the requirements of small and medium-sized enterprises and less favoured regions.

- Improving the understanding of the market. The European Information

Market Observatory will reinforce its strategic analysis of the market, widen the scope of its investigations and foster the development of forecasting tools.

- Overcoming legal and administrative barriers. With the advent of the single market in 1993, there will be an increased need for developing a Europe-wide legal framework for information services.

- Increasing the user-friendliness of services and improving information literacy. This will include the promotion of open technical standards and the development of generic interfaces. To promote information literacy amongst professional people, the Commission will rely on the multiplier effect of national awareness partners (educational establishments, professional organizations, etc.).

- Support for strategic information initiatives. The Commission will encourage industry to introduce the European dimension into new information systems.

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# The European electronics and information technology industry

*The Council has adopted the following Resolution concerning electronics, information and communication technologies:*

“THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,  
Having regard to the Communication from the Commission concerning industrial policy in an open and competitive environment: guide-lines for a Community approach,

Having regard to the Communication from the Commission concerning the European electronics and information technology industry: state of play, issues at stake and proposals for action,

Whereas the approach of the Community to industrial policy centres on the completion of the single market and the application of the competition rules at international level to ensure, on the basis of a balance of rights and obligations, that competitor's markets are as open as the Community market;  
Whereas the Community's electronics, information and communication technologies have a paramount importance for the competitiveness of the Community's economy;

Whereas equal access to markets and fair competition on a global scale is, as a matter of urgency, first priority in the areas of electronics, information, technology and telecommunications; whereas the Community aims at the positive and timely conclusion of the current GATT negotiations;

Whereas the main responsibility for improving industrial competitiveness lies on the economic actors themselves, but public authorities have to provide them with a clear and predictable framework for their activities;

Whereas trans-European networks and computerized telecommunications links between administrations and services of general interest, shall respond to user needs;

Whereas the Community's support for research and development, in particular in areas which are vital for the development of technology and its application by users, is a significant contribution to the future competitive position of this industry; whereas industrial cooperation is to be encouraged, to develop in Europe key technologies which are internationally competitive, particularly in long-term perspective;

Whereas small and medium-sized enterprises are important as innovators and disseminators of these technologies; whereas aspects of economic and social cohesion and regional development have to be taken into account;  
Whereas the use of electronics, information and communication technologies within the European economy depends crucially on the availability of people with the relevant skills;

HAS ADOPTED THIS RESOLUTION:

The Council:

1. Emphasizes that, in order to support the Community's pledge to free and fair international trade and competition:

– the Community must be in a position to ensure rapid and effective action against unfair competition and practices;

– the efficiency of the Community's trade policy instruments, such as anti-dumping, should be enhanced in order to promote free and fair trade;

– the Community should continue to support the establishment of more effective multilateral rules on non-discriminatory market access for users and suppliers, including compliance measures;

– the Community should maintain its efforts to support the establishment of competition rules, with a view to achieving the elimination of practices restraining competition and their effective application in each of the community's main trading partners;

– the GATT rules should be further developed and improved with regard to their effectiveness.

2. Takes the view that in the light of the results of the Uruguay Round negotiations additional bilateral initiatives of the Community, without prejudice to existing GATT obligations, may be necessary to create effective market access with equal opportunities.

3. Understands the need for a more systematic gathering of information on marketing, market access and distribution practices throughout the main industrial areas in the world.

4. Emphasizes the importance of a favourable business environment for improving the competitiveness of electronics, information and communication technology industries; specifically taking into account the role and interests of users; giving special consideration to small and medium-sized enterprises as well as to regional development.

Means for improving the business envi-

ronment include:

– full and effective implementation of all the relevant measures, in particular those concerning public procurement, aimed at creating the unified market in the Community, including the application of a system of effective competition;

– speeding up the process of European standardization and certification to meet the requirements arising from the creation of the internal market;

– reviewing present-day financing systems in the Community e.g. with regard to the provision of risk capital;

– the infrastructure for cooperation, between enterprises of all sizes;

– facilitating cooperation, without distortion of competition in the internal market, between individual enterprises, such as microelectronics, in order to be able to compete on world markets;

– strengthening the competitive position of subcontractors so as to permit them to meet the exacting and developing needs of contractors;

– promoting rules and mechanisms comparable to those in the internal market with a view to create a level playing field for European industry in world markets, in particular in the areas of public procurement, standardization and certification, distribution, competition policy, strategic alliances and foreign investments.

5. Emphasizes the need for trans-European networks and computerized telecommunication links between administrations and services of general interest taking account, insofar as action by the Community is concerned, of decisions to be taken in the appropriate Community fora.

6. Is convinced of the necessity for industry in the Community to be competitive at a world level, particularly when assessing strategic alliances and capital intensive investment in the framework of the rules of competition.

7. Also is convinced that steps should be taken to strengthen the efforts of the Community's R&D activity taking into account also the interest of small and medium-sized enterprises.

– By focussing in the relevant programmes on areas which are vital for the development of technology and its application by users;

– Priorities should be established and the financial means provided by the Community budget insofar as possible be allocated accordingly;

– A better synergy between R&D carried

out in the Community programmes and Eureka is to be promoted while maintaining Eureka's present flexible structure;

– Measures should be taken for the dissemination and exploitation of R&D results to users across the Community.  
8. Emphasizes the need for enhancing efforts relating to the provision of training at all levels in electronics, information and communication technologies above and beyond the current efforts being made by Member States and at Community level.

#### INVITES THE COMMISSION:

##### 1. To report on:

- relevant studies undertaken by the Community and its Member States;
- the most recent agreement between the US and Japan concerning semi-conductors, as well as its consequences for European producers and users;
- the present-day situation of market access in third countries;
- government practices in the field of electronics information and telecommunications technologies in the Community and its major trading partners.

2. To establish a centralized point of information, possibly within the Commission services, charged with monitoring marketing, market access and distribution practices throughout the main industrial areas in the world.

3. To monitor, in consultation with a high level group composed of representatives of Member States, and with respect to trade-related matters with the Committee referred to in Article 113 of the EEC Treaty, the progress in achieving the goals set out in this Resolution, and to report, at regular intervals and at least once a year, on the progress achieved.

#### INVITES THE MEMBER STATES AND THE COMMISSION:

To take, and where required propose, the measures necessary for reinforcing these basic principles and for pursuing the achievement of the goals set out in this Resolution. These measures should be initiated concurrently as a matter of urgency."

## Council gives green light to satellite liberalization

On 4 November the Council of Telecommunications Ministers adopted a resolution broadly embracing the policy proposals in the satellite green paper which the Commission issued in November 1990. Dutch transport and telecommunications minister Hanja Maij-Weggen, acting president of the Telecommunications Council during the second half of 1991, commented: "It is important that also in satellite communications markets competition is introduced – Member States recognise this as a priority."

The Council has thrown its weight behind major goals in satellite telecommunications policy, namely the harmonization and liberalization of satellite earth stations and satellite telecommunications services, and the separation of regulation and operational functions.

In order to achieve these goals, the telecommunications ministers endorsed the action being taken by the Commission to prepare detailed liberalization measures by 1 January 1993 including:

- competition rules for satellite earth station equipment and services,

- mutual recognition of type approval for satellite earth stations,
- harmonization of licensing for satellite networks and services,
- cooperation with the European Conference of Postal & Telecommunications Administrations (CEPT) on frequency matters.

Ministers identified non-discriminatory access to the space segment as a further major goal and called for speedy progress towards non-discriminatory procedures for setting up separate satellite systems and improved access to space capacity of the intergovernmental organizations Eutelsat, Intelsat and Inmarsat.

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## "00": a single European international dialling code

The Council of Ministers has endorsed a Commission proposal setting 00 as a single dialling code for access to the international network throughout the Community. A formal decision will be taken once the European Parliament has given its opinion.

The single international code should be operational via public networks from 31 December 1991 at the latest.

However, taking account of some Member States' technical, financial or organizational difficulties, certain countries may be authorised to delay

application until 31 December 1998. Special measures concerning local calls in frontier regions will be allowed or maintained.

There are currently, seven different international codes within the Community: Belgium, Germany, Greece, Italy, Portugal and Luxembourg already use the "00" code. All other member states use different codes: 009 in Denmark, 07 in Spain, 19 in France, 010 in the United Kingdom, 16 in Ireland and 09 in the Netherlands.

## Council common position on ONP for leased lines

After several months of discussions, EC telecommunications ministers have adopted a common position on a draft directive aiming to apply the ONP (Open Network Provision) directive of 1990 to the supply of leased lines. This specific directive defines the conditions for the supply of an open network for leased lines and specifies the nature of these leased lines which will have to be supplied in a harmonized way in all Member States.

The directive aims to guarantee users non-discriminatory and efficient access to networks and public telecommunications services by supplying leased lines. These are an essential element of the public telecommunications infrastructure. They are one of the most important elements of the networks

used by enterprises to meet their own needs or to supply services to third countries, in particular value-added services or competitive services. Under the terms of the directive, the common harmonization covers the conditions of use, tariffication principles, ordering procedures, control by national authorities and conciliation procedures in the case of disagreement between users and suppliers of leased lines.

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## Satellite study programme 1992

With the completion of the consultation round on the green paper on satellite communications, the Commission is now examining the scope and content of further steps.

To assist it in this task an extensive study programme has been drawn up for 1992. Three main categories of studies can be distinguished: market/economic, institutional and industrial. Among others the following studies are planned:

- The future of satellite communications in Europe.
- The market and key factors for micro satellite technology in Europe.
- Third generation satellite technology.
- The market for pan-European vehicle location and tracking services.

- The market for DAB via satellite.
- Regulation for LEO and HEO systems.
- Management of European orbit and frequency resources.
- Satellites and communications infrastructures in eastern Europe.
- The effect of US and Japanese efforts on the European satcom market.
- European ground segment industry: prospects and problems.

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## Debate begins on industrial policy for the 1990s

As the EC approaches the single European market deadline of 1992, discussions on a European industrial policy have intensified, leading to a series of separate but complementary policy documents. Three of these have now been put together and published as a supplement to the EC's monthly bulletin.

- Industrial policy in an open and competitive environment: guidelines for a Community approach.
- The European electronics and information technology industry: state of play, issues at stake and proposals for action.
- Promoting the competitive environ-

ment for the industrial activities based on biotechnology.

The booklet, available in all Community languages, is published by the Office for Official Publications of the EC in Luxembourg and can be obtained through the Office's normal sales and subscription channels in Member States. The price is ECU 4.25. The Commission communication concerning the electronics and information technology industry was the subject of a resolution by the Council of Industry Ministers in November, the text of which is reprinted in this issue (see page 2).

## Teleports study results soon

In the early and middle 1980s several "teleports" were created in the USA, Japan and western Europe. Although the definition of what a teleport is differed from region to region, the common element of most initiatives was the key role that was attributed to satellite communications. Via satellite connections a teleport was envisioned playing a role in telecommunications similar to that of regular seaports or airports in physical transport.

The world's first teleport was established in New York by the New York Port Authority. In the USA the market for teleports consisted, certainly in the starting phase, mainly of bypassing the local carriers. In Europe, partly as a result of the regulatory environment, the focus was more on the intrinsic, "new" potential of a teleport. Here, teleports were not seen as alternatives to existing carriers but as facilities adding value to the existing telecommunications environment by offering special services. By putting emphasis on new services such as videoconferencing, on intelligent buildings, shared tenants services, training, demonstrations, etc., teleports came in many cases to be regarded as a tool for reviving a region's economic potential. As in the case of physical ports, regions around the teleports were expected to benefit from the renewed vigour induced by telecommunications.

The Commission wants to promote the full use of satellite technology, in particular with regard to services for the less-favoured regions. In order to examine the possible role teleports can play in regional development, the Commission assigned a study on this to the consultancy agencies IBEX and EURISTIX. Final results are expected to be available by the end of this year.

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# PROGRAMMES IN ACTION

## ESPRIT NEWS

### ISA-Demon: testing starts

Software from the ISA-Demon project, which builds on results of the Esprit I Communications Systems Architecture project, is now being evaluated.

Demon is a monitor for distributed systems or applications which has other uses such as debugging or demonstration of a prototype. Demon provides instrumentation and visualization tools that allow insight into the execution of functions of such distributed systems platforms. The system is visualized by updating a graphical display as events occur in a very flexible, easily understandable way. The benefits will be demonstrated in real end-user applications of distributed object-oriented environments such as Esprit project 2267, Integrated Systems Architecture (ISA).

The ISA-Demon project addresses an acute need to simplify the development process for the growing community of researchers, developers and systems integrators planning to exploit object-oriented distributed systems architectures and platforms. It was initiated by a number of European companies in 1989.

The ISA-Demon will produce effective instrumentation tools of commercial quality, as well as support users engaged in the development and management of distributed applications. The first release was due to be available to third parties for test and evaluation from November 1991, running on Sun and HP Unix workstations. Work is in progress to link the software to ANSAware, the distributed systems platform resulting from the ISA project.

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### Translator's Workbench underway

Esprit II project 2315, Translator's Workbench, is being developed by a consortium comprising Triumph-Adler (D), Mercedes-Benz (D), L-Cube (GR), Siemens-Nixdorf Informationssysteme (D), SNI CDS (E), Fraunhofer IAO (D), University of Surrey (UK), Universität Heidelberg (D), Universidad Politécnica de Cataluña (E) and Universität Stuttgart (D).

The 36-month project started on 1 April 1989 with the aim of developing and integrating a set of computer-based tools for the professional translator. These tools are being tested by translators at Mercedes-Benz. The languages currently covered are German, English, Spanish and Greek.

The Translator's Workbench will provide translators with multilingual text-processing facilities, including a term-bank and term-bank building tools, grammar, style and spelling checkers,

and remote access to a machine-assisted translation system (Metal) and to other term banks (e.g. Eurodicautom). The multi-lingual editor FrameMaker integrates the facilities being developed using standard interfaces to ensure portability. A lexical interchange format and ODIF (office document interchange format) is supported by the workbench, thus offering compatibility with the office document architecture (ODA). A PC version of the workbench is aimed at the larger market of multi-lingual text processing, and provides parallel scrolling for source and target language, a multi-lingual dictionary and extended spell checking for German, integrated into Word for Windows.

The Translator's Workbench will assist professional translators, scientists, and engineers working in technical fields and handling large volumes of documentation, as well as secretaries in a multi-

### Amadeus software now available

Trinity College Dublin (TCD) which participates in several Esprit projects, particularly in distributed systems such as projects 2071 Comandos II and 5279 Harness, has developed an initial version of the "Amadeus" software environment. This supports fine-grained distributed and persistent object-oriented applications.

The first version of Amadeus, resulting from the Comandos project, has been circulated to a number of sites and considerable commercial interest is being expressed. Based on the reputation gained by this work, some TCD personnel have formed Iona Technologies, a new company whose goal is to commercialize the developments carried out so far. Further information about Iona Technologies is available on request.

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lingual office environment. Several products and near products have already emerged from the project: a German Extended Spell Checker (Triumph-Adler), a Greek Spell Checker (L-Cube), ODA/ODIF document converters (UPC and SNI CDS), and Mate, a machine-assisted terminology elicitation system (University of Surrey).

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## Special actions for information technology in Spain

The Esprit Advisory Board, a high-level consultative body of the European Commission in information technology, met in Spain for the first time in Madrid on 16 October. The EAB is an independent committee of leading figures active on the European IT scene.

An important item on the agenda related to special actions in IT in Spain, which aim at increasing the potential for participation in Community R&D in IT of organizations from Spain, as well as increasing their ability to make use of R&D results. An exchange of views was held in the presence of Dr E. Triana, Secretario General de Promoción Industrial y Tecnología, Ministerio de Industria, Comercio y Turismo and Dr L. Oro, Secretario General del Plan Nacional de Investigación Científica y Desarrollo Tecnológico.

A report was made on special actions which had already been launched in microelectronics. It was agreed that the actions were so far proving to be very successful in contributing to the aim of raising the potential in Spain to a considerable extent. In the light of these initial actions, it was decided to extend the initiative into the fields of software and computer-integrated manufacturing, where all sides agreed that Spanish companies and research institutes offered further good potential. EAB chairman Dr H. Nasko, vice chairman of the managing board of Siemens-Nixdorf Informationssysteme AG, joined Dr Triana in welcoming these plans for a significant stepping up of Community efforts in these areas. Spanish companies were already involved in about one third of ongoing projects in Esprit. He praised the readiness of Spanish companies to organize successful partnerships with other European companies, concluding that this openness and flexibility augured well for the future

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## Eurochip Workshop winners

At the second Eurochip Workshop in Grenoble (30 September – 2 October), 34 designs competed in an organized circuits exhibition. The workshop programme committee, assisted by Eurochip, selected the winning designs:

First prize, a set of new scientific books on VLSI design published by Elsevier, went to Marmik Brunfaut from the Belgian University of Ghent, for the Instruction Path Co-processor (IPC) design. This was the subject of a dissertation project in engineering and the largest application specific integrated circuit (ASIC) design at the University of Ghent. The project investigated the possibility of a system designer (with a limited knowledge in semiconductor design) comprehending a complex, non-trivial digital integrated circuit in one academic year.

A joint design for an integrated circuit chip from the University of Twente and the Polytechnic of Enschede was presented by Onno Harms and Martin Samsom. The circuit chip, designed in three months, implements the Affine Transform for real-time geometric processing of digitized images. The circuits are to be used in an image processing system currently being developed at the university.

The design for an image processing integrated circuit for real-time edge detection was presented by the University of Montpellier. Designers were M. Robert, J. P. Bonnaure, G. Cathebras, S. Hafdi, M. Paindavoine and J. F. Kirilenko. The duration of the project from system specification to manufacturing files was some 300 hours and was organized in the final year at the University of Montpellier Engineering School. The microsystem, aimed at fast detection of defects on manufacturing products, is based on an edge detection algorithm to select the information related to the structure of the objects present in the image.

All three designs were displayed at the Esprit 91 Exhibition. The designers were also invited to attend at the conference.

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## New Esprit information clubs

Esprit Clubs have been set up in Denmark, France, Germany, Greece, Italy and the United Kingdom under the auspices of local trade, professional or governmental bodies, to further disseminate information about the Esprit programme including:

- Information on DG XIII actions such as calls for proposals, the Esprit conference and publications.
- Information on events associated with Esprit, e.g. contributions to working groups, meetings, contributions to information days.
- Information supplied on specific request on matters such as analysis of requirements, choice of themes, selection of partners, etc.
- Technology transfer from Esprit results.

The foundation and management of

each club is a matter for each country. Each club represents a "bottom-up" approach and each has its annual programme. Esprit has assisted with the coordination and suggested some ground rules

The most recent Esprit Club launched was in Switzerland, where participation from EFTA countries is most welcome.

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The first Y-Net pilot phase service; X.400 E-mail service, is now available and offers a service based on:

- open environment compliant with the European MHS standard (ENV 41201);
- national service provision in each Member State via service points accessible through X-25, dial-up connection or OSI protocols interconnection, installed in each Member State (Belgium and Luxembourg to share);
- interconnection with other scientific E-mail networks, such as Cosine, EUnet and EuroKom: in each Member State the service point is interconnected to Cosine and international gateway services between Y-Net, EUnet and EuroKom are provided.

To access Y-Net's X.400 E-mail service, potential users will require a minimum of equipment such as a PC with modem or a workstation. Y-Net service users will have an electronic mailbox at their Member State service point. Messages and documents prepared on any computer can be transferred to the mailbox or prepared on-line at the service point and sent both to Y-Net users and other electronic mail networks users.

The advantage of Y-Net's X.400 E-mail to the EC R&D community is that their mailbox at the service point is more than a link for exchanging messages. In fact, users can exchange any kind of

file, including formatted documents made via word processors, specific application files such as spreadsheets and graphical files, source files and compiled programs, thanks to the possibility of transferring messages in a transparent way.

Researchers who have in-house OSI X.400 systems can be linked to Y-Net, taking advantage of enlarging their local E-mail environment inheriting Y-Net interconnection with the other E-Mail networks.

The Y-Net Service Points are available 24 hours a days, 365 days a year and subscription is free for the duration of the pilot phase.

The Y-Net Service is provided in each Member State via organizations acting as National Operational Unit (NOU) under the coordination of the Y-Net management Unit (YMU) located in Brussels.

The NOUs provides in the appropriate Member State language to Y-Net E-Mail users :

- Documentation
- User support and Help Desk
- User administration.

All researchers in small and medium sized enterprises who wish to subscribe to the Y-Net service should contact either their National Operational Unit or the Y-Net Management Unit for a registration form. After registration, there will be immediate interconnection to the E-mail service and docu-

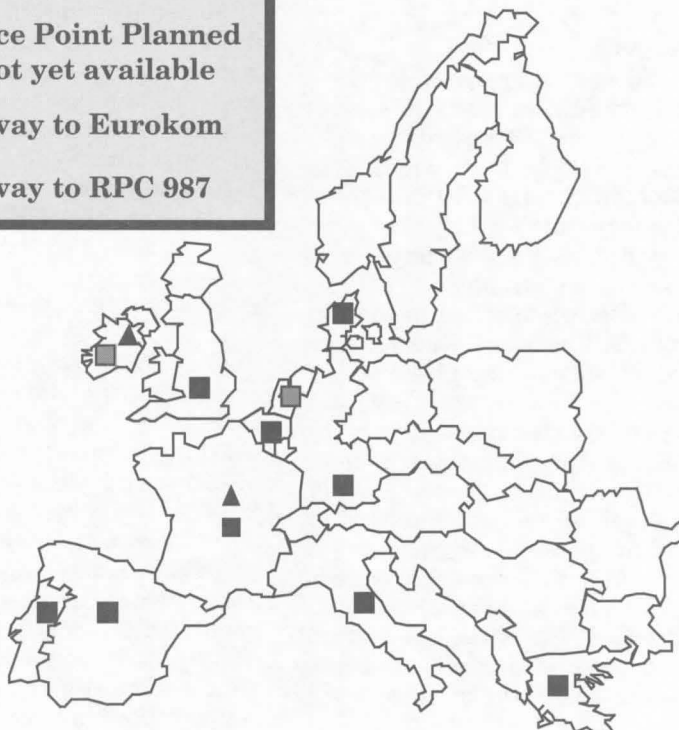
mentation about the service will be sent.

The Y-Net service is operational in most Member States. In countries where the service is not yet operational and in order to take immediate advantage of the Y-Net service, users can interconnect to their nearest service point, e.g. Dutch researchers can access to the Belgian service point.

Member States where a service point is operational:

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- Service Point Available
- Service Point Planned but not yet available
- ▲ Gateway to Eurokom
- ▲ Gateway to RPC 987



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## Future directions for IXI

The IXI pilot service has successfully demonstrated both the feasibility of and the need for a managed international X.25 backbone infrastructure. In view of this, RARE launched a call for tender for a production service at the end of 1990. The evaluation of responses is now nearing completion, and contracts may be signed early in 1992. Under the terms of the Cosine implementation phase execution contract, RARE has responsibility for the management of both the pilot and the planned production service.

The IXI production service will provide geographical coverage at least as extensive as the pilot. While services offered will be broadly similar to the pilot, it can be expected that higher access speeds, which will be visible to users as faster transmission of information, will be provided. Quality of service levels will be defined more stringently. The way in which the service is paid for will also change as, in line with general Cosine policy on self-funding services, the participating networks will begin to bear some portion of the cost of the service.

While the core service of the IXI production service will be X.25 packet switching, networking communities which use other protocols will be able to take advantage of the efficiency and cost-effectiveness of the service

through network gateways, which will allow IXI to be seen as a multi-protocol service. In parallel to the main service, proposals are under preparation for a higher speed trial network, which will provide packet switching at E1 rates, i.e. two million bits per second. This network will allow users to test new network applications such as videoconferencing and multi-media in preparation for the upgrade of the production service to similar capabilities.

Finally, IXI is a part of the European research community's telematics infrastructure, but not the whole of it. As RARE continues its development towards becoming the main body providing services to researchers at the European level, every effort will continue to be made to ensure a harmonious development of the European backbone.

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pulation of network traffic so that the impact of real-life error conditions can be examined.

Cosine asserts that it is vital that interoperability tests be designed to match the requirements of the users. The implementations that will be included in the project will be those which have a major role to play within the European research community. The project will thus focus on the defined requirements of researchers throughout Europe and provide the means to ensure that FTAM increasingly becomes a practical reality.

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## FTAM in practice

Cosine (*Cooperation for open systems interconnection networking in Europe*) provides the international computer networking infrastructure and range of services that will facilitate communications between commercial, academic and governmental research across Europe.

Cosine has identified that FTAM interoperability testing is essential because there is no guarantee that conformance-tested products will interwork satisfactorily. A major test of FTAM interoperability is therefore being launched. The contractor for the Cosine FTAM project will be the UK's National Computing Centre. Dr Tim Wells, director of NCC Open Systems, said NCC was delighted to be working with Cosine on a project which they regarded as a significant step forward in ensuring that OSI-based solutions were developed which met the needs of

the researcher.

He added that there were requirements for FTAM products in several thousand research sites across Europe. The study will focus on conducting interoperability tests on a number of OSI-conformant FTAM products. Conformance testing is undertaken to ascertain that an OSI product conforms to the requirements stated in the OSI protocol specifications. It thus provides a detailed view of the protocol elements.

The objective of interoperability testing is to test complete systems in their working environments: in other words, to test "real effects" and the services required by the user. This approach is used because it allows user requirements to be met and incompatibilities to be detected. The methodology which will be adopted during this 13-month project will include the dynamic mani-

## RARE news



RARE

### New members

During the past year RARE, the European Association for Research Networking, has added a number of east European countries to its membership. In February this year Poland became an associate national member. A few months later two organizations in the Soviet Union were accepted as associate national member and international member, the Academy of Science in Moscow and the Joint Institute for Nuclear Research (Dubna). At its meeting in October the RARE Council of Administration decided to accept Romania as a new associate national member. As of now, RARE membership encompasses most of the countries in east Europe, Czechoslovakia, Hungary and Yugoslavia already being members.

### New education research unit

In May 1991 RARE established a task force to propose the organization of an operational unit that will provide networking services necessary for the research and education community in Europe. In its first report, which was distributed last September, a number of recommendations were made. As a consequence the task force has been requested to undertake further activities to detail the proposal. A shareholders agreement has to be developed and potential investors will have to be





approached to seek initial commitment. A period of six months was expected to be required to finalize the establishment of the unit.

### **Ebone 92 endorsed**

The RARE Council of Administration has endorsed the Ebone 92 initiative: the creation of an interim backbone infrastructure providing value-added open networking services for Internet and pilot ISO CLNS, by combining and enhancing existing facilities. It is planned that in 1993 Ebone 92 services will be integrated into the full multi-protocol services. Operational responsibilities will be passed on to the Operational Unit, on the assumption that the Operational Unit has been created by that time.

### **Blois proceedings available**

Proceedings of the 2nd Joint European Networking Conference held in Blois, France in May this year are published in a special October issue of Computer Networks and ISDN Systems. Copies are available from the RARE Secretariat.

### **3rd JENC underway**

Preparations for the RARE 3rd Joint European Networking Conference, which will take place in Innsbruck in May 1992, are well underway. An announcement and call for papers was sent out last October. A preliminary programme and registration form will be sent out by the beginning of 1991. This year a record number of participants is expected.

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#### **CHANGE OF ADDRESS**

Please note that since December, the RARE Secretariat has changed address in Amsterdam. Full address information:

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## **250 new R & D projects selected**

### **- RACE and Telematics programmes to move into new phase -**

The EC Commission (Directorate General XIII) is in the middle of contract negotiations with representatives of some 250 project consortia whose proposals have successfully completed extremely competitive evaluation and selection procedures.

In response to a public call for proposals of June 1991 almost 800 proposals were submitted for funding, 183 proposals for the communications technology programme (Race), 541 proposals for the telematic systems programme and 66 projects for the investigation on information security. These proposals involved more than 7000 organizations from all EC and EFTA countries, central and eastern Europe, Japan and the USA. EC funding requested by the proposers totalled ECU 2.9 billion (ECU 1.26 bn for Race and 1.64 bn for the telematics programme) compared with the ECU 869 million of EC funding available.

The Commission hopes it will be possible to complete contract negotiations in December so that contracts can be signed before the end of the year. Projects would thus become operational in January 1991. The communications technology and the telematic systems programmes are part of the broader 1990-94 EC Framework Programme for research and technological development which the Council of Ministers approved in 1990. The action on information security is not part of the Framework Programme but is, for obvious reasons, very closely related to the other two other operations.

The Race programme is an important Community contribution to the introduction of Integrated Broadband Communications (IBC) in Europe. To date ECU 489 million have been set aside as Community support for the carrying out of transnational R & D projects.

The telematic systems programme is expected to help develop concepts for harmonized and coordinated use of information and communication technologies in areas such as administration, transport, medicine/healthcare, distance teaching/flexible learning, libraries, linguistics and rural development (for action lines 'libraries' and 'linguistics' the calls for proposals only closed on 2 december).

For the telematic programme, ECU 308 million of Community funding has been set aside.

The communications technology pro-

gramme (Race) will be based on the results and achievements of some 90 projects launched during the programme's first phase (1987 - 1991). The action lines transport, distance teaching/flexible learning and medicine/healthcare of the telematics programme will pursue the work of preparatory programmes - Drive (transport), Delta (teaching and learning) and Aim (medicine/healthcare) - which have been successfully completed. Accordingly, projects currently under negotiation show a high degree of continuity, with a substantial effort being made to deepen cooperation and to integrate the R & D work of individual projects into the broader EC policy concept.

Most of the projects being considered will run for 36 months. Negotiations cover both substance (further specification of work, merger of similar projects, etc.) and budgetary aspects.

Industry and private sector organizations represent almost half of the partners in the selected projects; administrations and public services 16%; and research institutions and educational establishments 30%.

A complete list of selected projects and their partners will be made available after completion of the current negotiations.

## **New RACE projects get off the ground**

The EC R&D programme on communication technologies, RACE, covers the development of advanced communication technologies and concepts for the commercial introduction of integrated broadband communications (IBC) services in 1995. A first phase of the programme was successfully launched in 1987. The new programme, put out to public tender in June 1991 will build on the results and achievements of the first phase.

The workplan sets out eight priority areas including technological R&D for IBC, intelligence in networks/flexible management of communication resources, mobile and personal communications, and image and data communications. It also includes integrated services technologies, information security technologies, advanced communication experiments, and test infrastructures and interworking.

The call for proposals brought in 183 proposals, involving close to 4000

different organizations. EC funding requested by the proposers totalled ECU 1.268 billion, two-and-a-half times the amount of ECU 489 million agreed by the Council of Ministers.

The greatest number of proposals concerned carrying out advanced communication experiments, followed by proposals for projects in technological R+D.

After evaluation, 84 project consortia were given the green light to negotiate their contracts with the Commission's services. In quantitative terms the two action lines on advanced communication experiments and technological R+D will see the greatest number of projects getting off the ground, with 26 and 27 respectively, the other areas of work being covered by approximately the same number of projects each.

Under the heading of "communications experiments", work on broadband applications in areas such as manufacturing, publishing and banking is due to be pursued and deepened. New application pilots in areas such as tele-shopping or rural development (establishing a link between Race and the relevant action line of the telematics systems programme) will be new elements in the programme.

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## Project selection under way for European 'nervous system' telematics

European Community action in this field aims to define common requirements for electronic information exchange and to examine the need for interoperability between electronic information networks within EC member states. The relevant Council decision also requests the carrying out of studies and pre-normative R+D work for the definition and subsequent establishment of trans-European telematic services networks needed for the completion of the single market, for the provision of the services necessary for the free movement of people, goods, services and capital and for increasing economic and social cohesion in the EC.

In response to the call for proposals of June 91, 40 proposals have been submitted, addressing either the vertical areas of the workplan in the form of application pilot projects or horizontal infrastructure aspects in support of the same pilot projects. Of these 40 proposals, 14 (i.e. 35%) have been selected for contract negotiations, comprising, among others, a project concerning the development of telematics facilities for use by social security organizations across Europe. The main objectives of

the project are to facilitate information exchange between social security organizations with regard to rights accumulated in different member states to enhance reliable and efficient awarding of such social security rights to citizens who qualify for them. A pilot scheme is planned to be organized for the "old age" pension sector.

Another project planned concerns information exchange on ships carrying dangerous or hazardous cargo, allowing for the integration of already existing isolated systems. The planned communication will be based on the Edifact standard.

In the area of environmental protection, two projects are under negotiation. One deals with trans-border environmental monitoring and one provides for data exchange about coastal pollution.

With regard to the free movement of capital, one project is planned to address the problem of interconnecting financial public administrations with the intention of exchanging fiscal information about non-resident tax payers.

The Council of Ministers has earmarked ECU 41.3 million for these 14 projects.

## DRIVE moves up a gear

The aim of the telematic systems R&D programme for road transport telematics (DRIVE) is "to contribute to the development of a framework in which advanced information technology and communications can be harnessed to improve the efficiency and safety of the transport of passengers and goods and reduce their impact on the environment."

In response to the June 1991 call for proposals, 150 proposals were submitted involving 1300 organizations from all the EC and EFTA countries. The requested financial support from the EC budget totalled ECU 600 million, i.e. six times the amount available for project funding.

An important characteristic of many of the proposals was the close relationship between proposed activities within the framework of the Community programme and ongoing work in Eureka and related national programmes.

Some 60 projects (40% of all projects proposed) have been selected for contract negotiations. A substantial number of these projects are pilot projects, designed to demonstrate in situ the results of earlier Drive and Eureka projects. These pilot projects will help bring together industry and the owners of transport infrastructure, road users and other actors, thus creating an opportunity to outline the form of future transport systems in the EC.

Project LLAMD (London, Lyon, Amsterdam, Munich and Dublin) will bring together five major European cities to work on concepts for advanced travel information systems.

Project FRAME (Freight Management in Europe) aims to produce an integrated freight management system, bringing together freight operators, freight forwarders and users. Trials will be based on the transport corridors London - Paris and Barcelona - Seville, with further trials planned in northern Europe.

Another project under negotiation concerns the testing and evaluation of IT systems which could help elderly and/or disabled drivers.

## A single market for rehabilitation technology

The Technology Initiative for Disabled and Elderly people in Europe (TIDE) is aimed at promoting the creation of a single European market in rehabilitation technology - technological devices and services provided directly to the elderly and people with disabilities.

These rapidly increasing user groups already number between 60 and 80 million people in the Community today. The technology is used to facilitate or enable independent living and empower participation in social and economic activities and so has a positive fiscal effect.

The Tide pilot project, due to end in 1992, addresses:

- Coordination, consensus development and application scenarios.
- Control technology.
- Communications technology.
- Integrated systems technology.
- Innovation in rehabilitation

technology manufacturing techniques.

There was an extremely encouraging response to the call for proposals in March 91. More than 70 consortia made proposals, with a high proportion of SMEs and electronic companies bidding for the ECU 8.1 million available, and 21 contracts are currently under negotiation.

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## Telematics systems for health care (AIM)

The objective of this part of the telematic systems programme has been laid down in the decision of the Council of Ministers: Community action should help to "...stimulate the development of harmonized applications of information and communication technologies in health care and the development of a European health care information infrastructure, taking into account the needs of users as well as technological opportunities."

In response to the June 1991 call for proposals, 193 project proposals were submitted – more than for the substantially bigger Race programme. Of these, 37 (i.e. 19.2%) are now in the phase of contract negotiations. EC support amounts to ECU 97 million for these 37 projects (compared with the ECU 600 million represented by the 193 proposals).

Selected projects provide for an adequate coverage of 10 of the 11 priority areas identified in the technical annexe to the Council decision; the one domain in which no proposals have been received is "Interhospital telematics for increased security in distance care and improved management of staff and specialized equipment."

A second call for proposals is envisaged in order to launch work on "Data cards for the health care sector." Good quality proposals have not yet been submitted which would have justified Community funding.

Projects currently under negotiation will address issues such as the development of a European database on drug terminology, the improvement of breast cancer screening through computer aided detection of mammo-

grammes, the development of a concept for a European integrated picture archiving and communications system in the hospital and a concept for computer assisted medical interventions where two demonstrator applications have been selected: cranial neurosurgery and orthopaedic knee surgery.

## Distance teaching/flexible learning (DELTA)

The aim of this part of the telematic systems programme has been defined as helping to improve the access to learning in Europe by the provision of new flexible tools and systems catering for flexible ways of learning, interactivity between the users, the enabling of remote access to the learning resources and optimum support to users.

In response to the June 1991 call for proposals, 110 proposals were submitted involving almost 900 different organizations and representing ECU 260 million of EC funding, compared with the ECU 54 million available. The 22 projects selected for contract negotiations (i.e. 20% of proposed projects) involve 232 different partners, including partners from four EFTA countries. Of these partners, 36% are universities or other establishments representing education or learning and 26% represent the telecommunications sector or industry.

Projects under negotiation include one on advanced communications for training which seeks to develop the tools and telecommunications configuration for a European training network based on ISDN and direct broadcasting by satellite. It will also address the provision of learner/tutor intercommunication and remote access to distributed information resources.

Another project will attempt to contribute to the development of favourable conditions for distance learning by farmers and people in rural areas, taking into account technical, economical and social conditions.

Project "Multimedia Teleschool" is planned as a pilot implementation project, which will provide for a series of large scale pilot projects with real learners, using PSDN at an earlier stage, thereafter PSDN plus CD-I and finally ISDN plus CD-I.

## MIM helps overcome language barriers

Under the IMPACT (Information Market Policy Actions) programme, the Commission has recently instigated the development of an innovative project called MIM.

This multilingual database interrogation mock-up (Maquette d'Interrogation Multilingue) has been realised with the cooperation of a Paris-based company, GSI-ERLI. It is available to users of ECHO, the European Commission Host Organization, using the public password, and enables them to search the database "People's Europe" (a CEC publication) in English, French or Italian and to receive the requisite full-text data in a language which is different from the interrogation language. The advantage of this is that the user may formulate questions in a language which he/she knows well, yet have access to information contained in databases produced in languages which are less familiar. It is, after all, easier to read a foreign language than to express oneself in it.

The multilingual aspect is coupled with the possibility of formulating questions in natural language rather than being required to learn a special retrieval or command language. The user simply formulates questions as in the spoken language and keys them in at a computer keyboard.

Even greater benefits will be available to the user if MIM is also able to translate the retrieved data into the mother tongue or language of choice of the interrogator. The addition of real-time machine-assisted translation software could help achieve this; it is planned to develop a second stage of the MIM project using Systran (the CEC-developed computer translation system). The "People's Europe" database provides information on the individual and collective rights of EC citizens under Community legislation, as well as a description of certain EC initiatives and programmes of interest to Europeans in their daily lives. In using the MIM application, questions must obviously be restricted to the subject matter of this particular database.

For access using MIM, use the public password ECHO and choose the option MIM from the main menu.

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## Information Market : LAB meeting report

The 12th meeting of the Legal Advisory Board (LAB) for the information market took place in Luxembourg on 14-15 October. In his opening speech, Frans de Bruïne, director of DG XIII/B, announced two Commission decisions aimed at improving the LAB's efficiency. For the first time in its five-year history the LAB meeting would be chaired by a senior expert who was not a Commission official, Marie-Charlotte Pitrat, and would include among its participants a number of information industry representatives who would bring concrete problems and experiences into the legal discussions.

The main item concerned the findings of the Publaw study on the legal conditions in the EC member states for access to and commercial use of (non-classified) public sector information by the private sector. This was a first step towards a follow-up to the guidelines for improving the synergy between the public and private sectors in the information market issued by the Commission and approved by the parties concerned two years ago. Access to public sector information is regulated mainly by laws concerning : access to government information (freedom of information); protection of personal data; government copyright; competition; and commercial secrecy. Particular attention was given to certain public files of commercial interest, namely population registers; car registers; company registers; credit risks files; and statistical files.

The experts who undertook the Publaw study made the following recommendations :

- A directive should be drafted on access to public sector information based on the existing directive on environmental information and the relevant Council of Europe recommendation (81)19, and in conformity with the Commission proposal on personal data protection.
- Further sectoral directives should be drafted concerning access to credit risk files, population and car registers.
- The public/private sector synergy guidelines should be re-examined to take competition issues more into account.
- Public sector databases should be offered for commercial use through obligatory licences.
- An economic analysis should be undertaken concerning the impact of the legal environment on the information market (including tariffication issues, private sector demand for public sector information, areas of commercial interest, etc.)
- An analysis of relevant US policies was also requested.

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## Results of the Sprint programme and key ongoing activities

### Technology Performance Financing

Following a call for proposals on technology performance financing launched in March 1991, a core group of 10 banks has now been chosen, representing some of the major names in European banking such as Banci di Bilbao, National Westminster Bank, Allied Irish Bank, Unibank, Agricultural Bank and the Industrial Development Bank of Greece. By means of their extensive branch networks, these core banks will promote and develop the scheme throughout the Community. They have undertaken to provide unsecured funding to suppliers for 250 projects for a total of ECU 55 million. In turn the Commission will provide a total of ECU 5 million as a safety net for the banks in the event that the technology involved does not achieve the promised results. A further 10 banks will

participate in the scheme on an ad-hoc basis, with a view to greater involvement as the programme develops.

The major attraction of TPF is the benefits which it offers to all the participants. For suppliers of technology, who are normally SMEs, it provides a means of acquiring the resources and credibility often necessary to enter markets whilst providing the means for continued development. For the receiving firms, which are often traditional industries resistant to change, the payment-by-results approach is a means of overcoming the perceived risk of acquiring new technology. For the banks, for whom the assessment of risk has always proved to be the biggest obstacle in innovation finance, TPF offers a far more quantifiable basis for risk assessment.

The main objective of the scheme is for all

parties involved to gain experience in the mechanisms of TPF and thereby establish it as a valid tool for developing and acquiring new technology throughout the Community.

### Cooperation among research and technology organizations

Because of the extensive and varied role they play in industry, research and technology organizations (RTOs) have been recognised from the start of Sprint as an important source for innovation and technology transfer in Europe.

A call for proposals for establishing transnational cooperation between RTOs in the areas of quality management methods and advanced manufacturing was launched in the first half of this year and the interest shown was substantial.

In total, 130 proposals were received of which 25 were selected for Sprint support. In the selection particular consideration was given to proposals which included organizations in regions under-represented in existing Sprint networks and in regions lagging behind the technological level of the more advanced EC member states.

Support for these 25 networks, which involve 120 RTOs across the Community, amounts to ECU 2.5 million.

### Mid-term evaluation

As the main phase of the Sprint programme has approached its mid-point, the Council decision requires the Commission to submit a report to the European Parliament, the Council and the Economic and Social Committee which gives an assessment of the progress achieved so far. The Commission has therefore set up a small panel of acknowledged experts in the field of innovation and technology transfer under the chairmanship of Mr P. Aigrain, former French minister of research and technology. The conclusions of this panel, expected during the first quarter of 1992, will be used as the basis of the mid-term report.

### Major Sprint conference postponed to June 1992

The *Innovation and Technology Transfer in the 1990s* conference has been postponed until 22-23 June 1992. Those interested in attending are asked to send their name and address to the Sprint secretariat so that a mailing list may be compiled.

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## IMPACT information day sparks keen interest

More than 300 participants attended the Impact (Information Market Policy Actions) information day held by the CEC in Luxembourg on 6 November 1991 and an additional 1,500 requests for proceedings and other documentation have been received since. Questionnaires completed during the conference recorded a high level of satisfaction with the programme, and almost all participants expressed interest in attending a future meeting of this type.

Mr Vicente Parajon Collada, deputy Director-General of DG XIII, highlighted two areas of Impact activity: those run by ECHO, the European Commission Host Organization, are consumer-based innovative projects based on innovative technology; in addition, pilot and demonstration projects carried out by industry aim to stimulate the supply side.

Chairing the meeting, Mr Frans De Bruine, director of DG XIII/B, said integration would be the key to the future reflected in Impact 2: integrating markets, technologies (the multimedia approach), information and language products. Impact 2, which is not a technology development programme, but geared to stimulating a pan-European information services market, would also see greater transparency and billing on a pan-European scale. Echo projects showing that problems of multilingualism and interfacing can be overcome using existing technologies included:

- The Information Market (I'M) Guide. This consolidates the former Dianeguide and Brokersguide databases and includes information on gateways, intelligent interfaces, CD-ROM products, image banks, etc. Available online and, condensed, in printed form, in all Community wor-

king languages, this guide directs users towards commercial information services. Some ECHO databases are available in Greek or Latin characters and may be accessed using the appropriate Network User Address.

- Videotex: ECHO is present in all operational European videotex systems. This offers the scope for addressing a wide European audience and offers information on electronic media and CEC activities, overcoming the technical problems of different standards and languages.

- MIM (multilingual interrogation "mock-up"): This illustrates work in multilingual database interrogation enabling users to search the "People's Europe" database in French, English or Italian and receive full-text data in another language if they wish. This has the additional advantage of enabling users to express questions in natural language and not being required to learn a special retrieval or command language.

Updated results were also presented on two projects presented at the Knowledge Transfer Meeting in October 1990.

1. Eurotop set out to produce electronic versions of tour operators' catalogues for use by travel agents. This project demonstrates the use of ISDN for transmission to the travel agent's workstation of catalogue pages incorporating a variety of still colour images. The prototype of a travel agent's workstation has been produced, while a tour operator's workstation for production of the service is in development.

2. The Ulysses project combines different national tourist information projects into a European system, with the service gathering information



from a variety of sources and delivering it to professionals and the public in electronic form. Project partners are based in Portugal, France and Ireland.

3. The Atis touring information system project, involving automobile organizations in Germany, UK and The Netherlands, was conceived as an initiative to enable the exchange of tourist data. A prototype workstation allows the capture, local storage, query and exchange of relevant data in standard format. A multi-user version is in preparation.

4. In the image bank subject area, the first project reported was Tecdoc, involving some 30 automobile repair shops and dealers in Germany, Belgium, France and the UK who will be equipped with CD-ROMs and portable reading devices to replace traditional paper and microfiche technical documentation. Mechanics and storemen will thus be provided on the spot with an easy-to-use, compact and up-to-date means of consulting repair manuals and parts catalogues.

5. Finally, the Aremm project, aimed at producing a multimedia networking atlas of the Mediterranean region was described. A CD-ROM will contain general geographical information and specialised detail on agriculture, food and commerce, with emphasis on the cities of this area.

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## LIB-2 update study reaches completion

The LIB-2 update study commissioned by the CEC was conducted in all member states during the period October 1990 to March/April 1991. It set out to reassess current application of new information technologies in libraries and their impact on library function. The first results were presented at a seminar in September 1991 and will be published as a complete set of EUR reports at a later date. The studies were required to provide



information on machine-readable bibliographic record resources, available in major libraries, utilities, and from the book trade; to give some indication of the extent of networking of such resources; to provide information on the take-up and penetration of integrated library systems supplied commercially; and to update the chapter on user services which use new technologies. The original LIB-2 studies revealed that much of the relevant data were not rou-

tinely collect by libraries and they were welcomed as a valuable source of previously unavailable information. Four years on, the picture has changed dramatically in some countries and these new studies should provide an equally useful information source.

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## Study on optical disc technology and European libraries



A study entitled *User and Technical Requirements in the context of Optical Disc Technology and European Libraries* has been completed within the framework of the libraries programme. Its findings will be published at the end of 1991.

The study was based primarily on desk research and interviews with libraries (users) and suppliers of the relevant technologies - scanning, encoding and storage, and access and retrieval. It was prompted by the minimal take-up by libraries of optical technology which was limited almost entirely to the purchase and, in a few cases, the production of CD-ROMs. This contrasts strongly with the growth in use of opti-

cal storage media in the office automation environment.

A typology of library materials and services was developed and then related to the technical features offered by current scanners and by optical discs, and to the access and retrieval software available. The result is a comprehensive and wide-ranging report which brings together data not previously provided in a single source.

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## Libraries programme: ION project end-of-phase report



A report is now available on phase I of the ION project, an OSI pilot/demonstration project between library networks in Europe for inter-lending services. ION represents the forerunner to the ultimate goal of interlinking libraries in Europe for electronic transfer and management of library material. The three-stage project will establish a pilot service between selected libraries in the United Kingdom, the Netherlands and France for international inter-library loan requests. It is co-funded by the Commission and the ION consortium participants, LASER, Pica and SDB/SUNIST. Technical teams from the three countries involved are contributing their specific knowledge of library and computer-based systems. The new international service will be integrated with the pre-

sent national services provided by the ION consortium participants.

The project aims to demonstrate the capabilities of OSI communication protocols in a message-oriented environment for inter-lending services by the interconnection of networks with different technical characteristics. The report records the concepts and specifications defining the operation of the pilot system and its technical requirements.

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flow by providing financial support to developers during the early industry phase.

- Assist in the development of an attractive range of multimedia titles for the consumer market.
- Stimulate cooperation between cultural information owners, developers and publishers to exploit interactive multimedia.
- Promote the creation of a European Multimedia Developers' Group.

There was strong support for the general thrust of these objectives from participants who were also able to feed back to DG XIII their own recommendations. These included:

- The idea of a call for proposals on interactive multimedia and cultural information, aimed at developing attractive high quality titles, while being commercially viable and "sensitive" to content suppliers.
- The idea of a platform-independent European Multimedia Group to provide a broad-based industry forum.
- The CEC should stimulate professional training in interactive multimedia for museum personnel and for title designers and developers.
- To enhance the value for money of the call for proposals, software "shells" should be funded.
- To encourage the participation of museums and other information providers in consortia to develop software titles, the Commission should accept considering as allowable costs some payment towards royalties for use of images.

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## CEC workshop on interactive multimedia and cultural information

Interactive multimedia is a set of emerging digital technologies destined to have a major impact on the business and consumer applications of computing and television in the coming decades. DG XIII is supporting these developments and in this context held a preparatory workshop entitled *Interactive Multimedia and Cultural Information* in Luxembourg on 9-10 October 1991. Some 50 participants attended, representing organizations from the multimedia software develo-

pers' industry and the museum community.

Discussions centred on the following six CEC-proposed objectives to:

- Provide the framework for accelerating the development of interactive multimedia titles in Europe.
- Support the creation of production environments in Europe for the development of interactive multimedia products.
- Help reduce the initial start-up risks and the period of negative cash

## Multimedia in action: Protex V

Protex V, an international congress covering "Multimedia in Action", took place in Luxembourg from 20 to 22 November. It was the first of its kind in Europe. Under the patronage of Mr Jacques Santer, Prime Minister of Luxembourg and European Commissioner Jean Dondelinger, it provided an opportunity for meeting leading professionals in all fields of multimedia information dissemination and associated technologies under application or under development.



The subjects were selected by a distinguished scientific committee and the lecturers included well-known figures from related industries or companies involved in this business.

Riccardo Petrella of DG XII/H chaired the conference, which covered items including multimedia information management, multimedia in CEC programmes, hypertext and hypermedia, and multimedia projects in European industry. It also included a debate on speech processing, multimedia perspectives and general conclusions.

Parallel workshops dealt with technology advances and application needs.

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## New opportunities for rural areas (ORA)

European Community action is planned to help with the diversification of employment opportunities in rural areas, the improvement in commercial, social, educational and health services and to contribute to the decentralization of economic activity and the preservation of the cultural diversity of Europe. Furthermore the ORA operation will increase the awareness of the potential use of information and communication technologies.

The limited budgetary resources (ECU 14 million) allocated to this action line of the telematic systems R&D programme reflects the Council of Ministers' wish not to disperse resources whilst recognising the special problems facing rural areas and the potential of telematics systems to address these problems. Accordingly, only 12 tasks of the much broader ORA workplan have been put out to tender.

In response to the call for proposals of

June 1991, 50 proposals were submitted of which 11 (22%) are now under negotiation. Proposals involved partners from all 12 EC member states, from EFTA countries (Austria, Norway, Sweden) as well as from Poland and Romania. A total of 92 different organizations are involved in the final selection. Many of the project partners have never before been involved in a Community R&D programme. More than half of the partners involved represent less-favoured regions in the sense of "objective 1" of the EC structural fund criteria.

Among the proposals retained, two projects will deal with services and applications for distance working, two others will deal with services and applications for tourism and leisure, and three projects will undertake to analyse – under different aspects – ongoing telematics applications in rural areas.

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# INTERNATIONAL PERSPECTIVE

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## COST: East European countries join European scientific and technical cooperation programme

"A Europe of science and technology will soon exist; a single European space for research and technological development is now a real possibility". This was the message given by Filippo Maria Pandolfi, Vice-President of the European Commission, meeting ministers and representatives of 23 European countries in Vienna to celebrate the 20th anniversary of COST (Coopération européenne dans le domaine de la science et de la technologie) and to mark the accession of four new member states - Poland, Hungary, Czechoslovakia and Iceland - to this pan-European research cooperation organization.

Praising its effectiveness and the importance of the research that it has promoted, Mr Pandolfi said that COST had demonstrated considerable flexibility and capacity to react to changing scientific circumstances. "COST can and should be an important element in the new European architecture which is being created at present", he said. Mr Pandolfi stressed that "in respect of

third countries and especially so far as the new democracies of central and eastern Europe are concerned, COST has a particularly important role to play, a role which is both scientific and political. The full participation of Poland, Hungary and Czechoslovakia will considerably brighten the prospects for a pan-European Community of research and technology".

Held in parallel with the ministerial conference in Vienna on 21 November, the COST scientific forum brought together more than 300 researchers and science policy officials from all COST member countries with the aim of giving scientists from all member states, old and new, an opportunity to exchange knowledge and experience, to get up to date on work being carried out and examine prospects for wide-ranging further European cooperation. Workshops were held in four fields: telecommunications, transport, forestry and the environment.

Since COST was created in 1971, 160

different activities have been launched, involving 14 different fields of research: information technology, telecommunications, transport, oceanography, materials, environment, meteorology, agriculture, biotechnology, chemistry, wood and forestry. Telecommunications is the largest domain, covering roughly 50% of all COST activities developed outside the framework of CEC programmes. It deals with areas such as: telecommunications networks, radio communications, television (HDTV and stereoscopic), optical communication systems, multimedia services, special applications (disabled, security), speech processing and signal processing. Of these activities, 70 are currently under way and 55 of them have been developed outside the framework of EC research programmes but complementary to them; 15 are fully integrated into these programmes and 20 supplementary activities are being prepared and will be launched within the next two years.

## WARC 92 will tackle shortwave and satellite broadcasts

Frequencies are shared out during the World Administrative Radio Conference (WARC) held under the International Telecommunications Union (ITU).

Warc 92, to be held in Torremolinos (Spain) from 3 February to 3 March 1992, has been convened principally to address selective frequency allocation issues identified by previous ITU World Administrative Radio Conferences.

In particular, the forthcoming Warc will address frequencies for HF (short

wave) broadcasting in order to extend the band reserved for broadcasting, and satellite-sound broadcasting which will offer a new possibility to broadcast with digital techniques, i.e. with CD quality. This will include high definition television broadcasting from satellites, future worldwide public mobile telecommunications systems, public telephones in aircraft and mobile satellite applications.

The conference will address key areas of Community interest, in particular

certain areas of broadcasting/television, mobile communications and satellite communications.

The Commission has therefore recommended that the Council decide that the Community take part in the negotiations during Warc 92, and that negotiations are carried out after coordination within a committee of the Member States and the Commission constituted at the time of the conference; this committee will in principle support the positions which are agreed in the framework of CEPT coordina-

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## The European Economic Area An innovative step for R&D cooperation throughout Europe

The ministerial meeting between the Community and EFTA in Brussels on 21-22 October reached a political agreement on the creation of the European Economic Area. The agreement must be ratified by the 19 national parliaments during 1992 so it can take effect as planned on 1 January 1993. Since the European Court of Justice still has to give its opinion on compatibility between the Treaty of Rome and the EEA agreement, the initialling of the agreement has been temporarily postponed. Under the terms of the new agreement, closer cooperation should be implemented in several areas, including research and development.

As regards R&D, closer cooperation includes the full participation of EFTA member states, companies and institutions in the third EC Framework Programme and its specific programmes. The exchange of information and consultation on plans or proposals for the establishment or amendment of the Framework Programme, specific programmes, actions and projects are also foreseen in the EEA agreement.

The EFTA states will contribute financially in accordance with rules which also concern other sectors. The contribution will be based on a proportionality

factor, obtained by establishing the ratio between EFTA countries' GDP and those of EC member states at market prices, and be paid twice a year, following the EC budgetary rules. These will be operational at the date of entry into force of the EEA agreement. They will be considered as additional in order to cover the larger European area to the Community R&D research budget. In return for their financial contribution to the Community programmes, EFTA representatives will participate fully in all EC committees which assist the Commission in the management or development of the specific programmes, but will not have voting rights in these committees.

The EEA agreement further provides the establishment of formal and informal exchanges of information, joint efforts to encourage certain ad-hoc activities throughout the territory of the EEA, the adoption of parallel legislation where appropriate, and the coordination of efforts and activities via or in the context of international organizations and of cooperation with third countries.

Current modalities for the participation of the EFTA states in EC R&D programmes will continue to be applied

under the rules of the existing bilateral agreements concluded between the EC and the EFTA countries until the EEA is formally established. As an example, EFTA countries already participate on the basis of these bilateral agreements in some of the DG XIII programmes (Esprit, Race) at the project level.

This will remain the case until the entry into force of the EEA agreement. With respect to the interim-period, i.e. the period which lies between the signature by ministers of the agreement and the entry into force of the agreement on 1 January 1993, the Commission is expected to elaborate an ad-hoc solution for EFTA observership in the various committees operating under the specific programmes of the third Framework Programme, so that EFTA representatives will be allowed to get acquainted with the issues involved.

At the request of the EFTA countries, a special article of the agreement refers to the future participation of these countries in EC actions in the field of information services. In the context of the entry into force of the agreement by 1 January 1993, the follow-up programmes of Impact and Sprint in particular will be concerned.



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# EUROPEAN DIMENSION

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## Defining a single unified European air traffic management system for Europe

The Commission recently signed a contract with a major European consortium for a study which will develop the design, architecture and specifications for a single unified European air traffic management (ATM) system. Known as Atlas, this study will bring together 25 European companies and research establishments, led by the PA Consulting Group of the UK. The Commission is closely cooperating with Eurocontrol for the management of this study, which involves also the European Civil Aviation Conference (ECAC) and EC member states. Of particular significance is the participation in the study consortium of national research establishments in Germany, Spain, the Netherlands, Britain and France.

The Atlas study is part of a coordinated study programme of the Commission and Eurocontrol on air traffic management, in which Phare

and Euret will cover the short and medium term and Atlas the evaluation of the future ATM system for the following period.

The study is expected to make a significant contribution to planning for future air traffic growth in the European Community, for which a doubling by the year 2000 is anticipated. The European Parliament has stressed the need for further air traffic control integration. The Association of European Airlines (AEA) has also issued a number of studies on the problems of European infrastructure, including the study *Towards a Single System of Air Traffic Control in Europe* which estimated the cost penalty of fragmentation at some US\$ 4.2 billion in 1988.

A key feature of the next contract is that it offers an opportunity for cooperation between all the European agencies involved in air traffic management

and its results can provide benefits to the Community as well as to the European ATM manufacturing industry. The European Community has to stimulate European ATM cooperation to allow European industry to compete on equal terms in the world market. Therefore the Commission is planning to submit new proposals.

The signing of the contract follows closely the successful 10th Air Navigation conference of the International Civil Aviation Organization (ICAO). This Conference endorsed the concepts of the future global ATM Communication Navigation and Surveillance (CNS) system developed by the Future Air Navigation Systems (FANS) Committee. The Atlas project will assist ICAO and the aviation community in achieving the realization of those concepts.

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## EIIA gains strength through IVIA merger

The European Information Industry Association (EIIA), formed in 1989, has grown impressively during the past two years as corporate members and national information industry associations have collaborated to present a distinctive European view on industry developments to governments, international agencies and the European Commission.

A new EIIA, with a proposed new structure to match growing industry requirements, was created following the announcement in October of a merger with the International Videotex Industry Association (IVIA), the voice of the videotex industry in Europe. Founded in London in 1979, its original membership included national videotex associations in the USA, Canada and Singapore as well as several European countries.

The concept of a strengthened EIIA means that the entire range of its membership needs can be dealt with in one multi-faceted organization - "one-stop shopping" - while the scope and variety of interests in the new organization make it a powerful channel of communication to many different departments of the Commission, itself helpful in bringing the parties together and encouraging discussions.

At its present stage of development, the EIIA Council has proposed creating vertical groupings or divisions. The first division, the audiotex division, was formed in June 1991. The merger with IVIA has enabled the establishment of the videotex division, the founder members of which are the national videotex industry associations throughout west Europe represented in IVIA.

Each division is represented on the main EIIA board by an elected chairman and is supported by the same secretariat structure, based in Luxembourg.

Divisional discussions are at present under way in a number of other technology and market-based sectors, including information brokerage, multimedia product development, electronic directory development, EDI, electronic mail, optical storage and value-added network operations.

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# NATIONAL SCENE

## Two new views of telecommunications in Spain

The Spanish Association of Telecommunications Users (AUTEL) and Anderson Consulting have just published the 1991 study of the rates of telecommunication services (*Estudio de tarifas de servicios de telecomunicación*). This presents data on the rates of services provided by Telefonica de Espana, including mobile communication and videotex, which is new. This useful 300-page book analyses the impact of the new 1991 Spanish rates against 1990 rates and compares them with those of the other EC countries. It also describes the structures for setting rates and explains the significance of related parameters. Three annexes deal with the rates of ISDN in the EC countries that provide integrated services or are about to, the taxes on telecommunication services in the EC and finally, a prices list of services currently in force in Spain.

The Spanish Association of Telecommunication Users has also brought out, with Price Waterhouse, its first annual report on the situation of Spanish legislation regarding telecommunication (*Situacion de la legislacion espanola en telecomunicaciones*), in the form of a 400-page book. It presents various aspects of the Spanish legislation in that field and includes the European standards as a reference for the evolution of Spain. Its clarity and detail will be of interest to both specialists and consumers alike.

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Fax: 91 522 49 18

Price Waterhouse  
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28046 Madrid  
Spain  
Tel: 308.35.00  
Fax: 319.60.57

## Commission approves Dutch aid to Philips' Eureka projects

The Commission has approved 13.75 million ecus and 5.6 million ecus in proposed aid from the Netherlands government for Philips concerning its participation in 1990 in the Eureka project on HDTV (high definition television), research into liquid crystal displays (LCDs) and participation in the Jessi project (12 million ecus for 1990 and 1991).

The Commission considers the aid for HDTV to be compatible with the common market under the derogation set out in article 92(3) (b) of the EC Treaty, which allows for aid to promote an important project of common European interest.

Aid to LCD research may benefit from the derogation under article 92(3) (c). The proposed aid represents 32% of R&D spending on the LCD research.

For the same reasons and under the same article of the treaty, the Commission has approved the proposed aid in favour of the company's participation in the Eureka Jessi project. The Commission stated that the aid will amount to a maximum of 12.9 million ecus and will not exceed an intensity of 50%.

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## Spain to establish telex link with Mercury

The Spanish Direccion General de Correos y Telegrafos (DGCT) has reconsidered its previous refusal to establish a direct telex link with Britain's Mercury Communications Limited following intervention by the Commission. This follows a complaint lodged by the British company with EC competition services.

Mercury argued that the absence of such a link forced the company to use British Telecom's (BT) network. Mercury suffered a significant disadvantage because it had to pay BT for the use of the network which restricted its profitability and its ability to compete with BT. Disadvantages were exacerbated by Mercury's increasing share (currently about 40%) of the telex traffic between the United Kingdom and Spain. The Commission stressed the spirit of cooperation DGCT has shown and took the opportunity to recall the principle included in the guidelines issued last July on the application of EC competition rules in telecommunications. According to these, the state monopoly for the provision of a network such as telex must guarantee general access to it on equal conditions.

## British R&D aid schemes approved by the Commission

The Commission has approved the refinancing of three basic industrial research schemes in the United Kingdom. The first involves the refinancing of the General Industrial Collaborative Projects (GICP) aid scheme for the 1990-91 and 1991-92 financial years. This scheme is directed at basic industrial research conducted on a collaborative basis by enterprises. The approved budgets will amount to £14.5 m (around 20 million ecus) for 1990-91 and £22 m (around 30 million ecus) for 1991-92.

The second concerns the refinancing of the Advanced Technology Programme (ATP) aid scheme for the 1991-92 financial year. The approved budget will amount to £27 m (around 38.5 million ecus). This scheme is also aimed at basic industrial research but may contain a small element of applied research as well. In the third case the Commission has approved the refinancing of the Link aid scheme, with a budget of £6.9 m (around 10 million ecus) for 1990-91 and £25 m (around 35 million ecus) for 1991-92. The scheme is aimed at strengthening basic industrial research between industry, universities and research centres.

All three schemes allow for an aid intensity of 40% of eligible costs. The Commission considers the schemes to be compatible with the Community aid framework for research and development.

# STANDARDIZATION

## Spring launch for interoperability drive

The **Conformance Testing Services (CTS)** programme was set up to help achieve one of the principal goals of information technology and telecommunications policy, namely the creation of a Community-wide market for equipment and services. This is accomplished through co-funding the establishment of a critical mass of laboratories offering harmonized testing services against European and international standards. Proposals for the latest phase of the programme (CTS4) - exclusively devoted to telecoms - have just been evaluated and four new ISDN-oriented projects are expected to go ahead early in the new year.

### Telecom 91 (Geneva)

CTS was well represented at Telecom '91 (the olympiad of telecommunications, held every four years in Geneva - the largest show of its kind). A key exhibit on the EC stand was the ISDN Basic Rate Tester demonstrating D-channel layer 2 & 3 testing according to NET3. At the Irish stand, three new services were publicly announced, comprising Facsimile Group 3, Triple-X (PAD standards) and V-series modems.

## CECUA standards group seeks consumer views

The influence of IT users and effective consumer involvement in the standardization process and in related activities have special importance in providing the necessary openness of communications and IT systems. Because of limited resources, IT users have to concentrate their efforts on key priorities. In this way CECUA (Confederation of European User Associations) and the CECUA Working Group on Standards (CECUA WGS) play a significant part as representatives of European IT users. CECUA WGS bases its work on its varied experience and good infrastructure (access to CEC and European organizations, CECUA resources and framework for seminars, etc.). But efficient work must also take account of the various skills, resources, interests and limitations (i.e. time, money, language) of the WGS members and the organizations they represent.



### TTCN tool

A recent innovation of potentially great significance is the decision to support the development of certain key enabling infrastructural technologies. The first of these is the provision of a sophisticated editor for the TTCN test specification language. TTCN (as defined in ISO 9646) has been officially recommended by ETSI as the preferred notation for abstract test suite specification. The development is being carried out by OSTC and Swedish Telecom with the cooperation of EWOS and ETSI. The first version of the tool is available immediately (and at very low cost) to selected user groups (e.g. Framework Programme projects, agreement groups and standardization bodies).

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## OSITOP technical assembly to highlight standards and open systems

Since 1987, OSITOP, a premier European user-driven association, has focused its action on promoting the widespread acceptance of internationally agreed standards and related infrastructure and examining the economic impact of high technology achievements on the organization of modern enterprises in Europe.

Regular gatherings, projects (PCP, OEDIPE) and technical documents, strongly demonstrate the practical benefits of standards, conformity and interoperability of products in real business environment. The increased awareness of vital issues and policy trends is of prime importance to all parties involved with open systems.

This is best illustrated by the choice of subjects for the next Technical Assembly (to be held in Brussels on 13 February):

- Portability & ISO standards
- Open systems management Framework in the '90s,
- Management domains in electronic messaging, etc.

OSITOP has always encouraged a frank dialogue between users and vendors. The event will once again provide a platform for such an exchange of views concerning user requirements for publicly available directory services and X.500.

A panel discussion at the end of the day will bring together a great number of service providers, users, vendors... all interested in finding satisfactory and economic solutions in this field.

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#### Contact:

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Chairman CECUA WGS  
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Germany

# PUBLICATIONS

## Prospects for Functional Programming in Software Engineering

J-P. Banâtre, S.B Jones, D. Le Métayer (Research Reports ESPRIT, Project 302. Ed. : CEC Vol. 1) - ISBN 3-540-53852-6

The aim of this book is to provide evidence of the relevance of functional programming for software engineering both from a research and from a practical point of view. The software development process is studied and a brief introduction to functional programming and languages is provided.

Functional programming tends to promote locality, which makes it possible to reason about a component of a program independently of the rest of the program. The significance of the functional approach for normal program manipulation is illustrated with two important techniques, abstract interpretation and program transformation. Abstract interpretation is applied to the compilation of memory management, and program transformation is illustrated with many applications such as program correctness proofs, program analysis and compilation.

A correct compiler is described entirely in terms of program transformations. Regarding program construction, it is shown that input/output and state-oriented problems can be described in a purely functional framework.

Contact :  
Springer-Verlag  
Heidelberg Platz 3  
D-1000 Berlin 33

## I'M-Guide: new directory of the European electronic information services market

Striving to help the potential user of electronic information services to find products and services that are relevant for developing business, the CEC has, since 1980, produced and made available the directory of databases in Europe known as DIANE-Guide. Now a new, more comprehensive version of this directory is being launched: I'M Guide.

Accessible online at ECHO (European Commission Host Organization), the I'M-Guide contains details of electronic information products and services publicly available in Europe. The directory covers not only databases but also CD-ROM and CD-I products, diskette bases, image banks, etc. Details are provided on the content, subject coverage, updating frequency, size and delivery medium, as well as the organizations producing and offering the products, i.e. information producers, host services, information brokers.

Among advantages offered by I'M-Guide are the following:

-Continuous updating of information,

with the help of a network of correspondents in all countries covered

-Available in all nine official Community languages (with the exception of abstracts)

-Available online and free of charge at ECHO.

-Can be searched using Common Command Language (CCL) or via a user-friendly menu-driven interface, with questions posed by the system in the user's own language.

-Short-form version of the directory available in printed form.

I'M-Guide is accessed online by using the public password ECHO and choosing main menu option 2 followed by IMGUIDE.

Contact:  
ECHO  
P.O. Box 2373  
L-1023 Luxembourg  
TEL: +352 349811  
TEL: +352 349812/34

## Automatic Tools for Designing Office Information Systems

The TODOS Approach  
B. Pernici, C. Rolland,  
(Research Reports ESPRIT. Project 813 : TODOS. Vol.1) - ISBN 3-540-53284-6

The TODOS methodology and design support environment for office information systems development are presented in this book. In TODOS, a method for the definition of an office system is proposed, and tools support the developer in the different design phases in making design choices, analyzing results and presenting these design results to final users of the office systems.

The main ideas underlying the TODOS approach are the goal of avoiding unnecessary reimplementations of hardware and software components available components and about design choices. A prototyping tool is used to

present the office system to the users before its actual realization, to obtain users' evaluation.

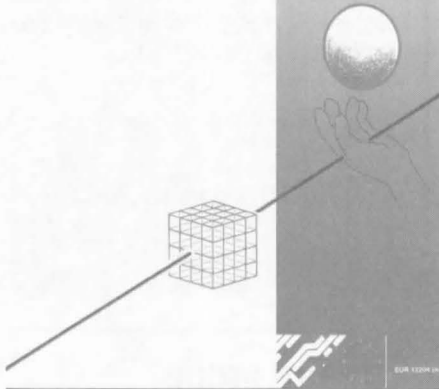
The book is mainly oriented to professionals looking for a method for office system development. It may also be valuable for office system managers interested in exploring possibilities of developing office information systems in their organizations. Moreover, it offers material for study in the academic world.

Contact :  
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Heidelberger Platz 3  
D-1000 Berlin 33

The university-industry  
and research-industry  
interfaces in Europe

INNOVATION  
**sprint**

European Community programme for  
innovation and technology transfer



## The university-industry and research-industry interfaces in Europe

Innovation Sprint - European  
Community programme for Innovation  
and technology transfer.

Final report - Coordinator S.Kuhlmann  
Fraunhofer-Institut für Systemtechnik  
und Innovationsforschung.

ISBN 92-826-2829-9

Ecu: 35-

Office for Official Publications of the  
EC.

The Commission has a number of pro-  
grammes aimed at improving transna-  
tional cooperation between universities  
and public-funded research centres on  
the one hand and industry on the other  
within the Member States in the fields  
of technological R&D, training and  
technology transfer. These efforts are  
concentrated particularly on those  
bodies which act as interfaces between  
the public-funded research organisa-  
tions and industry; i.e. on the industry  
liaison officer (ILO).

The study aims to get a better know-  
ledge of these ILOs, who they are, how  
they work and what needs they have.  
It will help the Commission in defining  
and carrying out its policies in these  
areas.

Contact:  
Office for Official Publications  
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L-2985 Luxembourg

## Research Publications 1989-1990

Catalogue of publications issued by the  
Dissemination of Scientific and  
Technical Knowledge Unit

DG XIII C3

L-2920 Luxembourg

ISBN 92-826-0597-3

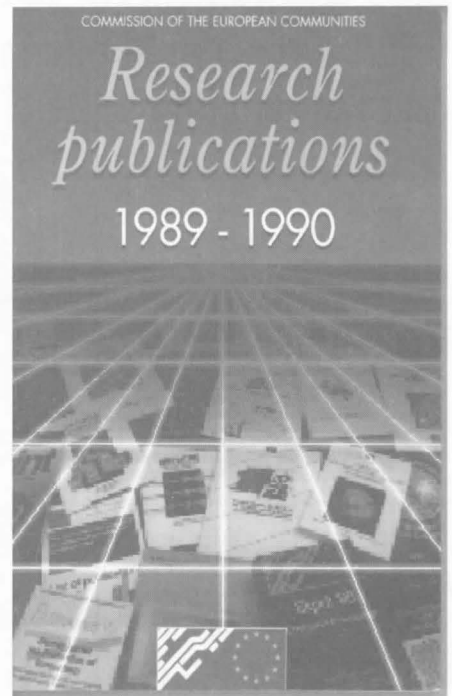
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Cordis information system may place  
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## ISDN: 1991 European Atlas available

ISDN, the Integrated Services Digital  
Network, is intended to be the digital  
successor to the public switched tele-  
phone network and a vital step into  
Europe's telecommunications future.

The Commission has therefore made  
major efforts to assure coordinated  
ISDN introduction, leading to a genu-  
ine Euro-ISDN.

Along these lines, DG XIII has commis-  
sioned the production of a European  
ISDN Atlas, the 1991 version of which  
has just become available. The publi-  
cation is a user's guide to ISDN,  
addressing issues such as ISDN ser-  
vices, ISDN customer systems, Euro-  
ISDN standards, etc. Copies of the  
report are available from:

Contact:

Fisher + Lorenz  
65, Vangede Bygade  
DK-2820 Gentofte  
Tel: 45.31.68.31.00  
Fax: 45.31.65.05.77

Ovum Ltd  
7 Rathbone Street  
London, W1P 1AP  
Tel. +44.71.255.26.70  
Fax. +44.71.255.19.95

# AGENDA

## CIM-Europe conference on multi-supplier operations

Stuttgart, 13-14 February 1992

CIM-Europe is organizing a conference on multi-supplier operations together with the Steinbeis Zentrum in Stuttgart. The conference will focus on strategies, management and techniques for improving the performance of supplier and distribution chains.

The design and management of production chains, from buying raw materials to the delivery of products and services, is becoming a key element for competitiveness in global markets. The process industry - discrete part manufacturing and the transport sector, for example - would benefit from a close relationship between suppliers and sub-contractors through the use of advanced information systems and the introduction of novel organizational and logistical concepts.

At the conference, managers and experts from various sectors, including representatives from two Esprit CIME projects developing advanced concepts and tools for supply chains, will present their views on multi-supplier operations.

The conference is targeted at strategists and managers who are the channel captains' of supply and distribution chains. It will provide comprehensive overviews of strategic, managerial and technical aspects covering lean, logistics, total quality and the use of EDI. The final plenary session will discuss international trends in different industrial sectors.

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## Eclips '92

Eclips'92 (the European Convention of Library Suppliers and Information Providers '92), the new formula meeting place of suppliers and users of information products and services, will be held in Amsterdam from 23 to 25 February 1992.

Eclips '92 will offer:

- an attractive exhibition, including the Dutch online and optical information exhibition;
- lectures by highly authoritative speakers;
- product presentations;
- a directory of information products and services;
- a selection of satellite events;
- the right ambiance for networking and alliances

The idea is to have European conferences somewhat similar to the American annual conferences, which encompass many aspects of librarianship and information management, including an exhibition with a large spectrum of products and services. The exhibition will be an integral part of the conference, which will focus on the theme "Strategies towards the next millenium". Discussion between providers and users is one of the major benefits of this event and ample time will be allowed for delegates to meet and talk to exhibitors. Exhibitors will also be encouraged to participate in the sessions, product reviews and satellite events.

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## Esprit CIM-Europe annual conference

Next year the annual CIM-Europe Conference will take place on 27-29 May in Birmingham, UK. The conference is a focal point for reporting on progress in computer-integrated manufacturing and engineering (CIME). It is a meeting-place for CIME practitioners, decision-makers and researchers. The conference will address technical, organizational, managerial and strategic issues related to CIM with particular emphasis on the application of CIME in industrial environments.

The conference aims:

- to report on state-of-the-art technology with special attention to the application of CIME and its strategic role in industry;
- to exchange experience in developing

and implementing CIME technologies;  
- to update the results of the Esprit CIME programme.

The conference will comprise experts contributions, presentations by selected authors, workshops, poster and video presentations, and technical visits.

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## European voice processing conference

An international conference on emerging voice processing opportunities in the European market, entitled "European Voice Processing 1992: The exploding Voice-Integrated Applications Markets" will be held in Madrid, on 6-7 February 1992.

The overall European market for voice-processing equipment, services and applications has been accelerating over the past two years with increasing general awareness and more aggressive interest shown by all the players - PTTs, vendors, service providers and end users. Europe continues to present non-homogeneous market characteristics. Even more mature markets such as the UK and France present very different opportunities from those in countries like Germany and Spain, where the markets are at an earlier stage of development. The different market characteristics, experiences and growth will be discussed by speakers from: Telefonica de Espana, Telefonica Servicios, Telsis Ltd (UK), TDF Radio Services (France), Comsys (Holland), Société Française du Radiotéléphone, LIMSI and the European Speech Communication Association, Telecom Finland, CNET, and the Commission of European Communities.

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## DG XIII participation in technology exhibitions

January - April 1992

EuroTC 92  
Chambéry

Feb. 11-15

Home systems for the disabled  
Chambéry

Feb 11-16

Technorama Ufficio  
Bari

Feb. 13 - 17

CEBIT'92  
Hanovre

March 11-18

Home systems for the disabled  
Chambéry

March 23-April 3

EDBT  
Vienna

March 23 - 27

European Physical Society  
Prague

April 6 - 9

Communications'92  
Birmingham

April 7 - 10

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