

Council agrees on 4th R&D Framework Programme

The Council of Ministers of the European Union has adopted the 4th Framework Programme for research and development (1994-1998) after conciliation procedures with the European Parliament. The agreed budget is 12.3 billion ecus, with an additional 700 million ecus being kept as a reserve to be released on 30 June 1996 at the latest.

The increase of 300 million ecus, following on from discussions with the Parliament, will be shared out as follows: 50% to action 1 (specific programmes); 40% to action 2 (international cooperation) and 10% to action 3 (dissemination and valorisation of R&D results); (see page 2).

Commenting on the Council decision, Antonio Ruberti, Commissioner in charge of Research, expressed his satisfaction, stressing that this will ensure the continuity of a common effort in the field of research. He also noted that this decision represents a successful test of the new co-decision procedure established by the Treaty of Maastricht.

The debate on the specific programmes, proposed by the Commission on 9 March (see separate article) should start rapidly. The objective is to conclude with a decision on all the specific programmes before the end of this year.

INTERNAL MARKET

Opening the European Market for mobile and personal communications

On April 1994 the Commission adopted a Green Paper on a common approach to mobile and personal communications in the European Union, following a proposal from Martin Bangemann and Karel Van Miert, EC Commissioners.

Mobile communications are currently the fastest growing area within the telecommunications sector. Over the last few years it has experienced unprecedented growth in subscriber numbers, especially in cellular mobile telephony. Europe has now more than 8 million cellular mobile telephony users, over double the number three years ago. There are also more than 8 million users of other mobile communications services, (in particular, paging and so-called private mobile radio systems).

It is forecast that by the year 2000, there could be nearly 40 million users in the European Union, and with the growing expansion into personal communications services (PCS), up to 80 million users by the year 2010.

The market is being driven by rapid advances in technology, by commercial opportunities and by falling prices. Subscriber growth rates during the last few years in Member States with high growth cellular telephony markets (car telephones and hand-held portables) have varied from 30 to 40%. Recent analysis shows that this trend is withstanding the current economic recession.

As well as accounting for greater than 45% of the total user base, cellular also accounts for around 90% of the value of the total European market for mobile services and 75% of that for mobile equipment.

Personal communications will ultimately allow person-to-person calling independent of location and the terminal used, the means of transmission (wired or wireless) and/or the choice of technology. The market potential for personal communications services is huge.

While the maximum density for fixed wireline telephones is not expected to exceed substantially an average

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Fourth Framework Programme for Research and Technological Development (1994-1998) - Framework Programme for Research and Teaching for the European Atomic Energy Community (1994-1998)

	4th Framework Programme EC 1000 ECU			Framework Programme EAEC (1000 ECU)		TOTAL (1000 ECU)
	AFP	JRC (*)	other DGS	AFP	JRC (*)	
First Activity						
Information and Communications Technology	3384	11	10	-	-	3405
1. Telematics	843	-	-	-	-	843
2. Advanced communications technology	630	-	-	-	-	630
3. Information technology	1911	11	10	-	-	1932
Industrial technology	1790	195	10			1995
4. Industrial and technological materials	1623	84	-	-	-	1707
5. Measurements and testing	167	111	10	-	-	288
Environment	760	294	26	-	-	1080
6. Environment and climate	532	294	26	-	-	852
7. Marine sciences and technologies	228	-	-	-	-	228
Live sciences and technologies	1495	47	30	-	-	1572
8. Biotechnology	552	-	-	-	-	552
9. Biomedicine and health	336	-	-	-	-	336
10. Agriculture and fisheries	607	47	30	-	-	684
Energy	967	20	15	954	300	2256
11. Non-nuclear energy	967	20	15	-	-	1002
12. Nuclear fusion safety	-	-	-	160	254	414
13. Thermo-nuclear controlled fusion	-	-	-	794	46	840
Transport						
14. Transport	240	-	-	-	-	240
Finalised socio-economic research						
15. Finalised socio-economic research	105	33	-	-	-	138
Second Activity						
16. Cooperation with third countries and international organisations	540	-	-	-	-	540
Third Activity						
17. Dissemination and exploitation of results	293	-	37	-	-	330
Fourth Activity						
18. Stimulation of training and mobility of researchers	744	-	-	-	-	744
TOTAL	10,318	600	128	954	300	
		11,046			1254	12,300

penetration of 50% of the population, (i.e. approximately one connection per household, plus business use), personal communications penetration has the ultimate potential to reach nearly 80% of the population (i.e. up to one connection per adult).

Total user numbers could ultimately exceed 200 million in the European Union - compared to a current total subscriber base for traditional fixed telephony of 153 million.

With the expansion of mobile communications into the personal communications market, the Green Paper launches a debate on a coherent policy framework for the sector. It identifies basic principles and action lines for further discussion. Its aims are:

- to permit the development of a Union-wide market for mobile services, equipment and terminals;

- to identify common principles for the provision of mobile infrastructure, the development of mobile networks and services, and the supply and operation of mobile terminals;

- to promote the evolution of the mobile communications market into mass personal communications services, with particular emphasis on pan-European services;

- to facilitate and promote trans-European networks and services and to ensure that the sector develops in a manner consistent with the public interest.

Key proposals

The Green Paper proposes five major changes to the current environment for mobile communications in the European Union in order to remove barriers to further development.

1. abolition of remaining exclusive and special rights in the sector, subject to appropriate licencing conditions.

2. removal of all restrictions on the provision of mobile services both by independent service providers and by mobile network operators.

3. full freedom for mobile network operators to develop their own networks, including a right to provide

these themselves or use third party infrastructures to operate their mobile network, and the removal of restrictions on sharing infrastructure.

4. unrestricted combined services provision via the fixed and mobile networks, within the overall time schedule set by Council Resolution 93/C219/02 of 22 July 1993 for the full liberalisation of public voice services via the fixed network.

5. facilitating of pan-European operational and service provision.

This should include further development of mutual recognition of type approval for mobile terminal equipment, as well as coordination of licencing and award procedures to facilitate the development of trans-European networks.

The Green Paper is intended to launch a broad public consultation of everyone involved. In addition to inviting written comments, the Commission is organising consultation meetings to take place in the summer, culminating in a report on the results of the consultation process during the autumn.

Council's resolution on postal and telecoms services

Following the agreement reached at the Telecommunication Council of 7 December, the Council has formally adopted two resolutions, the first on the development of postal services, the second on the development of universal telecommunication services (for details, see I&T News Review - winter 1993 issue). These two resolutions have now been published in the EC Official Journal: C48 of 16 February 1994.

Commission's proposals on R&D specific programmes

On 10 March 1994, the European Commission adopted the specific programmes of research required to implement the 4th Framework programme of R&D (1994-1998). These proposals were presented as the Council was reaching an agreement on the Framework programme (see separate article on page 1). They should now follow the usual procedures and consultations (Council, European Parliament) to be approved before the end of the year.

The new focus of RTD in the **Information and Communication Technologies (ICT)** specific programmes is the emerging information and communications infrastructure, which will provide the basis of the information society of the

future. The RTD areas proposed are those most vital to the development of the infrastructure, taking into account the need for selectivity and concentration of effort, and with the objective of improving the competitiveness of all industry. This new focus implies an increased emphasis on the needs of users and of the market. Activities will stress access to services and technologies, usability and best practice. Some technological fields will necessarily be covered in a complementary manner by RTD activities in more than one specific programme, reflecting the growing convergence of information technologies and communication technologies, and the emergence of new technologies cutting right across the field of ICT.

Telematics Applications Specific Programme

Research on telematics applications of common interest will have two aims. One will be to promote the competitiveness of European industry. The other, which is a new feature contained in the Treaty on European Union, is to promote research activities necessary for other common policies. Research on telematics applications, which by definition is geared towards users, will give priority to this new aim. RTD will build on the experience gained under the Third Framework Programme, but the emphasis will be shifted from "data telematics" to the new "multimedia telematics", which includes distributed and interactive multimedia applications. In addition, increased importance will be attached to user requirements and to the search for the most efficient and cost-effective solutions. Work initiated under the Third Framework Programme will be continued and RTD work on telematics for public services (administrations, health care, transport) will remain a priority in terms of budget allocation. Activities of common interest to all sectors, such as language engineering, will be strengthened. New domains will be covered, notably air traffic management, integration of disabled and elderly people, environmental protection, information engineering and telematics engineering.

Advanced Communications Specific Programme

The work will consolidate European technological leadership in digital broadband communications and enable effective network management and service deployment in a diverse and competitive communication environment. In particular, the work will stimulate and coordinate the emergence of digital multimedia services and integrated photonic systems with a view to their widespread introduction in Europe from 2000, including development of the technological basis for deployment of optical fibre networks. It will ensure mobility on fixed networks and through advanced wireless, radio and satellite systems across Europe, with particular emphasis on user access in both public and private networks, and develop and demonstrate technologies for the integrity, confidentiality and availability of information in integrated systems.

Information Technologies Specific Programme

Work on software technologies will concentrate on techniques and best practice for the production of usable, correct, reliable and efficient software. Components and subsystems RTD will concentrate on semiconductor developments in areas where European industry needs the capability and can be competitive, with particular emphasis on advanced integrated circuits for specific applications, on flat panel displays and compact memory systems, building on existing achievements, and the emerging field of microsystems. In the new field of multimedia technologies work will concentrate on the technologies needed for the creation, manipulation, display and storage of multimedia information. Focused clusters of activities will cover the integration of enterprises into the information infrastructure, and the effective use of IT in new business and manufacturing processes, the enhancement of Europe's capability to exploit computing technologies offering the highest performance, and the further development of standards and technologies for open microprocessor systems.

Coordination between Specific Programmes

In running these research and development activities, the Commission will ensure that proper coordination mechanisms are in place and that the potential relationships between the topics covered will lead to greater synergy, more rapid transfer of results, and more effective research and development as a whole. Specific areas where close coordination is particularly appropriate include the following:

Language and information engineering:

- work on generic and enabling technologies and processing techniques for language engineering and database systems is proposed within the information technologies specific programme. The telematics specific programme proposes R&D on the application of information and communication technologies to language engineering (for example translation, language resources, general linguistic problems) and to information engineering (especially

ease of access, information content and usability).

High performance computing and networking:

- work in the information technologies specific programme covers the exploitation of high performance computing technologies and the special needs of the use of high-speed networks for high performance computing applications. RTD on high-speed networking technologies is handled within the advanced communications specific programme. The telematics specific programme will perform development work on the application and validation of results with advanced categories of users, notably the research and the medical communities.

Multimedia systems:

- work on tools and standards for basic multimedia processing is proposed in the information technologies specific programme. The advanced communications specific programme covers technologies for multimedia transmission and service management, and those relating to digital video services. The telematics specific programme addresses the issue of integrating such research results into multimedia systems and services applicable to areas such as health care, traffic management, education and training, libraries or administrations.

Dissemination and Validation of Results

The programme called Dissemination and Validation of Results aims to encourage industrial use of R&D results, especially by SMEs. Priority is being given to three themes:

-developing different services, e.g. Value centres, CORDIS, efforts to increase awareness, help with using research protection of intellectual property and industrial patents.

-technology transfer for industry, especially SMEs lacking R&D capacity and resources, support for innovation and business/university cooperation, technological networks, training etc.

-encouragement of new methods for financing technology, and better communication between finances and promoters of technological projects.

Commission proposal to facilitate Europe-wide satellite services

On January 4 1994, the European Commission adopted a proposal for a Directive concerning the mutual recognition of national authorisations for satellite telecommunications services (COM (93) 652 final).

The Directive aims to achieve the mutual recognition of national authorisations for satellite services on the basis of harmonised conditions, which will be established in a procedure set out in the Directive. A national authorisation granted in accordance with such harmonised conditions will automatically allow the provision of the service concerned in all Member States. In order to facilitate their provision during a transition period before harmonised conditions are adopted, the proposal provides for an interim procedure based on

regulatory "one-stop-shopping". This will give applicants intending to operate a service in more than one Member State the possibility of obtaining the necessary national licences at a single location and with a simplified procedure.

Among the satellite services which are expected to profit from the proposed framework are VSAT networks, satellite-based mobile data communications and fleet management systems, SNG units and satellite-based personal communications services and networks.

The proposal is a key element of the EC's satellite communications policy, as set out in the Satellite Green Paper of 1990.

Satellite orbit and spectrum resources

A study entitled "Economic Assessment of European Satellite Orbit and Spectrum Resources" was recently completed by the consultancy agency KPMG on behalf of DGXIII.

The objective of the study was to investigate and make recommendations on methods by which the economic value of orbit and frequency resources can be modelled.

According to KPMG's analysis, the main shortcomings of existing international and national regulations and procedures relate to the creation of artificial scarcity ("paper satellites"), and to distortion of competition, and thus economic inefficiencies.

Four alternative future regulatory scenarios were evaluated through modelling. The overall conclusion to be drawn from the results of the modelling is that the introduction of more economic considerations into the regulation of the geo-stationary orbit and spectrum resources would yield significant economic benefits. These could exceed 1000 million ECU a year, estimates KPMG. Key factors in realizing these gains are close coordination in Europe of frequency allocations for pan-European services, a common European position in international negotiations, and a

degree of harmonisation of assignment procedures and licence terms.

The study advocates the introduction of a regulatory regime that will introduce a greater market orientation in the allocation and use of orbit and frequency resources. It concludes that "the benefits of greater efficiency could potentially spread to a very wide range of consumers both inside and outside Europe. Such stimulation of the industry would also provide it with a greater chance of competing effectively, both outside Europe and with terrestrial substitutes".

The study is intended to contribute to these discussions on the Communication on Space Segment that will soon be published, as well as to those in ITU forums and related meetings. It will also serve as support material for the positions taken in this Communication.

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First meeting of the "information society" High Level Group

On 15 February the first meeting of the "information society" High Level Group took place in Brussels, chaired by Martin Bangemann, member of the European Commission.

The group reached agreement on the importance of a European information and communications network for growth and employment. Modern communications networks will not only serve the economy but also the whole of society, and competitiveness will go hand in hand with prosperity.

The task of the High Level Group is to point the way to new job opportunities in the information society, in the light of the White Paper on Growth, Competitiveness and Employment. This will entail:

- the further development of European networks and harmonisation of technical norms;
- removing the final obstacles to economic network utilisation;
- identifying new applications opportunities and where necessary, providing targeted aid;
- adopting the framework of competition for the new realities of multimedia;
- supporting social consensus on the use of modern information and communication technologies.

The group's intention is to make concrete proposals on the problems mentioned. To this end, two working groups have been formed among the members:

- the first group (chair: Mr. de Benedetti) will deal with all questions arising from new markets, applications, technologies and networks;
- the second (chair: Mr. Davignon) will deal with deregulation, normalisation, rights of ownership and political aspects.

The findings of these sub-groups were discussed later in the main group, and its closing report will be submitted to the Council at Corfu in June.

DG XIII Structural Funds Coordination Group

A working group within DG XIII, headed by Mr. Richard Nobbs, has been providing feedback from different parts of the Directorate-General in order to ensure that DG XIII's priorities for telecommunications, RTD and postal services development, are represented in the Member States' Regional Development Plans. The group, in which DG XII (Science, Research and Development) also participates, meets on average once a month, using videoconference facilities for Luxembourg representatives. The combined input is co-ordinated and transmitted to DG XVI (Regional Policies), DG V (Employment, Industrial Relations and Social affairs) and DG VI (Agriculture) by Mr. Nobb's Unit.

The multiannual Regional Development Plans (1994-1999) are prepared at national level for DG XVI, DG V and DG VI, and represent substantial investment from the structural funds for the less developed regions of the European Union. The particular issues within these plans that are followed by DG XIII include, for example, the promotion of advanced communications technologies, provision for telecommunications infrastructure development, training of researchers, and technology transfer.

Other aspects of structural funds planning to which DG XIII actively contributes, via Mr Nobb's Unit, include telecommunications and RTD activities in DG XVI's Community Initiatives and the Structural Adjustment Plans for Member States. An additional area of interest is the relationship between cohesion policy and RTD.

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Satellite personal communications

In December 1993 Council adopted a Resolution on satellite personal communications. In it the Commission was invited to "investigate the significance of satellite personal communications in the formulation of Community policies for telecommunications, space, trade, industry and regional developments".

This study has now been completed and published under the title "*Satellite PCN and their consequences for European telecoms, trade and industry*".

The 300-page study starts with overviews of satellite PCN technology issues, and of the market. It then zooms in on issues related to the competitiveness of European industry and regulation at international level (frequencies) and Community level (licencing in particular).

The study analyses options for further measures and their possible effects. These, and the recommendations following from this analysis, will now be used for an intensive debate with the relevant participants. Decisions on further measures will be based on the outcome of this interaction. This process was due to start through the public presentation of the study results in March.

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"A Partnership in ICT": towards more user involvement in ICT policy.

It is well known that users wish closer involvement in Community policies for Information and Communication Technologies (ICT). Michel Carpentier, Director-General, DG XIII, invited twenty-five associations of users, vendors and ICT professionals to meet the Commission Services of DG III and DG XIII in June and September 1993.

The result of the discussions was a general agreement on how to review partnership and collaboration between ICT associations and with the European Commission. Participants approved the document "User involvement in ICT Policy" which analyses the situation of ICT users and their future role. They also decided to cooperate actively and to exchange information about their own activities. To do so, they agreed on a Memorandum of Understanding called: "A Partnership in ICT". This document, open for signature to all interested associations and bodies, specifies the principles guiding such cooperation. To date about thirty associations have signed:

CECUA, CEPIS, EA, ECMA, ECTEL, ECTUA, EEMA, EIIA, EITA, EMUG, ETIS, EUROBIT, EUROPEN, EUROSINET, EUSIDIC, ETSI, EWOS, ICC, IGFOS, IMPACT, INTUG, OSF,

OSITOP, POSC, RARE, TMA, UNICE, VEBI-ASAB, X/OPEN Company Ltd, X-OPEN User Council.

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During the discussions, the issue was raised of how to access the many sources of ICT information and then to get the information one needs. The associations requested the Commission to prepare an "ICT Information Sources guide". This document is now available from:

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Furthermore, as a first set of common actions, the associations decided to launch eight specific Round Table meetings to be held in 1994. Some of them are directly related to the ICT issues raised in the recent White Book of the Commission on "Growth, competitiveness and employment". This first set of meetings, which

already had a very successful start, will be followed by other Round Table meetings to cover new themes selected by the associations.

Every association wishing to join and/or receive information on one or several Round Tables should write to the chairpersons mentioned below.

(1) Strategic view of ICT in Europe.

Chair: Maurice ELZAS
(CEPIS)
Konijnenberglaan 11
NL-6705 CR Wageningen
The Netherlands
tel: + 31 8370 13348
fax: + 31 8370 21803

(2) Users needs for trans-European services.

Chair: Stuart GOOLD
(CECUA)
c/o CS Services, Ltd
P.O. Box 18, Beeston
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(3) Universal service.

Chair: Adrian SQUIRES
(ECTUA)
ECTUA Secretariat, Olper Strasse 37
D - 51491 Overath
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tel: + 49 2204 75333
fax: + 49 2204 74635

(4) Procurement of ICT products & services.

Chair: David ALEXANDER
(OSITOP)
ICI Computing and Telecommunications
P.O. Box 14
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(5) Translating business needs into user specifications for standards.

Chair: Denis BROWN
(X OPEN - USER COUNCIL)
PRC Inc
1760 Business Center Drive
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(6) Architecture for multi-vendor networks & platforms.

Chair: Richard SITRUK
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(7) Review of Community standards policy.

Chair: Anne LEHOUCK
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(8) Access to Community information for users.

Chair: Jean-Michel CORNU
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relations with the Member States on transparency, communication and information, Mr Joao de Deus Pinheiro, officially inaugurated what has been described by the press as "the first major centre for information on the European Union".

"Sources d'Europe" offers the general public a variety of services including a media library, a current affairs room and a bookshop. DG III and DG XIII have a joint permanent stand, the aim of which is to provide information and advice on aspects relating to information and communication technologies. It is aimed both at a general and a specialised audience. Both brochures describing the activities of the two Directorates-General and a number of video programmes which have been produced by DG III and DG XIII are available to visitors.

The joint DG III/XIII stand is, in addition, intended to provide a more in-depth service for a specialised audience. In the coming months, information and communication activities such as seminars, round table discussions, lunch-time debates, demonstrations of projects which have been developed within the framework of Community R&D programmes, and meetings of experts will be organised.

The DG III/XIII stand is open to the general public from Monday to Friday from 10.00 to 18.00 (admission free).

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The DG III/XIII stand at "Sources d'Europe", Paris.

Following an agreement which was reached between the European Commission and the French authorities, a Centre for Information on the European Union was inaugurated on 18th March, on the stand at L'Arche de la Défense in Paris. It is called "Sources d'Europe" and is expected to

deal with some 150,000 requests for information annually.

In the presence of 1,000 people, of whom more than 100 were journalists, the French Minister for European Affairs, Mr Alain Lamassourre, and the European Commissioner for

RARE sponsoring research on computer security mechanisms



The CERT (Computer Emergency Response Team) Task Force, hosted by the Woolwich Centre for Computer Crime Research, has been provided with a workplan by RARE, its sponsoring body, to undertake research into the optimum development of computer security mechanisms within the RARE community. This necessitates understanding the requirements of RARE member networks in order to make recommendations to the RARE Secretariat about future developments in this field, particularly with regard to the evolution of CERTs (Computer Emergency Response Teams).

The immediate requirement is to create an organizational structure within and between European networks so that security incidents can be dealt with quickly and effectively. In addition, the networks need to be well informed about tools, practices and software changes (including operating systems updates and correction of errors) which allow them to maintain a high level of security.

The short-term role of the task force should be to help with these processes. Its priority will be to support the activities of RARE members, i.e. networks which provide services primarily for the academic and research community in Europe. It should nevertheless be prepared to assist other networks by supplying information and expert guidance. Where there is a common interest, collaborations with other networks can also be set up.

The task force has been established for one year in the first instance with the following terms of reference:

- a) to give guidance to network organizations which wish to set up CERTs;
- b) to encourage all RARE members to establish their own CERT;
- c) to set up and disseminate publicly available information on the operational security of computer networks;

d) to provide a coordinating link with US networks by participating in the activities of FIRST (which originated in the USA but wishes to become a world-wide body), preferably as a liaison member;

e) to provide a quarterly report on activities and progress;

f) to make recommendations concerning any further activities in subsequent years.

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High Speed Progress

Preparations for the procurement of a next generation backbone for the European research community (34/155 Mbps) are progressing. Earlier this month DANTE secured approval from the EuroCAIRN (European Co-operation for Academic and Industrial Research Networking) Project Board for a proposal to produce a study report. The target of this report is specify information and requirements necessary to support funding proposals and the formal procurement of a high-speed backbone.

EuropaNET Developments

The number of (TCP/IP) connections in EuropaNET, DANTE's international network service, is steadily increasing. The decision by NORDUnet (a consortium formed by the national networks of Denmark, Finland, Iceland, Norway and Sweden) to acquire a 2 Mbps connection from 1 July 1994 has been welcomed by DANTE.

CERN, the European Laboratory of Particle Physics, Geneva, has had a 1 Mbps connection to EuropaNET since 4 February.

DANTE's Technical Advisory Group

DANTE has up a Technical Advisory Group (TAG), a small group of experts from the European research networking community who are invited to provide the company with advice on the technical aspects of its current operational network services and the ways in which they might be developed. The advice to DANTE from the members of the TAG will supplement the feedback that DANTE expects to receive from presentations and discussions in meetings of IETF and RARE working groups, RIPE and similar open bodies.

EuropaNET Intercontinental Connectivity

A contract for the provision of a 64 kbps line between EuropaNET and KREONET, the Korean research network, has been signed between DANTE and the CEC (DG XIII). The line will be the first direct link between EU countries and an R&D network in the Pacific Rim. The aim is to stimulate the - so far - relatively weak co-operation between European and Korean researchers.

A 1.5 Mbps link between Geneva and Washington organised by DANTE has been operational since 1 January 1994, and a second line of 2 Mbps between Amsterdam and Washington since the end of February.



MHS Co-ordination Service = MailFLOW

MailFLOW is the new name for DANTE's global MHS Co-ordination Service. DANTE provides MailFLOW to its customers under a contract with SWITCH. The MailFLOW service ensures efficient inter-working between R&D X.400 e-mail services all over the world.

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Trans-European Networks - Integrated Broadband Communications

The year 1994 will see major progress in the early deployment of broadband communications. The majority of European carriers will start implementing their trans-national ATM trial. The ultimate objective is to provide a seamless web of communications networks, computers, databases and consumer electronics that will put vast amounts of information at users' fingertips.

Building on the RACE collaborative R&D, the Commission has prepared and launched in collaboration with the European Public Network Operators a preparatory action in the spirit of Article 129 of the Maastricht Treaty. In addition, the White Paper on European Competitiveness identifies the Trans-European Networks as a system of information highways with a robust infrastructure carrying multimedia applications.

Technological progress increasingly enables telecommunications to be enriched by the inclusion of still and moving images in addition to voice and data. This brings the possibility of offering more user-friendly and informative communications, referred to as multimedia services, which require broadband communications.

The initial phase includes the development of specifications for Integrated Broadband Communications Trials (IBC Trials) whose objective is to

validate the technical feasibility and economic viability of advanced communications. Candidate trials include:

* Citizens Network (health care, social services, transport, education/training, telecommuting)

* Network of R&D centres (including high performance computing)

* Industry Network (providing for the needs of manufacturers and their relations with supplier and customers)

* Business Network (addressing the needs of service industries, with particular reference to the needs for equal access to services throughout Europe)

* Administrative Network (providing cost-effective administrative services to citizens and businesses throughout Europe)

* Media Network (providing for the development of general purpose dial-up video services and interactive multimedia services based on digital video).

The Call for Proposals, launched in August 1993, has resulted in 53 proposals. After an independent technical evaluation by major European experts, the Commission services have successfully concluded

negotiations with 14 proposers who offer the following:

- to develop trial specifications for May 15, 1994.

- to establish and run Common Interest Groups (CIG) for assessing their specifications with end-users' feedback.

- to engage in a thorough concertation process to enlarge the feedback exercise to a broader end-user population.

- to assess the cost/benefits of the trials for the end-users.

- to build up relationships with the Network Operators for obtaining the required network infrastructure.

At a later stage, the specifications will be implemented in real-life trials whose results will provide guidelines for a broad deployment of advanced communications services supporting Europe-wide interactive applications.

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Major displays of RACE results at events during 1994.

R2040	MOEBIUS	7 June	Demonstration	Posidonia Athens	public
R2029	ESSAI	7-9 June	Demonstrations and presentations	Broadband Islands Conference, Hamburg	public
R2036	TRAPPIST				
R2037	DIDOS				
R2042	E'PUBLISHING				
R2063	DITTO				
R2091	URSA				
R2036	TRAPPIST	9-10 June	Demonstration	Internat. CT Conf.Berlin	public
R2119	BRITEUR	23 June	Demonstration	Sligo	public
R2070	MUNDI	June	WDM acces demo	BT Martlesham	by invitation
R2029	ESSAI	Aug-Oct	Teleshopping trial	Basle	public
R2042	EUROPUBLISHING	15-16 Sept	Demonstration	GMD Schlotag Birlinghoven	public
R2001	WTDM	16-20 Sept	Demonstration of image software and digital TV via satellite	IBC 94 Amsterdam	public
R2052	MONALISA				
R2064	FLASH TV				
R2082	dTTb				
R2040	MOEBIUS	27 Sept	Demonstration	SMM Hamburg	public
Most Optical Projects		September	Demonstrations/presentations	ECOC Florence	public
R2001	WTDM	September	TV Studio demonstration	BBC UK	by invitation
R2028	MWTN	September	Network demonstration	Stockholm	by invitation
R2036	TRAPPIST	September	Demonstration	ECNDT Conference Nice	public
R2039	ATMOS	September	2x2 optical ATM switch	CSELT Torino	by invitation
R2039	ATMOS	September	4x4 optical space switch	SEL Stuttgart	by invitation
R2039	ATMOS	September	4x4 optical ATM switch	AAR Marcoussis	by invitation
R2039	ATMOS	September	Optical MAN	ASCOM Berne	by invitation
R2065	COBRA	September	Studio demonstration	BBC UK	by invitation
R2014	FIRST	Sept 94-96	Fibre access trial	Aveiro	public
R2042	EUROPUBLISHING	5-10 Oct	Demonstration	Book Fair, Frankfurt	public
R2042	E'PUBLISH	15-20 Oct	Demonstration	ACM Multimedia San Francisco	public
R2021	DESSERT	October	Demonstration	The Hague	public
R2046	ARAMIS	October	Demonstration	Copenhagen Airport and Charles de Gaulle Airport	public
R2034	EDID	Oct-Dec	Demonstration	Cranfield	public
R2070	MUNDI	Oct 94-Jan 95	WDM integrated access	DBP Darmstadt	public

RACE and the European Year of Older People and Solidarity between Generations

A symposium entitled "New communications technologies for healthy and sick senior citizens in European perspective" was held by the Postuniversity Centre of West Flanders, KULAK, in the city of Kortrijk on 23 November 1993. Speakers came from France, Belgium and Holland. The symposium started with an explanation of the demographic situation, major medical care problems and financial difficulties. The physical changes in the human body caused by ageing were highlighted. After the description of this general background, the use of interactive devices designed for use by older people opened the discussion on appropriate technology. The message was that multidisciplinary experience is required and that the eventual outcome of work in this area would also be of use to younger and non-disabled people.

After clarifying the possibilities and limitations for older people using multimedia systems in communications (IPSNI II, RACE R 2009), it was stressed that this was not just another one amongst a variety of services which in the future can be provided by telecommunications, because for certain groups of people, this is their only possibility for use of advanced communications. Thus it is an essential part of a future communications infrastructure, if we are serious about having a caring Europe. The potential advantages of using advanced communications in the social care of older people cannot be underestimated. There was a lot of interest in welfare services from other local towns represented at the Symposium in the Telecommunity project (RACE R2033). The day ended with a presentation on intelligent homes by the elderly. It was an interesting and useful

symposium showing that a well-balanced and clear explanation of a difficult subject in the field of advanced communications and technology could get the message across to non-specialists. The workshop was sponsored by DG V.

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RACE 1994 Technical Report now available

The 1994 edition of the Annual Technical Report of RACE is now available. Copies were distributed to all project managers at the concertation meeting on 2-3 March and by mail to current project participants, persons supporting the ACTS workshops and others who requested the document. Machine-readable versions are also being made available on the two servers listed below; the possible use of others remains under investigation.

From the ECTF Forum on Compuserve (Go ECTF):

The "Green" and "White" pages relating to RACE II only, together with the Cross Reference Tabulations ("Yellow" pages) have been uploaded as 19 compressed sip-files of manageable size, totalling approx. 1.4MBytes. Once downloaded and un-zipped, the files are in MS Word-for-Macintosh format (Green pages) and Word-for-Windows format (White and Yellow pages). All these files may be fully retrieved on either Macintosh or Window-based PCs, through the graphics of the Green Pages may not

visible when using earlier versions of Word-for-Windows.

The precise contents of each file have been listed in an uncompressed text file "READ1.txt", which is already visible in the "RACE NEWS" library of ECTF.

Note: RACE I information has not been uploaded to Compuserve.

From the FTP Server at the University of Stuttgart (RUS):

This server may be accessed via the Internet. The files have been placed in a directory /pub/org/ceu/race-1994 - and a corresponding announcement has already been made to some Usenet groups. The structure of the files is essentially the same as on Compuserve, though they are not zipped. The information on RACE has been uploaded to this FTP server. The total size of the RACE 1994 files amounts to approx. 3.6MBytes.

The basic procedure to retrieve RACE 1994 via FTP is to issue the following

commands once connected to the Internet:

1. open ftp.rus.uni-stuttgart.de (or dial 139.69.8.13) (connect to host)
2. login: anonymous
3. password: (type your-user-id) (eg:nhe@postman.dg13.cec.be)
4. cd/pub/org/ceu/race-1994 (changes directory on the host)
5. binary (sets binary file transfer mode)
6. mget *.* (downloads the files)
7. quit

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TELEMATICS: Calls for Proposals

As part of the preparations for the Fourth Framework Programme, a series of three calls is being organised for studies and accompanying measures in the three areas:

1. Telematics for Air Transport, with a budget of around 6 million ecu for studies and experiments to explore and promote the use of telematic technologies in support of communications, navigation and surveillance in air transport. Large and small airports, satellite systems and research networks are all within the scope of this call.

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2. Telematics for Urban Areas, with a budget of 4 million ecu covering education and training aspects, employment issues, economic regeneration and the transition to a tele-economy.

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3. Telematics engineering, with a budget of 1 million ecu, covering analysis of systems development, software production and distribution environments, with the emphasis on standards. The objective will be to lay down guide-lines for projects in the Fourth Framework Programme. Work on process engineering will also be included.

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Better visibility for health telematics - advanced informatics in medicine

Health Telematics - AIM started as a programme more than 2 years ago and is now in its third year. The following events will be interesting opportunities at which to get in touch with the AIM staff and the project leaders between April and June '94. Clearly the Commission is becoming increasingly interested in developing contacts with the end users in order to involve them in the preparation of the next Telematics Program. A group of experts has been working since January '94 in order to prepare the specific workplan in the next R&D Framework Programme. This includes not only the traditional partners in AIM, such as industry and academic and research institutions, but gives increasing responsibility to users and users' associations.

Spain: 24-25th March '94. Achievements in medical imaging

The Aim staff were in Madrid in order to give two presentations of the main achievements in medical imaging to be held in Maranon Hospital and Principe de Asturias Hospital. This was also an opportunity for discussing with users the possible content of the 4th Framework Programme for R&D.

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Italy: 15-17 June '94. Seminar on management of medical informatics



A three-day course will be delivered by the School of Business Administration of the Bocconi University of Economics, in Milan. This school, which is a leader in education for health care management in Italy, has organised the course on the basis of the AIM projects, whose leaders and eminent partners will constitute the teaching body together with the Bocconi professors. The course will present the most advanced results of the European research in two main sessions: the first one dealing with the advanced hospital information system and medical imaging; the second one dealing with medical records and coding systems and applications.

The projects Milord and Covira will be present in the first session, whereas Galen and Menelas will appear in the second one. Professor Galvez (Madrid-Covira), Prof. Lemke (Berlin-Milord) Prof. Rector (Manchester-Galen) and Dr. Zweigenbaum (Paris-Menelas) will constitute the faculty.

The course, addressed to medical doctors with leading positions and to health care administrators, will be organised by Bocconi University with the full support of the AIM staff.

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Telematics systems in metropolitan areas



Health Telematics: on 21 January AIM organised an interesting seminar in Brussels with the appealing title of "Metropolis". Its purpose was to discuss how telematics systems can improve health care delivery in metropolitan areas. More than 60 persons attended this meeting which took place in the Borschette Congress Centre in Brussels and disseminated the results of a study previously undertaken by Andersen Consulting.

Three case studies were introduced in Copenhagen, Madrid and Paris, together with some examples of technology applications in the same metropolitan areas. Finally the key players' viewpoints were presented and discussed.

Amongst the speakers were eminent persons from the Spanish Ministry of Health, Assistance Publique of Paris, the County of Funen in Denmark, Telefonica de Espana and Insalud of Spain.

Niels Rossing and Jesus Villasante of Health Telematics AIM chaired the meeting.

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Belgium: June 22-24 1994: Telematics for resource management in health care



An International Symposium is being organized in Brussels with the sponsorship of EFMI and WHO, in order to:

- demonstrate the use and benefits of telematic systems for case-based resource management and quality of care;

- discuss the contribution of the case-based approach to equity in health care by comparing operational systems and their actual benefits;

- agree on recommendations for the technical discussions of the WHO

Europe Regional Committee of Health Ministries meeting in Copenhagen, September 16, 1994.

The Symposium will see the participation of experts from a number of European companies. The themes and subjects will be introduced by six invited speakers. Operational systems will be demonstrated.

An open call for papers has been made and authors are invited to submit original contributions about systems in operation to the Symposium Secretariat before March 1, 1994.

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International Symposium Secretariat
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Belgium: Clinical protocols and guidelines discussed in Brussels



In the framework of the periodical concertation meeting for all the AIM projects, some of these, namely DILEMMA, GAMES, KAVAS, HELIOS and OPADE, organized a workshop on clinical protocols and guidelines in Brussels on Sunday, 24th April.

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Sweden: 26-27 April 1994: biomedical engineering conference



NUTEK, the Swedish National Board for Industrial and Technical development, organised a national conference on three main topics: biocompatibility; medical imaging and decision support systems; less invasive medical engineering.

On 26th April one plenary session discussed the biomedicine and health programme (Biomed) and the telematics in health care programme (AIM) within the European Union. There is already considerable Swedish participation in both programmes.

In the framework of the closer links between the European Union and Sweden, health telematics staff attended the event at the Star Conference Hotel in Lund.

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Portugal: 22-28 May 1994. Medical Informatics take the floor



be held on 26th May, 1994, chaired by Dr. Luciano Beolchi of the AIM Office, and with the participation of eminent persons currently contributing to the AIM concerted action on primary health care, Prof. De Maesneer, Dr. Bjerregard, Dr. Strobbe, Dr. Jones and Dr Boydell.

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MIE '94 is an Annual Congress on Medical Informatics organised this year by the Portuguese Association of Medical Informatics on behalf of EFMI, the European Federation for Medical Informatics. Many of the health telematics - AIM projects will be there in order to present their achievements. The Congress will be held at the Alfa Congress Centre (Lisbon) where the European Commission will have a stand in the scientific exhibition. People interested in more information on the next R&D Framework Programme, on the telematics programme and on health informatics - AIM - should contact the EC staff there.

During the congress a special meeting of CEN - T251 on standardization will take place. ACOSTA, which is an accompanying measure funded by AIM, will also organise a meeting on future strategies for health telematics in the European Union market, with the participation of the national delegates and national representatives for the AIM programme.

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Another important event will take place in Estoril from 25 - 28 May, 1994 organised by the SIMG (Societas Internationalis Medicinae Generalis), a federation of 20 European organisations, representing more than 30,000 general practitioners. During the congress a seminary on medical informatics will

Health Telematics publications



Individual brochures on medical imaging and workstations (Projects Milord, Covira, Euripacs and Sammie) are available on request.

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Artificial Intelligence is a book co-edited by Peter Barona and Jens Christiansen, which will be published in April.

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Three booklets on data cards will appear, edited by Antonio Pernice of the AIM Office.

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Communication: a health care resource management in Europe is a study co-edited by Francis Roger-France and Maria Laires.

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Infosec 94: Electronic signature and trusted third party services

Infosec 94 is a framework for a set of project-driven field trials in areas of application where there is a practical need for electronic signatures and trusted third party services (TTPs). These are likely to have an increasing impact on international markets and will become more widely applicable to business which is conducted electronically. Their long term use may be applied to meet the need for mobility in fields such as teleworking, healthcare, transport informatics, manufacturing, industrial and energy supply systems, financial, trading and retail systems.

There are many potential application areas for electronic signatures and TPP services. The Infosec projects are addressing a small number of these, such as: The European Business Register, the electronic trading project (Bolero), the auctioning of livestock by satellite, the healthcare sector (HealthSign), the road/rail transportation industry (Testfit).

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SPRINT: Specific Projects 1994 extension

Specific projects are large-scale trans-national technology transfer projects addressing problems of technology diffusion in Europe. This action line was launched in 1989 as a major activity of the SPRINT programme. There were two calls for proposals in 1989 and in 1990. As a result of these, there are now 21 specific projects in the main implementation phase. In 1994 some will be extended.

All the projects are concerned with quite large-scale industrially relevant technology transfers. Projects involve a mix of partners including end users, technology providers and intermediaries. A decision was made this year by SPRINT management that due to the intensive selection processes a new call for proposals for specific projects will not be possible during 1994. It was, however, decided that certain successful running projects will be considered for extension, particularly if the proposed extensions involved new partners, additional countries and increased diffusion.

During 1993, four projects were already given additional support to extend their activities to further users.

SP231 is concerned with improving the conditions of people working in the printing industry through the use of vegetable cleaning agents in lieu of solvent-based products. It has extended its activities to include training seminars in Italy, the UK, the Netherlands, and Luxembourg.

SP257 focuses on leakage control in fresh water supply systems, and is extending to include partners in Germany.

SP034, concerned with the high-speed spinning of wool, is extending its activities to Ireland, the United Kingdom, and Belgium.

SP226, working on the transfer of real-time control systems into urban drainage systems, is extending to include pilot implementations in lake Garda (Italy), and Berlin (Germany). Existing projects and national authorities are currently identifying new potential partners for selected successful projects, and it appears that other specific projects will soon be granted support.

SPRINT is looking not only to increase the impact and geographical spread of

current projects, but also to identify the practices and methods used by project partners to overcome the many barriers to technology transfer which still exist. In this regard SPRINT will also be supporting a number of subordinate accompanying measures in which existing project partners can exchange experience on topics such as project management and best practice in innovation transfer.

For further information see below.

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Workshop: The Social Impact of Technology on Disabled People and Elderly People (TIDE)

A workshop was jointly organised by DG V and DG XIII in Brussels, January 17-18, 1994. It aimed to improve dialogue between the European Union actions in favour of disabled and elderly people, as well as research projects in the fields of new technology. The social impact of these technologies was also investigated. The initiative for this meeting came from the COST 219 group which is very active in DG XIII initiatives. TIDE's potential for encouraging an internal market in rehabilitation technology in Europe was illustrated, with particular emphasis on the role of the users of assistive technology in the programme's orientation and performance.

In the section called "Activities of the European Commission: Philosophy and Strategy of the Programmes" a presentation was given about RACE and some projects for people with special needs. The rationale of the RACE programme was set out, and in particular, the presentation focused on the fact that advanced communications must be prepared to provide cost-effective generic services, to respond to future demands of different sectors, including people with special needs. TEN-IBC and the plans for the Fourth Framework Programme were also mentioned. The workshop was attended by over 160 participants and there were pertinent presentations from COST 219, COST A5, COST A4, TIDE, RACE, DG V, Horizon, Helios, users, European associations for elderly and/or disabled people, research organisations and welfare organisations.

The proceedings of this workshop and its main recommendations were made available in April, 1994. Copies may be obtained from the COST Telecommunications Office.

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SPRINT in 1994

The Strategic Programme for Innovation and Technology transfer (SPRINT) was allocated 19 million ECUs for its extension until the beginning of the fourth framework programme, i.e. for a period of one year covering 1994.

The first major action line of activities consists in the European innovation services infrastructure (11.5 million ECUs). This includes strengthening technology transfer networks of research and technology organisations, science parks, technology brokers, firms, etc (6.5 million ECUs) and accompanying measures such as the promotion of innovation management techniques (MINT, design, quality, value analysis, (5 million ECUs), associated promotional activities, Technology Transfer Days and financial schemes for helping the launch of innovations emerging from the networks. Further to the results of the latest SPRINT call for proposals, support is envisaged for suitable initiatives to carry out feasibility studies and evaluation of science parks as well as the review of regional innovation and technology transfer strategies.

The second major action line (4 million ECUs) is for the specific projects, large-scale transnational technology transfer projects addressing barriers to

technology diffusion in Europe. A total of 21 such projects are currently supported.

The third main action line (3.5 million ECUs) deals with monitoring innovation (responsibility of the European Innovation Monitoring System - EIMS - SPRINT), and cooperation between the Member States and the Commission in the field of innovation and technology transfer. Apropos of this, EIMS will be preparing a draft Commission Communication on Innovation and Technology Transfer during 1994. The final evaluation report of the SPRINT programme will be carried out this year.

The extension of the programme, approved by the Council on 20 December of last year, will allow the work of SPRINT to be continued and reinforced, and to prepare for its integration into the Fourth Framework Programme in 1995.

Initially, SPRINT was seen as largely experimental; now it has become an established programme, but one within which experimentation is possible and welcomed (for example, the MINT scheme launched in 1993 - see following article).

SPRINT addresses the needs of SME (Small and Medium-sized Enterprises) needs in particular because typically these are not able to maintain significant in-house technology

development activities. Services offered to SMEs include most current activities of the SPRINT programme:

- Inter-firm technology transfer networks;
 - Networks of research and technology Organisations;
 - Specific projects;
 - Technology transfer days;
 - Investment forums;
 - Technology performance financing;
 - Managing the Integration of New Technology (MINT);
 - Innovation and management tools: design, value analysis, quality;
 - Science park initiative and consultancy scheme.
- Brochures are available on each of these action lines.

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First technology transfer day in Portugal

The first Technology Transfer Day (Value Crossroad Day) held in Portugal took place recently at Porto on March. It was organised by the Portuguese Relay Centre and focused on Esprit project results in the field of computer integrated manufacturing.

The choice of Porto as the first Portuguese venue for a calendar of events which have been linking research organisations and SMEs in Europe since early 1993 was considered especially important by all the parties involved as the town is the capital of the region where the largest number of small and medium-sized enterprises are located.

More than 20 companies attended the event, where five Esprit-CIM results were presented:

- Development of tools for economic evaluation of CIM in smaller manufacturing companies - presented by BIBA of Germany.

- Automotive Industry CIME - presented by Alfamicro of Portugal.

- Modular framework for evolutionary implementation of shop floor control - a joint presentation between INESC and Tecnotron of Portugal.

- Advanced Intelligent Multisensor System for control and boilers and furnaces - a joint presentation of IST and Servotrol of Portugal.

- User-driven and configuration tool-set for CIM implementation in SMEs presented by IBK of Germany.

During the event the communication

flow between presenters and companies was strong, with the occasion being used for first-approach contacts to discuss future exploitation agreements.

All these activities will be followed up by both the Portuguese Value Relay Centre and the Value Relay Service Co-ordination Unit.

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News on MINT

Managing the Integration of New Technology (MINT) is now in its second year. This experimental scheme has made good progress and interesting case-studies should be available soon. All sixteen Europe Union MINT contractors have begun operations and similar parallel schemes exist in Norway and Sweden.

The second MINT contractors workshop (January 20-21 1994) brought together some 60 national contractors, national experts, some CIT delegates (Committee for Innovation and Technology transfer), and consultants from various EFTA countries.

After reviewing the current status of MINT contractors, the needs of MINTed firms were assessed, taking into consideration the various industrial sectors concerned and the different national/regional cultures. Needs and methodologies were compared and ideas and solutions for marketing MINT were investigated. Subsidiarity and flexibility came out as key properties. Nevertheless emphasis was laid on the need for a common language or *esprit de corps*, so as to guarantee a European dimension to the scheme. Practical and emerging issues were also investigated by highlighting the aims and objectives. Future developments include extending the scheme to service firms, promoting trans-national synergies,

diffusing MINT diagnostic tools and workable methodologies, and collecting success stories from MINTed firms.

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Technology Transfer Days on laser cutting and welding

Two Technology Transfer Days (VACRO - Value Crossroads Days) on laser cutting and welding technology took place in the Italian cities of Udine on 22 March and Perugia on 24 March.

Both events were organised by the Italian Value Relay Centre CRENEST in close collaboration with the Industrialists Associations of Udine and Perugia.

These two Italian Vacro days, in which results of the Brite/Euram programme were presented, form part of the important calendar of similar events

that the network of Value Relay Centres is holding all over Europe. Their aim was to bring several research and technological development project results close to the various regions' enterprise environments.

At the Udine and Perugia events the current situation in laser cutting and welding technology was debated. Specific results on this were presented by the leading research organisations, offering the opportunity of discussing exploitation agreements between researchers and interested companies.

The presentation dealt with the following results:

- Adaptive control of laser welding (UKAEA).
- Welding of thin sheets by CO2 lasers (IRSIDE).
- Plume emission analysis for laser welding control (Centro Laser Valezano).
- JOCAL joining of Cu and Al alloys by laser (PHILIPS BEDRIJVEN BV).
- High intensity beam welding (CISE).

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EFLC conference on library networking in Europe

A conference on the above theme organised by EFLC in cooperation with LIBER, EBLIDA and the European Commission will be held in Brussels from 12-14 October 1994. The conference programme will address the recent trends in the implementation of new technologies in libraries. The event will also provide a platform for creating awareness of the most

successful projects of the Libraries programme.

EFLC = European Foundation for Library Cooperation
LIBER = Ligue des Bibliothèques Européennes de Recherche
EBLIDA = European Bureau of Library Information and Documentation Association

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CoBRA: group addresses national bibliographic resources in Europe



To address issues under Action Line I of the Libraries programme, which deals with computerised bibliographies, an integrating group has been set up, known as CoBRA (Computerised Bibliographic Record Actions). The group consists of eight European national libraries and is chaired by the British Library, which also hosts the group's secretariat.

CoBRA's purpose is to discuss a number of core issues identified in other forums but not addressed by the standard Calls for Proposals mechanisms as they require coordination between all major parties involved. It will work through four task groups

with members drawn from other major libraries and other interested sectors, such as the book trade.

The specific objectives of the "integrating group" are:

- to create a European dimension for the provision and exchange of bibliographical data from agencies with established responsibilities at national level;

- to foster new links between organisations involved in bibliographic record creation at all stages of the publication and distribution press;

- to improve the efficiency and utility of national bibliographic service provision through stimulating the take-up of new ITs for service delivery and enhancement;

- to encourage greater standardisation among all parties involved in record supply and use.

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CEC initiative to attract proposals for Libraries Call



In connection with the Third Call for Proposals under the Libraries Programme, the CEC adopted a new strategy to encourage proposals from small and medium-sized enterprises (SMEs). Under the new Proposal Expansion Award (PEA) scheme, SMEs interested in developing library products or services could apply for financial assistance for preparing full proposals. All that was required for participation was a consortium with a good idea, consisting of at least one SME and one library. The application

form simply required details of the main proposer and partner(s) together with a brief description of the proposed project. Successful applicants were granted a contribution of up to 75% of the proposal preparation costs related to travel, partner-finding or consultancy services.

By early December when the initiative closed, 72 applications had been received of which 48 qualified for support. The real impact of the initiative can only be assessed when an

analysis is made of the extent to which the full proposals have qualified as acceptable projects.

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IMPACT 2 Work Programme:

Ongoing EU efforts to develop the European information market



The 1994 work programme for the IMPACT 2 (Information Market Policy Actions) programme of DG XIII/E was approved by the Commission on 1 February 1994 and is now available for information.

The IMPACT programme aims to develop the market for information services in Europe and to improve the competitiveness of European businesses by promoting the use of advanced information services. During 1993, there was a mid-term review of IMPACT 2 by a team of independent experts. An important message to emerge is that the creation of a European market for information services will require continuing cooperation and commitment by market actors, the European Union and Member States.

IMPACT will continue during 1994 to stimulate cooperation and commitment at a transnational level. Info Euro Access - "improving the accessibility to information at the European level" - will remain the central strategic theme and will be reflected in efforts to overcome legal, administrative and language barriers and to stimulate European initiatives.

Under Action line 1, the Information Market Observatory (IMO) will continue to collect and analyse market data to increase market transparency. However, future actions will be increasingly oriented towards strategic issues of European information services development and the monitoring of the structural changes in the information industry at large. Recognising the growing convergence

of technologies, products and markets, studies will pay particular attention to the analysis of cross-sectoral alliances, new markets and the role of advertising in financing future products. The recently created European Information Policy Support Network will also play a role in this respect. The IMO will expand the dissemination of its results by using existing distribution channels as widely as possible.

Under Action line 2, the Legal Advisory Board (LAB) will strengthen its network of experts, developing increased contacts with public sector authorities with both regulatory and market player roles in the Member States. Close interaction with market actors will ensure that the legal solutions proposed fit the real-life

problems of the information services marketplace. The possibility of organising LAB meetings in various Member States will be considered. 1994 will see the completion of actions launched in certain areas, such as the discussion with Council and Parliament on the data protection directive, and the legal protection of databases discussion. New initiatives will address the role of the consumer and the issue of quality certification, as well as legal problems related to specific new information technology (NIT) applications, such as multimedia and geographical information systems (GIS).

In the standards area of Action line 3, work will be undertaken in 1994 to extend the pilot information service launched last year, with particular regard to the publications and handbooks on the use of standards for Open Information Interchange. The guidelines for the use of standards will be extended with the development of a reference model for all the encoding standards.

In the information awareness, user support and training area, continued

emphasis will be placed on decentralisation of activities via the National Awareness Partners network throughout the Member States. The financial support for this network will be significantly increased and the number of national organisations involved may be extended. Universities and other higher education institutions will be encouraged to include training related to electronic information in their normal curricula. Synergy will be sought with EU programmes specialising in training and education such as COMETT and FORCE.

Action line 4 activities will build on strategic information initiatives which started in 1993 and earlier. For example, support to the selected projects for interactive multimedia information services will be continued and projects in the area of geographical information services will be selected for their main implementation phase. Support will be given to the European Umbrella Organisation for Geographical Information (EUROGI). A Call for declarations of intent was launched in October 1993 to gauge the level of industry interest and readiness to invest in a range of applications to

improve European-wide access to information using the latest available technology. This will be followed by Info Euro Access Calls for proposals before the end of 1994 for shared-cost projects which, subject to budget availability, will be supported during 1995. As a follow-up to 1993 activities related to the development of the European electronic publishing market, actions proposed include the creation of a high-level forum with publishers and other major figures in the electronic publishing chain and a feasibility study on a network of multimedia laboratories for exchange of experience, training and as a source of creativity.

Copies of the 1994 work programme, in all EU languages, may be obtained from the address below.

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IMPACT 2 mid-term evaluation report

A mid-term evaluation of IMPACT 2, the "programme for the establishment of an internal information services market (1991-1995)", was conducted by a panel of independent experts. The panel's report, which puts the programme into the context of global information market developments, has been transmitted by the Commission to the European Parliament and Council.

The report provides a comprehensive evaluation of the European Union initiatives launched within the four action lines of the IMPACT 2 programme and of the results so far. In the assessment of the action lines, it was generally felt that they had been correctly chosen. By creating the means essential for the development of a European information services market and enhancing those already in place (Information Market Observatory, Legal Advisory Board, National Awareness Partners and European Commission Host Organisation), IMPACT2 has attained most of its initial objectives. The report concludes with a number of recommendations addressing the need for a more

ambitious programme aimed at taking advantage of Europe's assets and stimulating the creation of a genuine internal information market.

The Commission intends to start the preparation of a follow-up programme early in 1994. This will take into account the views expressed by the panel, strategic input from other sources, and the implementation plans for the White Paper on Growth, Competitiveness and Employment.

Copies of the report, entitled "IMPACT 2 Mid Term Evaluation: For an Information Strategy", are available from the following address.

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Fourth IMO Annual Report available

The Fourth Annual Report of DG XIII/E's Information Market Observatory (IMO) has been available since December 1993. This report is on the main events and developments in the electronic information services market carried out within the IMPACT programme. It reviews the most important trends during 1991/92 in the following sectors: "classical" online ASCII database services, videotex services, publications on optical disc, fax-based and audiotex information services. Key findings are described, and the main conclusions highlight the report's major theme of Europe's international competitiveness in electronic information services in relation to the USA and Japan.

The full report may be obtained free-of-charge from the address below.

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IMPACT Information Service



This database, hosted on ECHO (European Commission Host Organisation), is designed to offer information related to the IMPACT programme and can be accessed free-of-charge.

The database contains the following categories of information:

- IMPACT in brief (an introduction to the IMPACT programme for those unfamiliar with its action lines and general orientation)
- IMPACT News (recent items, updated regularly)
- IMPACT Contact Points
- IMPACT Documentation (full text of major documents, which can be

browsed online or searched for information)

- IMPACT Document List and Document Ordering Service
- IMPACT Electronic Mailbox Facility (users may enter messages or questions to be answered by the IMPACT Central Office).

The objectives of the IMPACT Information Service are: to disseminate information relating to the programme and its activities as widely as possible to online users, to offer a rapid overview of IMPACT-related documentation, and to provide a simple means of ordering material of interest. In addition, the service gives new

online users the opportunity to gain hands-on experience in the principles of database access and simple searching.

To access the database, the user simply logs on to ECHO (NUA: 270448112) and types IMPACT as the password.

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Impressive ECHO usage statistics for 1993



ECHO, the European Commission Host Organisation, continues to fulfil an effective role in promoting electronic information services within the IMPACT programme. Far from competing with other hosts, ECHO actually helps commercial information providers through promotion in the online and printed versions of the IM Guide, a directory of electronic information services and products available in Europe. In addition, ECHO passes on to the industry the addresses of persons (subject to their agreement) who are interested in obtaining information on available commercial services.

Statistics show that both new and experienced users have been making greater use of ECHO's mainly free-of-charge online databases during 1993.

From October 1991 until December 1993, the number of users has grown by 62%, from 9,900 to 16,000, while the average number of connect hours per month has increased by 88%, from 2,600 to 4,900. In November 1993 the total number of connect hours for the month actually exceeded 6,000. The Internet phenomenon has had a noticeable effect on ECHO usage. Over 800 connect hours during November 1993 involved connection via Internet. A further boost can be expected if ECHO is actively promoted as an information host at strategic entry points to Internet (e.g. gophers).

Much of ECHO's success is due to its user-friendliness and accessibility. The new user, in particular, benefits from the simple-to-use Common Command Language (CCL) and from menu-

driven access. ECHO is unique internationally in offering menu-driven access in all nine official EU languages for certain databases such as IM Guide and TED (Tenders Electronic Daily). The host is currently accessible via public networks as well as Infonet for all European Information Centres (EICs), EuropaNET, Internet, and videotex networks in Belgium, France and Germany via a gateway. For details on accessing ECHO and its range of databases, see below.

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Setting up EUROGI: final report now available



Under the IMPACT programme, DG XIII/E initiated an enquiry in 1992 into the feasibility of establishing a European Umbrella Organisation for Geographical Information (EUROGI). It was formally decided to set up such an organisation at a meeting in Luxembourg on 25-26 November 1993, attended by delegates from 14 European countries, most of whom represented Interdisciplinary National Geographical Information (GI) Organisations. Mr Michael Brand, Director of Ordnance Survey of Northern Ireland, was elected as the first president supported by an

8-member Executive Committee. The first formal General Assembly will be held on 19-20 May 1994 at DG XIII/E headquarters in Luxembourg.

The primary goals of EUROGI are: "to support and represent all GI groups at European level; to stimulate, encourage and support the development and use of GI at European level, and to become the official partner for GI with the relevant European institutions".

The final report of the Committee investigating the feasibility of creating

EUROGI is now available from the address below. This document sets out the need for and potential benefits of EUROGI, the proposals for setting it up, organisational principles, a strategic plan and a possible working plan for 1994-1995.

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LRE Activity Report available

The above report outlines DG XIII/E's activities in the Linguistic Research and Engineering (LRE) sub-programme within the Telematics programme. The Community has been investing in language processing for almost 20 years. The Commission entered the machine translation domain working on the Systran system in 1975. The Eurotra programme was funded to build a prototype machine translation system for the nine official Community languages. Within Esprit, the Community funded a number of speech and written language projects. More recently, the LRE sub-programme was operational from 1991-1994, and currently the Commission is laying the foundation for a follow-up to these activities within the forthcoming

Fourth Framework programme.

In the LRE sub-programme, the key areas for action identified in two calls for proposals launched in 1991 and 1992 were: general research; common resources, tools and methods to build a comprehensive linguistic infrastructure; and pilot applications to demonstrate the integration of language engineering technologies and components within information and communication systems. In total, 26 projects and accompanying actions were selected for funding. A total of 160 companies and organisations from throughout Europe are participating, with a significant presence of user bodies, SMEs and multinational companies. The tools, resources and pilot applications

emanating from these projects will serve as an invaluable foundation for further exploration and exploitation by European academia and industry in a technology area which is vital to Europe's future.

The activity report, accompanied by project synopses, is available from the address below.

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Eurotra Final Review Report

Eurotra is a Community R&D programme which was initially approved by the Council in November 1982 and terminated at the end of 1992. Its objective was to create a prototype machine translation system of advanced design capable of dealing with all official EC languages. The programme was carried out in the framework of Contracts of Association concluded with all Member States and co-financed by the EC and Member States. The total Community budget over the 10 years was 37.5 million ecu.

The final evaluation of the programme was undertaken in 1993 by a panel of high-level personalities, chaired by Dr Brian Oakley, former director of the Alvey programme. Although the

Commission did not entirely succeed in creating an operational multilingual machine translation system prototype capable of handling all official EC languages, the conclusions of the report are nevertheless very positive. It stresses in particular the role Eurotra has played in educating a generation of computational linguists, in shifting the centre of gravity of computational linguistics research from the West Coast of the USA to Europe, and the influence it had in devising industry-led projects like EuroLang and both Community and national research programmes.

It also formulates recommendations for a broad technology approach for the future. These recommendations have

largely been incorporated in the Commission's proposal for a language engineering programme as part of the Telematics specific programme of the Fourth Framework programme.

The Eurotra Final Review Panel Report is available from the Commission services.

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INTERNATIONAL PERSPECTIVE

International industrial co-operation

Although in the 'old' part of the Directorate-General for Industry (DG III), Unit III-A-2 is relatively new. Its remit is to cover international industrial, technological and scientific cooperation in general.

Its main objectives are (in close co-operation with the other DG III units specialised in specific industrial and research sectors and other Commission services):

- to provide the interface with the different Commission services, international financial institutions such as the European Bank for Reconstruction and Development (EBRD) and the relevant organisations in the Member States on all questions concerning industrial and scientific co-operation;

- to organise specific activities in order to promote industrial co-operation such

as the EC-Japan centre for industrial co-operation, the organisation of round tables, industry/Commission missions etc;

- to build up a thorough working knowledge of all financial and other instruments available within the Commission, the EIB, EBRD or other international financial institutions and, to a certain extent, in the Member States to promote international industrial co-operation;

- to initiate and develop the activities and follow projects in the field of international scientific and technological co-operation, whether these concern matters for which DG III is responsible or matters where the industrial interface needs to be established with other DGs; and to assure an industrial follow-up;

- to establish an overview of foreign direct investment as well as an understanding of the industrial strategies and to act as an interlocutor for industrial associations on such matters;

- to identify legal and administrative barriers to foreign direct investment and industrial co-operation by EU industries with the aim of remedying such situations;

- to act as a facilitator and advisor for all international industrial and scientific co-operation projects developed by the specialists units of DG III; and

- to act as a first contact point for industries and industrial associations interested in developing industrial co-operation projects.

The geographic focus of the unit is as follows.

Though it covers questions of international scientific and technological co-operation on a world-wide level, the specific focus is on industrial co-operation in Central and Eastern Europe, Russia and the other NIS, Asia, in particular South-East Asia including Japan, and Latin America.

EKORN - Linkage of R&D Networks of Korea and Europe

In November 1992, an Administrative Arrangement for Cooperation in Science and Technology was signed between the Commission and the Republic of Korea, which foresees the promotion of cooperation in fields of mutual interest. After a first exchange of views in Brussels in 1992, a second workshop exploring concrete collaboration possibilities was held in Seoul in October 1993.

Prior to the Arrangement, DGXIII and representatives of the Ministry of Science and Technology (MOST) had already started discussions on the possibility of connecting existing R&D networks in Korea and Europe to support the exchange of information between their R&D communities. In Korea, MOST mandated the System Engineering Research Institute (SERI) to establish the Korean R&D network KREONET, which has now been operational for several years, linking all major R&D sites in Korea. On the European side, EuropaNET is the comparable initiative.

DGXIII has now mandated DANTE (a research foundation established jointly by eleven research networks in Europe to provide the EuropaNET international network services) to define the technical specifications of a direct connection between KREONET and EuropaNET. This is planned to become operational during the first half of 1994. It is foreseen to run the link (at a speed of 64 kbps) for a subsequent trial period of 12 months during which a range of services such as electronic mail, directories, file transfer and remote login will be available to users of EuropaNET and KREONET. The project is known

under the acronym EKORN (EU/Korea R&D Network).

The traffic intensity will be monitored to assess the usage and to decide whether the direct link should be continued and possibly upgraded beyond the trial phase. Exchanges between DANTE and SERI on the network management and different network protocols will complement the trial phase. Although EuropaNET and KRONET users are already able to

communicate through the US Government's NSFnet, the planned direct connection will improve the speed and reliability of communications, and so promote further the scientific exchange between Korean and European scientists.

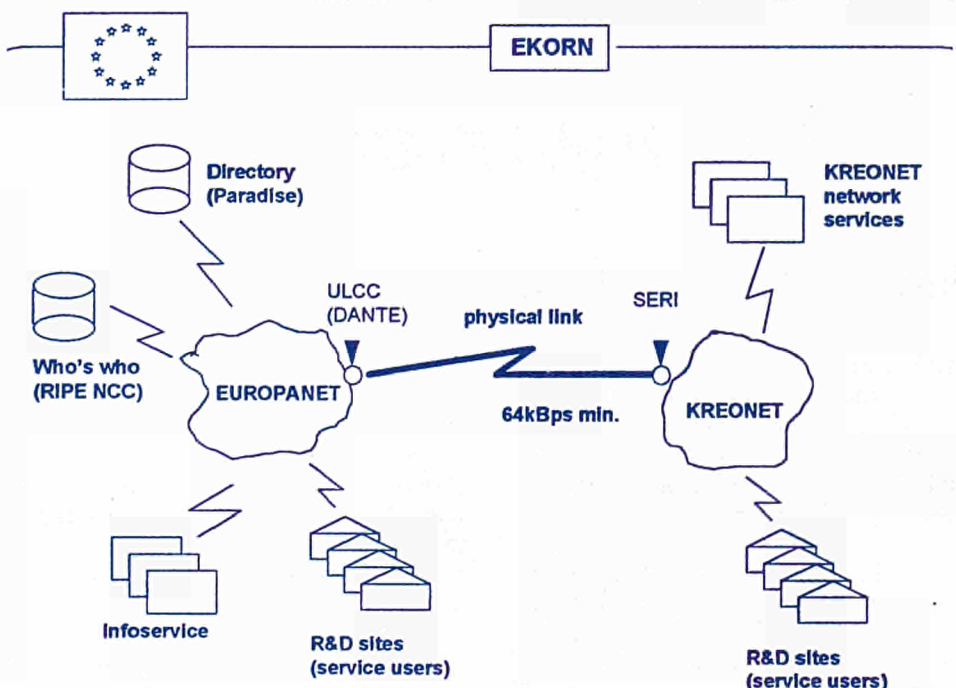
The connection established in the EKORN experiment will be the first direct general purpose R&D network link between Europe and the Pacific Rim.

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EUROPEAN DIMENSION

EU to help modernise Eastern Europe telephone system

The European Commission has announced a 5.6 million ECU (\$6.25 million) programme aimed at training staff in Central and Eastern Europe to run a modernised telecommunications sector there. Under the EU's Regional Telecommunications Programme, the ten beneficiary countries - Poland, Hungary, the Czech and Slovak Republics, Slovenia, Bulgaria, Romania, Albania, Latvia and Lithuania - will receive an integrated telecommunications training programme lasting until mid-1995 to help them implement a series of specific, market-oriented reforms. The overall aim is to enable Central and Eastern countries to bring their telecommunications systems up to EU standards and create a more efficient network across the whole of Europe.

This initiative, under the EU's PHARE programme of aid and assistance to Central and Eastern Europe, was launched on 22 February at the Hungarian telecoms company's management training centre at Lake Balaton, Hungary.

Over 200 projects will take place in the ten countries, with the close collaboration of the recipients locally. Co-ordinators from each recipient state will ensure their country receives maximum benefit from the programme, and will be taught to select people for training under the programme.

The programme will be co-ordinated on behalf of the European Commission by Development Dynamics Limited

(DDL), a UK-based management consultancy specialised in telecommunications training. DDL have identified six areas for specific attention, and preparation during the second half of 1993 has led the programme to focus on the following priorities for action:

1) Regulating the telecommunications sector

Independent regulatory bodies will be set up to improve telecoms legislation and licence conditions, set quality and performance standards for operators and install monitor arrangements, as well as improve policy on tariffs.

2) Managing a telecoms company

National operators will be trained to manage the sector along efficient market lines, including the production of strategic and business plans, and plans to increase profitability, channelling more profits to investment.

3) Managing human resources

The aim here is to help companies develop their own staffing plan, focusing on conditions for remuneration and promotion, as well as developing a training strategy for each company to improve staff efficiently.

4) Marketing and selling telecoms products and services

Market research will be carried out into each key segment - large, medium,

small and residential businesses - followed by the setting-up of effective management of customers' accounts.

5) New technology and managing telecoms networks

The focus will be to identify and tackle specific problems hindering the performance and reliability of telecoms networks, and to reform their operation so that they can sustain a greater volume of telecommunications traffic.

6) Managing computer systems in telecommunications

An information technology strategy will be needed to cater for more sophisticated forms of telecoms service, as well as procedures for controlling spending on new technology.

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4th CEPT Radio Conference

The fourth CEPT (European Conference of Postal and Telecommunications Administrations) Conference will be held in Prague, the Czech Republic, on 21-23 November 1994. At these conferences the European Radiocommunications Committee (ERC) consults with service providers, users and industry on important radiocommunications issues which feature in the programme of work of the ERC and the European Radiocommunications Office (ERO).

This year the theme of the Conference is mobility. In addition to the EC's

Green Paper, important matters will be raised on telecommunications policy concerning mobility, standards issues, defence, users' perspectives, ERMES, TETRA and DSRR.

In addition, one day will be devoted to a seminar on preliminary trends arising from the second phase of the Detailed Spectrum Investigation (DSI) covering 29.7 MHz to 960 MHz. The DSI process examines the current and future radiocommunications spectrum requirements in CEPT countries, with the objective of achieving a harmonised table of frequency allocations and

utilisations in the middle of the next decade. The DSI Seminar will provide an opportunity for consultations and feedback on the key issues.

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European Electronic Messaging Association: latest news

Following its successful launch at the EEMA Autumn Conference in Maastricht last September, the European Directory Services Group (EDSG) met in mid-January to review its work plan for 1994. Over 20 people representing service providers, user organisations and vendors as well as the research community attended the meeting in Brussels.

At Maastricht, it was predicted that in the early stages the group's attention would be focused on promoting directory services amongst the user community. To this end, two of the principal projects are targeted at large user corporations. These are: PRDMD

Operational Deployment Guidelines and Corporate Migration to X.500

Both aim to provide a practical guide for EEMA's user organisations in setting up directories. The first will address an organisation's directory relationship with the external world.

The second will deal with the issues and difficulties involved in migrating from existing directory systems to ones based on X.500. Where possible the document will identify deficiencies in the X.500 standard and make recommendations on the types of management tools required.

Electronic messaging: name-sharing across Europe

The other major European Directory Services group (EDSG) project is entitled "Top Level Naming in Europe" which it is hoped will provide the basis for common agreements on naming and DIT structuring across European countries in order to achieve a single European namespace. One of the first tasks will be to examine the work undertaken by the North American Directory Forum (NADF) for the United States and Canada and see whether the same approach is viable for Europe.

Each European country has differing attitudes towards regulatory bodies and their responsibilities. Another goal of this project will be to collect the names and addresses of all appropriate authorities and to ascertain their position towards naming and registration of publicly-available directory services. This will include identifying procedures for registration including those for EDI. Included in this activity will be an examination of what the future holds for the concept of a pan-European domain, such as the locality = Europe currently maintained by PARADISE, the European research community's X.500 directory pilot. This domain is used at present for governmental and not-for-profit pan-European organisations such as the European Commission, the European Space Agency and EEMA. It is the only supra-regional domain held below

the root of the global DIT (Directory Information Tree) and currently lacks a sanctioned registration authority.

Other projects proposed by the EDSG include:

- a registry of ADDMDs and PRDMDs;
- a list of available X.500 products;
- an information document on X.500 in the form of questions and answers;
- an up-to-date on-line X.500 directory for use by all EEMA members. This will contain the full EEMA membership directory and will be accessible remotely via X.25, Internet and dial-up. The recent EEMA publication "A Study on X.400 Naming and Addressing" is available to non-members at a cost of £150.

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EC funding for collaborative R&D between the European Union and Eastern and Central Europe

Strengthening the research capacity and reorienting research to the socioeconomic needs of central and east Europe countries is of prime importance for the successful transformation of their economies.

Collaborative R&D has an important role to play in this context. The European Commission's COPERNICUS action was set up specifically to encourage collaborative R&D between Member States and central and east Europe.

The EC's Telematics programme for health care (AIM) is one of the areas in which this collaboration can take place, and moreover it was explicitly mentioned in the last call for proposals.

A budget of 57 million ecus has been allocated to the COPERNICUS action, to be distributed between DG III (Industry), DG XII (Research), DG XIII (Telecommunications, Information Market and Exploitation of Research). Of this amount, 22% is devoted to Information technology (DG III), 18% to telecommunications, telematics and language engineering (DG XIII) and 60% to DG XII activities:

- (a) manufacturing, production, processing, materials,
- (b) measurement and testing,
- (c) agro-food industry and
- (d) biotechnology.

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PUBLICATIONS

Language Industries Atlas

P.M. Hearn and D.F. Button,
INK-Belgium N.V.-1994 IOS press
ISBN 90.5199 1487

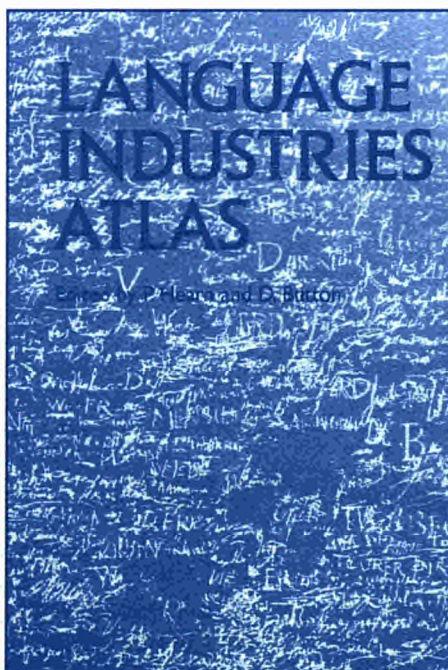
The first Language Industries Atlas is the product of one year of information gathering and surveying in Europe, Japan and the US. It aims to describe the activities of the many organisations, both public and private, that create the infrastructure within which languages are able to develop and interact on equal terms in multilingual Europe. Although developments in the United States and Japan have been mentioned, the Atlas primarily describes activities in the European Community, which has a rich linguistic heritage, enshrined and protected within the framework of the Treaty of Rome.

The Language Industries Atlas will be of interest to a broad spectrum of language professionals including translators, interpreters, terminologist, teachers, computational linguists, researchers and public and private organisations, and indeed to anyone interested in languages, from a planning, standards, infrastructural or technological perspective.

The Atlas contains more than 1,000 descriptions of activities which play a role in shaping the language industries, whether from a user or provider perspective. It shows that the language industries are an exciting forum in which researchers, developers, standardisation bodies, professionals and academics, and private companies with varied interests, come together, discuss and ultimately design the standards and solutions to overcome many of the challenges posed by multilingualism in business, academic and socio-cultural affairs. The European Community, perhaps more so than its main trading partners in the US and Japan, is set to benefit from these solutions. In Europe more than two thirds of the workforce - almost 100 million people - work directly processing letters, numbers and graphic data, in numerous languages. In the 1990s, more people work every day in Europe using word processors than the total number employed in agriculture.

The Language Industries Atlas has been compiled from a questionnaire and telephone survey carried out over the past 12 months. This first edition does not aim to provide an exhaustive picture of the language industries, as this is perhaps too ambitious a goal in one year, when attempting to trace language throughout its many manifestations in commercial and academic activity.

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Advanced Informatics in medicine: medical imaging project

CEC-DG XIII/C4-AIM

SAMMIE (Software Applied to Multimodal Image and Education), COVIRA (Computer Vision in Radiology), MILORD (Multimedia Interaction with Large Object-oriented Radiological and clinical Databases) and EURIPACS (European Integrated Picture Archiving and Communication Systems), are four projects dealing with medical imaging and which have been implemented under the AIM programme (European research and development programme in advanced informatics in medicine). Their main objectives and results have now been published as fact sheets by the Commission.

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Telecom Strategic Atlas

The SIRUS consultancy, which specialises in telecommunications strategy and economics, has announced the publication of the 1993 edition of STRATLAS, its telecommunications strategic atlas.

STRATLAS is designed to provide its user with the equivalent of a personal documentation centre, illustrated with more than 300 colour graphs, with all the information analysed and ready to use. This telecommunications encyclopaedia is unique in offering strategic and comprehensive information on all issues regarding telecom strategy and economics.

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“Network Europe: Telecoms Policy to 2000”

Susan Ablett and Michael Denmead
Analysys Publications - Briefing Reports series - European Telecommunications - 1994 -
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The European telecoms sector is set for dramatic changes throughout the remainder of the 1990s. The agreement to liberalise voice telephony services from 1998 - and the expectation that liberalisation of infrastructure will follow close behind - mark the beginning of a significant new period of development in European telecoms policy. The challenge to regulators is to create an environment that will lead to maximum economic benefit for Europe; the two key areas on which they must focus are pan-European networks and the local loop.

The report, *Network Europe: Telecoms Policy to 2000*, argues that the European Commission has lost the political initiative on telecoms policy formation to the Member States at a critical point in the liberalisation process. While these are now agreed on the liberalisation of voice telephony services from January 1998, there is no common agreement on how to proceed on key areas of policy such as the liberalisation of infrastructure in local loop, national and pan-European networks. Telecoms policy-makers in the Member States must decide whether their interests will be best served by acting on a narrow definition of national interest - which will mean protecting their national operators - or whether there is greater benefit to be had from cooperation on a European basis.

The Commission is pressing ahead with its plans for Trans-European Networks (TENs), but Member States may let their operators make such decisions on a commercial basis. If they do, the unevenness of regulation and network development across Europe will prove an overwhelming obstacle.

The report deals with the key issues in this latest round of liberalisation:

- the challenge from the National Regulatory Authorities (NRAs) to the European Commission's role as the main driver of change in telecoms;
- the plans of Member State governments, some of which already go beyond the liberalisation proposals agreed in June 1993;
- the strategies of the telecoms operators (TOs) to gain the upper hand in the pan-European services market;
- the challenges faced by equipment manufacturers seeking to adjust to the demands of a competitive but still fragmented market.

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European Transactions on Telecommunications

European Transactions on Telecommunications (ETT) is a EUREL magazine published by AEI Associazione Elettrotecnica ed Elettronica Italiana in co-operation with AEE, AIM, ASN-CPEF, KIV, ODE, OVE, SER, SEV-ASE, SRBE-KBVE, VDE, and with the support of the Commission of the European Community.

ETT has set well-defined goals for its fifth year of activity:

- to become the European focus for outstanding contributions from telecommunications researchers and engineers.
- to concentrate on a range of selected telecommunications topics, ranging from the theoretical aspects of communications to communications systems and networks.

Prof. Maurizio Decina, Italy, editor in chief, and the technical staff of seven telecommunication editors are aiming to attract leading-edge contributions on the following specific topics:

Communications Theory (editor: Prof. E. Biglieri, Italy).
Telecommunication Systems (editor: Prof. Joachim Hagenaur, Germany).
Information Processing (editor: Prof. Jim L. Massey, Switzerland).
Signal Processing (editor: Prof. Maurice Bellanger, France).
Communication Networks (editor: Prof. Paul J. Kuehn, Germany).
Optical Communications (editor: Prof. Tom R. Rowbotham, United Kingdom).
Computer Communications and Protocols (editor: Prof. André Danthine, Belgium)

In 1993 the results of their efforts were set out in a programme of special focuses and issues continuing into 1994/95 which covers a wide range of topics in the field of telecommunications. As well as these programmes it will continue to publish open contributions from countries all over the world on the selected topics assigned to the ETT/Telecommunications Editors.

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Catalogue of research projects in the Third Framework Programme

Commission of the European Communities - DG XIII-1993.
ISBN 92-826-62-88-8/ EUR 14937 EN

This catalogue presents a listing of research projects funded under the European Community's Third Framework Programme (1990-94) for research and technological development. Up to 1,800 projects are covered. The entry for each project includes the project title, name and address of the prime contractor, name of contact point, names of the other partners, and where appropriate, the

project acronym. The catalogue has been generated from information held in the RTD-Projects database of Community Research and Development Information Service (CORDIS). Information is included on how to access CORDIS and how to obtain further data from the RTD-Projects database.

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AGENDA

3rd International Conference on Intelligence in Networks

The third edition of ICIN (International Conference on Intelligence in Networks) will take place in Bordeaux from 11-13 October 1994.

This conference, organised by SEE, IREST and ADERA, is supported by France Telecom. It is sponsored by the International Telecommunications Union, IEEE Com-Soc, as well as a dozen other international scientific societies.

The Programme Committee, chaired by Trevor Boyd of BT (UK), considers that the introduction of intelligence in networks will allow the development and expansion of new services (teleworking, personal and mobile communications, global services). The creation of specific architectures, increasing cooperation between the fields of telecommunications and computing, the availability of new networks (ISDN, broadband, data networks), will contribute to the development of intelligent networks. Issues of standardisation and administration will also become particularly important. All these

concerns have been grouped according to the following five main themes:

1. Applications and services
2. Architecture
3. Network and systems implementation
4. Service specification, creation and management
5. Non-technical aspects of intelligent networks.

Due to the excellent standard of papers submitted, the organisers now propose to hold a day of tutorials, which will take place on the 10 October 1994.

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BRIS '94: Broadband Island Conference 1994

BRIS '94, the 3rd International conference on Broadband Islands, is to be held in Hamburg (Germany) on 8-9 June. Organized by RACE project R 2008 Eurobridge and R 2060 C10, on 8-9 June 1994, it will give opportunities for presentations, demonstrations and discussions on the changes taking place in telecommunications. The presence of invited speakers from the major research laboratories and the senior management of industry throughout the world guarantees a programme that presents the latest developments in broadband communication and distributed multi-media applications.

Tutorials will provide an in-depth introduction to relevant technologies. Conference sessions on generic applications provide insight into current and future developments in, for instance, multimedia mail, teleconferencing and joint working (CSCW). The presentations will be complemented by demonstrations. Sessions on customised applications will report on today's specialised developments. Topics for the presentation include information, training and publishing systems. The session on growth in the market will present results of market research and analysis of marketing trends.

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Workshop IVAR '94

On June 9 and 10, 1994 the Technology Transfer Workshop on Industrial Vision and Autonomous Robots (IVAR '94) will be held in Leuven, Belgium, immediately after the European Information Technology Conference (EITC Brussels, June 6 to 8). The aim of the IVAR-workshop is to stimulate interaction between basic research and industrial and medical applications in the field of vision and autonomous robotics. Delegates invited from European industry will be informed about ongoing advanced research at European universities and research institutes, and the potential industrial and medical applications. To this end the workshop offers a wide gamut of tutorials, technical presentations, demonstrations, poster sessions and discussions on industrial needs and on necessary future research directions. Emphasis will be on applications which

can be implemented in the short and long term. In order to create market-ready products there is a need for further elaboration in close collaboration with the industry.

The workshop is organised jointly by nine European research projects in the field of vision and autonomous robotics.

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INTELCOM '94

The last ten years have seen massive changes in the communications scene in the Mediterranean area. The next decade will bring more change as national operators are privatised, new technologies are applied and new services introduced. To this end, a conference dealing with these, Intelcom '94, will be held in Turin (Italy) from 2-5 November 1994.

The conference will provide a platform for speakers from locations worldwide to discuss enhanced communications

and in particular the opportunities and applications afforded by the Mediterranean region. The conference will have major themes covering: infrastructure development and deployment; new multi-media service; operator strategies and alliances and new mobile & wireless services.

Parallel to the conference, an exhibition will bring together the major areas of telecommunications interest, such as: public and private international operations, infrastructure manufacture and system integration, satellite and cable services, mobile, wireless and multi-media service

providers. It will be an international exhibition staged in Southern Europe, one of the fastest growing areas for communications investment.

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Technology Transfer: ENERCOMP 95

Call for papers

ENERCOMP 95, the first international conference on composite materials and energy, will be held in Montreal, Canada, in May 1995. This conference will bring together specialists in these two important fields from around the world with the aim of promoting greater interaction and opening up

new possibilities for scientific and technological exchanges. For technical papers, an abstract will be required by June 1, 1994, followed by camera-ready copy before December 31, 1994. To display a poster in the Technology Transfer Session, an abstract with a special format (described in the Call for Papers) is required by December 1, 1994.

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IS&N '94 2nd International Conference on Intelligence in Broadband Services and Networks

"Towards a Pan-European Service Infrastructure"

The above conference to be held in Aachen (Germany) on 7-9 September 1994 provides a forum for the dissemination of knowledge about activities relating to the realisation of Intelligence in Services and Networks (IS&N) and the experience gained.

The conference is relevant to a broad range of people interested in development, engineering, operation, and provision of advanced communications services. It provides an opportunity to expose technological developments in IS&N systems to the critical scrutiny of a broad community of systems professionals and operations managers.

The issue of an advanced service infrastructure in a European context is a crucial factor for the further development and deployment of telecommunication technologies. The following subjects will be debated:

- Service architectures
- Communications management architectures (TMN, ODP, IN)
- Service management and quality of service management
- Strategies and policies for IS&N Implementations

- Standards for IS&N Implementations
IS&N applications/prototype - services/
software infrastructures

- Integration in IS&N.

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