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# Esprit Information Exchange System

# ies news

Issue No 23, August 1989

The 6th Esprit Conference will be held the week of Monday, 27 November, 1989, in Brussels.

The Conference is a key element of the annual Esprit operations cycle and of the process of Esprit information dissemination. As such it is the major annual public event of the Esprit programme.

This year, it will also take place at a particularly important time during the preparation of the future Community activities in the Information Technology area, which will form a part of the new 5-year Framework Programme proposed by the Commission of the European Communities.

## 6th Esprit Conference 1989

### BRUSSELS
### 27 NOVEMBER - 1 DECEMBER

Since the number of participants is limited, you are kindly requested to complete and return the enclosed Registration Form together with the registration fee by the deadline of 27 October to give us the opportunity to confirm your invitation.

We welcome your attendance and active participation in contributing to the success of this year's Conference and look forward to meeting you in Brussels.

**For details of programme and booking form see overleaf**
**Please ensure that the Primary Area of Interest Page is also completed**

Esprit
DGXIII
Telecommunications
Information Industries
and Innovation

## LATE NEWS

***ELECTRONIC LIBRARY FOR FRANCE***

*A 800 million ECU programme for the complete computerisation of the Bibliothèque Nationale in Paris and linking this into a nationwide (computer) network with the provincial and university libraries has been launched. Scheduled for completion by 1995, the scheme includes a new home for the Bibliothèque Nationale with its stock of 12 million books*

***INTERNATIONAL NETWORK FOR TERMINOLOGY***

*A new international association, TermNet, has been established to support the transfer of knowledge and technology on terminology, to ensure that there is both wider consensus in the use and knowledge in this field. Further details and particulars of membership can be obtained from the TermNet Secretariat, P.O . Box 130, Heinestrasse 38, A-1021 Vienna*

## LATE NEWS

***STEM UPDATED***

*Further to the article in the last issue of IES News, an updated version of the STEM modelling system has been released. This incorporates an integrated model annotation and cross-referencing tool*

***BRIGHT FUTURE FOR ONLINE USAGE***

*The latest LINK Reports predict a large increase in online and data traffic in Europe with growth rates in excess of 30% annually for some sectors.*

## THIS ISSUE:

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# 6th Esprit Conference 1989

## OBJECTIVES

This year's Esprit Conference will be devoted to the results, achievements and industrial take-up of Esprit and also address the increasingly important topic of technology transfer.

During the first three days (27-29 November), project results will be presented in plenary and parallel sessions. These sessions will be complemented by panel sessions and workshops where invited speakers will discuss issues relevant to Esprit. The Conference proceedings will be available for all those who have paid the registration fee.

During the Information Technology Forum on Thursday, 30 November, a number of prominent speakers from industry, politics and science will address the Conference.

The Conference and IT Forum will be complemented by an exhibition in which more than 80 projects will demonstrate their results. The exhibition will be open during the Friday and facilities will be available for informal meetings. Additional projects will participate via poster displays or videos.

**Abbreviations:**

MEL: Microelectronics and Peripheral Technologies
IPS: Information Processing Systems
CIM: Computer Integrated Manufacturing
OBS: Office and Business Systems
IES: Information Exchange System
BR: Basic Research

## GENERAL INFORMATION

**Dates & Venue**

From 27 November to 1 December 1989
Brussels Congress Centre
(Palais des Congrés)
Coudenberg 3
B - 1000 BRUSSELS

**Languages**

Simultaneous interpretation in English, French, German and Italian will be provided during the IT Forum sessions. Parallel, plenary, panel and workshop sessions will be conducted in English only. All technical papers will be in English.

**Technical interest groups**

During the evenings groups of delegates who share a common and specialised technical interest will be provided with facilities to hold meetings. If interested, please request further information.

**Hospitality & Social Events**

Coffee and tea will be provided for participants. There will also be an opening reception on Monday 27 November at the Palais des Congrés of Brussels.

## REGISTRATION

Whilst the primary objective is to achieve a balance of interested groups, an element of "first come, first served" is unavoidable. You are therefore urged to complete the enclosed Registration Form and to mail it, to arrive not later than 27 October 1989, together with the registration fees, to the Administrative Secretariat. On acceptance, participants will receive a personal confirmation.

Participants can choose to organise their own lunches during the Conference.

A discount is offered to those registrants who pay before 16.10.1989.

**Registration fee and payment**

Registration fee in BFr per participant

| | before 16.10.89 | after 15.10.89 |
|---|---|---|
| 3 lunches incl. | 10,000 | 11,000 |
| without lunches | 8,000 | 9,000 |

Participants are requested to forward their registration fee by banker's draft payable to the "Esprit Conference", net of bank charges, or by transfer to bank account no. 310-0119278-54 at Banque Bruxelles-Lambert.

All participants, including authors of papers selected, are required to pay the registration fee. The fee includes a copy of the technical conference proceedings, which will be available at registration.

Early registration is recommended, the interest in attending the Conference may be higher than in previous years.

**Administrative Secretariat**

Registration Forms and inquiries should be addressed to the Administrative Secretariat.

E.C.C.O.
(European Congress Consultants & Organisers)
Rue Vilain XIIII,17a
B-1050 BRUSSELS
Tel. +32 2 6478780
Telefax +32 2 6406697
Telex 61434 sdrbru b

## ESPRIT CONFERENCE 1989

## Registration and Accommodation Form

For secretariat use only

Closing date for Registration: October 27th, 1989

Kindly complete in CAPITALS and send to the Administrative Secretariat:
E.C.C.O., Rue Vilain XIIII, 17A, B-1050 Brussels.

**Title Code** ( ) Prof ( ) Dr ( ) Mr ( ) Mrs

**Name:**

**First Name:**

**Institute/Company:**

**Address:**

**Country:**

Country Code

**Telephone:** **Telefax:** **Telex:**

**CEC DGXIII Programme Name:** **(if applicable)**

**Esprit Project Number:** **(if applicable)**

**Primary area of interest for parallel session - See overleaf**

**Registration fee : (Please indicate exact amount)**

| **Before 16.10.89** | **After 15.10.89** |
|---|---|
| **( ) Bfr 10,000,-** | **( ) Bfr 11,000,-** |
| **( ) Bfr 8,000,-** | **( ) Bfr 9,000,-** |

**Accommodation:**

( ) Please reserve accommodation for me at: (name of hotel)

( ) single room ( ) double room

Date of arrival November 1989 Date of departure: November/December 1989

arr. 11

( ) Deposit: Bfr.

dep.

**Payment:**

( ) I enclose a cheque

( ) I am transferring to your bank account no. 310-0119278-54 at Banque Bruxelles Lambert the total amount of Bfr **net of bank charges** to cover:

( ) Registration fee ( ) Reservation of accommodation

Date : Signature:

**PRIMARY AREA OF INTEREST**

It is imperative to mark only one primary area of interest for each parallel session, so that rooms may be allocated correctly. Continued sessions are listed once (for all titles refer to Announcement).

**Monday 27.11.1989**

( )***Plenary Session***

***Parallel Session I*** (14.00-15.30)

( )MEL:Analogue Circuit Design (workshop)
( )MEL:Multifunction Technologies for System Integration on the Chip (workshop)
( )IPS:High Performance Systems (workshop)
( )IPS:Systems, Safety and Quality (papers)
( )IPS:Integration of Data and Knowledge
( )IPS:International Trends in IT Programmes (panel)
( )IPS:IT for Finance Domains (papers)
( )CIM:Architecture and Communications (papers)
( )CIM:Mechatronics (workshop)
( )OBS:Distributed Systems (papers)
( )OBS:Office & Business Security (workshop)
( )BR:High Temperature Superconductivity (panel)

***Parallel Session II*** (16.00-18.00)

( )IPS:Multi-Agents Paradigm (workshop)
( )IPS:Software Maintenance (workshop)
( )CIM:Factory and Plant Communication (panel)
( )CIM:Human Factors in CIM (workshop)
( )OBS:Home Systems and Intelligent Buildings (panel)

**Tuesday 28.11.1989**

***Parallel Session III*** (9.00-10.30)

( )MEL:Advanced CAD Tools (papers)
( )MEL:Lithography (workshop)
( )IPS:Advanced Methods (papers)
( )IPS:Project Management Tools (workshop)
( )IPS:Parallel Architectures (papers)
( )IPS:Logic Programming (papers)
( )IPS:Performance Modelling (workshop)
( )CIM:Enterprise Networks (workshop)
( )CIM/BR:Management System Design & Implem. (papers)
( )OBS:Communication/Networking & Home (papers)
( )OBS:Low Cost to High Tech Workstations (workshop)
( )IPS/CIM/OBS:Human Computer Interaction (HCI)

***Parallel Session IV*** (11.00-12.30)

( )MEL:CAD Integration (workshop)
( )IPS:Reuse (workshop)
( )IPS:Knowledge Acquisition (papers)
( )IPS:IT for Engineering Processes (papers)
( )CIM:Prenormative Actions (panel)
( )IES:Users' Forum
( )IPS/CIM/OBS/BR:HCI - Natural Language (papers)
( )IPS/CIM/OBS/BR:HCI - Speech and Dialogue (papers)
( )IPS/CIM/OBS:HCI - Graphics (workshop)
( )IPS/CIM/OBS:HCI - Ergonomics (workshop)

***Parallel Session V*** (14.00-15.30)

( )MEL:Manufacturing Science (workshop)
( )MEL:Non-Volatile Memory on ASICs (workshop)
( )IPS:Future of UNIX (panel)
( )IPS:Formal Methods (panel)
( )IPS:Next Generation KE Tools (panel)
( )IPS:Signal Processing (workshop)
( )IPS:Project Management II (workshop)
( )CIM:Flexible Manufacturing System (workshop)
( )CIM:Product Design and Analysis System (papers)
( )OBS:ODA & Integrated Information Man. (papers)
( )OBS:Distributed Operating Systems (workshop)
( )BR:VLSI Design Training Actions (workshop)

***Parallel Session VI*** (16.00-18.00)

( )MEL:CAD Frameworks (panel)
( )IPS:Computer-Based Training & Tutoring (papers)
( )IPS:The Parallel Computing Action (workshop)
( )CIM:Logistics and Multi-Supplier Chains (panel)
( )CIM:Modelling and Parallel Computing (workshop)
( )OBS:Harmonised Software Development (panel)
( )OBS:Whole Life Education (workshop)
( )BR:VLSI Design Training Actions (workshop)

**Wednesday 29.11.1989**

***Parallel Session VII*** (9.00-10.30)

( )MEL:Advanced Technology (papers)
( )IPS:Consumer IT (workshop)
( )IPS:Ecology of Computation (workshop)
( )IPS:Validation of KBS (workshop)
( )IPS:Development Environments (papers)
( )CIM:Robotics and Shop Floor Systems (papers)
( )OBS:Workstations (papers)
( )OBS:Integrated Business Applications (workshop)
( )IPS/BR:Neurocomputing (papers)
( )CIM/IPS :Integrated Sensors/Actuators and Control (workshop)
( )Technology Transfer I (workshop)

***Parallel Session VIII*** (11.00-12.30)

( )MEL:Device Modelling (papers)
( )MEL:Test, Packaging & Automation (papers)
( )IPS:Optics and Electronics (workshop)
( )IPS:Prototyping (panel)
( )CIM:Robotics for New Applications (workshop)
( )CIM:Life Cycle Quality (workshop)
( )OBS:Human Factors & Interfaces (papers)
( )IPS/OBS:The Object-Oriented Paradigm (workshop)
( )Technology Transfer II (workshop)

***Parallel Session IX*** (14.00-15.30)

( )MEL:High-Level Design and Tool Interface (papers)
( )MEL:Device & Process Modelling (workshop)
( )IPS:AI vs Engineering (panel)
( )IPS:Simulation (workshop)
( )IPS:IT for Natural Science (workshop)
( )IPS:Vision (workshop)
( )CIM:Management and Control (papers)
( )CIM:Engineering for the Environment (workshop)
( )OBS:LAN Applications (panel)
( )OBS:Mobile Working (workshop)
( )Technology Transfer III (workshop)

***Parallel Session X*** (16.00-18.00)

( )MEL:Silicon Compilation (panel)
( )IPS:Future of System Engineering (panel)
( )CIM:Putting CIM into Operation (panel)
( )CIM:CIM in the Process Industry (workshop)
( )OBS:IT Impact on Information Society (panel)
( )IES:Cosine (papers)
( )Technology Transfer IV (workshop)

**Thursday 30.11.1989**

( ) ***Plenary Session: IT Forum***

# 6th Esprit Conference 1989

## Panels and Workshops

This year more emphasis has been put on panels and workshops. Your attention is particularly drawn to:

**Panels**

MEL: CAD Frameworks: Panacea or Dream?
MEL Silicon Compilation: Now or When?
IPS: Systems, Safety and Quality
IPS: International Trends in IT Programmes
IPS: Future of UNIX
IPS: Prototyping
IPS: Future of System Engineering
CIM: Factory and Plant Communication
CIM: Logistics and Multi-Supplier Chains
CIM: Putting CIM into Operation
OBS: Home Systems and Intelligent Buildings
OBS: LAN Applications and Market Requirements
OBS: IT Impact on Information Society
BR: High Temperature Superconductivity
IPS/BR: Neurocomputing

**Workshops**

MEL: Manufacturing Science
MEL: Analogue Circuit Design
MEL: Lithography
MEL: Device & Process Modelling
MEL: CAD Integration
MEL: Multifunction Technologies for System Integration on the Chip
IPS: The Parallel Computing Action
IPS: Consumer IT
IPS: Software Maintenance
IPS: Project Management
CIM: Flexible Manufacturing System
CIM: Robotics for New Applications
CIM: Engineering for the Environment
CIM: Mechatronics
CIM: Human and Organisational Factors in CIM
CIM: Modelling and Parallel Computing
CIM: Life Cycle Quality
CIM: CIM in the Process Industry
OBS: Office & Business Security
OBS: Low Cost to High Tech Workstations
OBS: Distributed Operating Systems
OBS: Whole Life Education in the Information Society
BR: VLSI Design training Actions
IPS/OBS: The Object-Oriented Paradigm
CIM/IPS: Integrated Sensors/Actuators and Control Technology Transfer

## PRELIMINARY CONFERENCE PROGRAMME

**Brussels Congress Centre**

**Monday 27.11.1989**

**Plenary Session** (10.00-12.30)

**Parallel Session I** (14.00-15.30)
MEL: Analogue Circuit Design I (workshop)
MEL: Multifunction Technologies for System Integration on the Chip I (workshop)
IPS: High Performance Systems I (workshop)
IPS: Systems, Safety and Quality I (papers)
IPS: Integration of Data and Knowledge I
IPS: International Trends in IT Programmes (panel)
IPS: IT for Finance and Administration Domains (papers)
CIM: Architecture and Communications (papers)
CIM: Mechatronics and Embedded Systems (workshop)
OBS: Distributed Systems (papers)
OBS: Office & Business Security I (workshop)
BR: High Temperature Superconductivity I (panel)

**Parallel Session II** (16.00-18.00)
MEL: Analogue Circuit Design II (workshop)
MEL: Multifunction Technologies for System Integration on the Chip II (workshop)
IPS: High Performance Systems II (workshop)
IPS: Systems, Safety and Quality II (panel)
IPS: Integration of Data and Knowledge II
IPS: Multi-Agents Paradigm (workshop)
IPS: Software Maintenance (workshop)
CIM: Factory and Plant Communication (panel)
CIM: Human and Organisational Factors in CIM (workshop)
OBS: Home Systems and Intelligent Buildings (panel)
OBS: Office & Business Security II (workshop)
BR: High Temperature Superconductivity II (panel)

**Tuesday 28.11.1989**

**Parallel Session III** (9.00-10.30)
MEL: Advanced CAD Tools (papers)
MEL: Lithography for the Future I (workshop)
IPS: Advanced Methods & Tools for Software Developments (papers)
IPS: Project Management Tools I (workshop)
IPS: Parallel Architectures and High Level

# 6th Esprit Conference 1989

Language Paradigms I (papers)
IPS: Logic Programming (papers)
IPS: Performance Modelling (workshop)
CIM: Enterprise Networks (workshop)
CIM/BR: Management System Design and Implementation (papers)
OBS: Communication/Networking & Home I (papers)
OBS: From Low Cost to High Tech Workstations I (workshop)
IPS/CIM/OBS: HCI - Human Computer Interaction (panel)

**Parallel Session IV** (11.00-12.30)
MEL: CAD Integration I (workshop)
MEL: Lithography for the Future II (workshop)
IPS: Re-use (workshop)
IPS: Knowledge Acquisition and Machine Learning (papers)
IPS: IT for Engineering Processes (papers)
IPS: Parallel Architectures and High Level Language Paradigms II (workshop)
CIM: Prenormative Actions (panel)
OBS: Communication/Networking & Home II (papers)
OBS: From Low Cost to High Tech Workstations II (workshop)
IES: Users' Forum
IPS/CIM/OBS/BR: HCI - Natural Language (papers)
IPS/CIM/OBS/BR: HCI - Speech and Dialogue (papers)
CIM/OBS: HCI - Graphics (workshop)
IPS/CIM/OBS: HCI - Ergonomics (workshop)

**Parallel Session V** (14.00-15.30)
MEL: CAD Integration II (workshop)
MEL: Manufacturing Science (workshop)
MEL: Non-Volatile Memory on ASICs I (workshop)
IPS: Future of UNIX I (panel)
IPS: Formal Methods I (panel)
IPS: Next Generation Knowledge Engineering Tools (panel)
IPS: Signal Processing, Control Engineering and AI I (workshop)
IPS: Project Management II (workshop)
CIM: Flexible Manufacturing System (workshop)
CIM: Product Design and Analysis System (papers)
OBS: ODA & Integrated Information Management (papers)
OBS: Distributed Operating Systems I (workshop)
BR: VLSI Design Training Actions (workshop)

**Parallel Session VI** (16.00-18.00)
MEL: CAD Frameworks: Panacea or Dream? (panel)
MEL: Manufacturing Science II (workshop)
MEL: Non-Volatile Memory on ASICs II (workshop)
IPS: Future of UNIX II (panel)
IPS: Formal Methods II (papers)
IPS: Computer-Based Training & Tutoring (papers)
IPS: Signal Processing, Control Engineering and AI II (workshop)
IPS: The Parallel Computing Action (workshop)
IPS: Project Management III (workshop)
CIM: Logistics and Multi-Supplier Chains (panel)
CIM: Modelling and Parallel Computing (workshop)
OBS: Harmonised Software Development Tools (panel)
OBS: Distributed Operating Systems II (workshop)
OBS: Whole Life Education in Information Society (workshop)
BR: VLSI Design Training Actions (workshop)

**Wednesday 29.11.1989**

**Parallel Session VII** (9.00-10.30)
MEL: Advanced Technology (papers)
IPS: Consumer IT (workshop)
IPS: Ecology of Computation (workshop)
IPS: Validation of KBS (workshop)
IPS: Development Environments for Systems and Software I (papers)
CIM: Robotics and Shop Floor Systems (papers)
OBS: Workstations (papers)
OBS: Integrated Business Applications and Cooperative Work I (workshop)
IPS/BR: Neurocomputing I (papers)
CIM/IPS: Integrating Sensors/Actuators and Control I (papers)
Technology Transfer I (workshop)

**Parallel Session VIII** (11.00-12.30)
MEL: Device Modelling (papers)
MEL: Test, Packaging & Automation (papers)
IPS: Optics and Electronics (workshop)
IPS: Prototyping (panel)
IPS: Development Environments for Systems and Software II (workshop)
CIM: Robotics for New Applications (workshop)
CIM: Life Cycle Quality (workshop)
OBS: Integrated Business Applications and Cooperative Work II (workshop)
OBS: Human Factors & Interface (papers)
IPS/BR: Neurocomputing II (panel)

# 6th Esprit Conference 1989

IPS/OBS: The Object-Oriented Paradigm I (workshop)
CIM/IPS: Integrating Sensors/Actuators and Control II (workshop
Technology Transfer II (workshop)

**Parallel Session IX** (14.00-15.30)
MEL: High-Level Design and Tool Interface (papers)
MEL: Device & Process Modelling I (workshop)
IPS: AI vs Engineering (panel)
IPS: Simulation (workshop)
IPS: IT for Natural Science I (Medicine) (workshop)
IPS: Vision I (workshop)
CIM: Management and Control of Manufacturing Processes (papers)
CIM: Engineering for the Environment (workshop)
OBS: LAN Applications and Market Requirements (panel)
OBS: Mobile Working I (workshop)
IPS/OBS: The Object-Oriented Paradigm II (workshop)
Technology Transfer III (workshop)

**Parallel Session X** (16.00-18.00)
MEL: Microprocessor Design by Silicon Compilation (panel)
MEL: Device & Process Modelling II (workshop)
IPS: IT for Natural Science II (workshop)
IPS: Future of System Engineering (panel)
IPS: Vision II (workshop)
CIM: Putting CIM into Operation (panel)
CIM: CIM in the Process Industry (workshop)
OBS: IT Impact on Information Society (panel)
OBS: Mobile Working II (workshop)
IES: Cosine (papers)
Technology Transfer IV (workshop)

**Thursday 30.11.1989**

**Plenary Session IT Forum**

## ACCOMMODATION

Accommodation for the conference participants has been secured in the following hotels (all prices in Bfr.):

| HOTEL | Single Room | Double Room |
|---|---|---|
| Hilton | 6,500.-** | 7,500.-** |
| Amigo[1] | 4,500.-** | 4,950.-** |
| Europa[2] | 4,420.-* | 4,420.-* |
| Ramada | 4,040.-** | 4,730.-** |
| Novotel Grand-Place[1] | 3,990.-* | 4,275.-* |
| Archiméde [2] | 3,975.-** | 4,700.-** |
| Astoria [1] | 3,950.-* | 3,950.-* |
| Metropole [1] | 3,600.-** | 4,300.-** |
| Euroflat [2] | 3,500.-** | 4,200.-** |
| Bedford [1] | 3,460.-** | 4,340.-** |
| Arenberg [1] | 3,000.-** | 3,500.-** |
| New Siru | 3,000.-** | 3,600.-** |
| Chambord [1] | 2,925.-** | 3,525.-** |
| Delta [1] | 2,900.-** | 3,400.-** |
| Palace | 2,900.-** | 3,400.-** |
| Diplomat [1] | 2,900.-** | 3,400.-** |
| Chelton Concorde [2] | 2,730.-** | 3,075.-** |
| Charlemagne [2] | 2,400.-** | 2,850.-** |
| Argus [1] | 2,300.-** | 2,600.-** |
| Albert I | 2,200.-** | 2,500.-** |
| Ste Catherine [1] | 2,000.-** | 2,500.-** |
| Vendôme | 1,975.-** | 2,350.-** |
| Madeleine | 1,695.-** | |

1 situated within walking distance from Palais des Congrés
2 situated within walking distance from Commission building
* Price inclusive of service and taxes
** Price inclusive of breakfast, service and taxes

Participants who wish to stay in any other hotel must make their own arrangements.

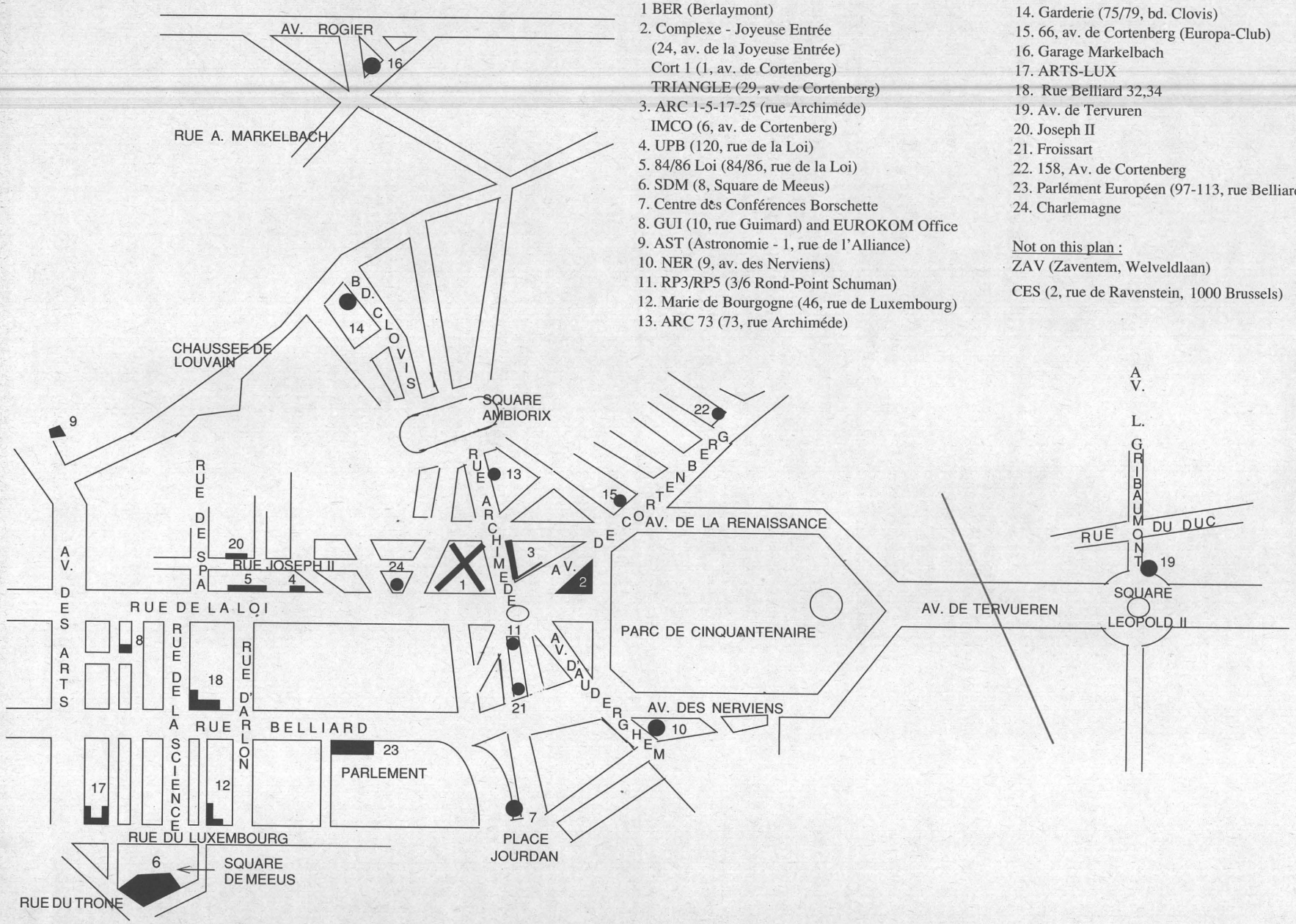
Deposit

To ensure reservation of accommodation, a deposit equivalent to one night is requested. Reservations without deposit will be cancelled a week prior to the Conference.

**Note:**

Please ensure that the Primary Area of Interest Page is also completed.
The Booking Form, once filled in, should be detached from the Newsletter and returned to E.C.C.O. at the address indicated

# BRUSSELS LOCATIONS OF THE EUROPEAN INSTITUTIONS.




1 BER (Berlaymont)
2. Complexe - Joyeuse Entrée
(24, av. de la Joyeuse Entrée)
Cort 1 (1, av. de Cortenberg)
TRIANGLE (29, av de Cortenberg)
3. ARC 1-5-17-25 (rue Archiméde)
IMCO (6, av. de Cortenberg)
4. UPB (120, rue de la Loi)
5. 84/86 Loi (84/86, rue de la Loi)
6. SDM (8, Square de Meeus)
7. Centre des Conférences Borschette
8. GUI (10, rue Guimard) and EUROKOM Office
9. AST (Astronomie - 1, rue de l'Alliance)
10. NER (9, av. des Nerviens)
11. RP3/RP5 (3/6 Rond-Point Schuman)
12. Marie de Bourgogne (46, rue de Luxembourg)
13. ARC 73 (73, rue Archiméde)
14. Garderie (75/79, bd. Clovis)
15. 66, av. de Cortenberg (Europa-Club)
16. Garage Markelbach
17. ARTS-LUX
18. Rue Belliard 32,34
19. Av. de Tervuren
20. Joseph II
21. Froissart
22. 158, Av. de Cortenberg
23. Parlément Européen (97-113, rue Belliard)
24. Charlemagne

Not on this plan :
ZAV (Zaventem, Welveldlaan)
CES (2, rue de Ravenstein, 1000 Brussels)

# TEDIS CONFERENCE

## BRUSSELS, 12-13 JULY 1989

Over two hundred participants attended a Conference in Brussels on the 12th and 13th of July to review the progress of the Commission's TEDIS[1] programme and to listen to representatives from the automotive, banking, chemical, insurance, retail and transport industries explain how the use of Electronic Data Interchange (EDI) was expanding in their respective industries.

In his opening speech, Mr Michel Carpentier, Director General for Telecommunications, Information Industries and Innovation (DGXIII) of the Commission expressed his pleasure at welcoming so many participants from different industries. He assured them that the Commission would be proposing the continuation of the TEDIS programme beyond the end of 1989 and that it would continue its support for UN/EDIFACT[2] standardisation of EDI messages. He also stressed the importance of the modified directive on open network provision (ONP) and of the directive under Article 90 of the Treaty of Rome, which will allow independent undertakings to compete with the Member States telecommunications monopolies in offering new services such as EDI on the telecomms network.

On the first day of the conference, members of the TEDIS team presented the results of a series of workshops held in June to examine legal, telecommunications and security issues. Some 150 experts took part in these workshops, which looked in detail at what has still to be done to encourage the take up of EDI throughout Europe. The reports from these workshops will be taken into account as the proposal for the continuation of the TEDIS programme is drawn up over the next few months. Some preliminary findings from a survey of awareness of EDI throughout the Community were discussed.

The second day was devoted to presentations from industry user groups: ODETTE[3] for the automotive industry, CEFIC-EDI[4] for the chemical industry, EDIFICE[5] for the electronics and computing industry, EAN[6] for the retail and wholesale trades, RINET[7] for the insurance sector, as well as representatives from the transport and banking sectors.

Amongst these groups of users there was a common feeling that now, with the stable standards provided by UN/EDIFACT, it was possible to build EDI systems that bridged across different industries and across all the Member States. This made it all the more important to resolve outstanding issues which hindered the development of EDI.

The rapid growth in the spread of EDI was illustrated by the announcement of two new user groups. EDIGLASS and EDIMETAL are new European industry sector EDI user groups for the glass and metallurgical industry respectively. They have the support of enterprises in all the Member States and also from countries outside the Community.

Mr Etienne Dreyfous, Chairman of the UN working party responsible for UN/EDIFACT, drew a number of conclusions from the two days' discussion. He said that users called upon the Commission to continue its effort to raise public awareness of EDI, to continue its support for standardisation, and to remove legal obstacles to trade by electronic means. European industry, commerce and public administrations needed secure and transparent telecommunications services, and he asked the Commission to support projects which were transnational and broke down the barriers to EDI between different industries and between the public and private sectors. The Commission must also ensure that the needs of small and medium sized enterprises, and of developing countries were not forgotten.

R. WAKELING
CEC, DGXIII/D/5
Brussels

1 A Community programme on Trade Electronic Data Interchange Systems (87/499/EEC). (See progress report in IES-News No 21, April 1989)

2 A set of standards developed within the United Nations for Electronic Data Interchange for Administration, Commerce and Transport. The EDIFACT Board is being granted Associate Body Status with CEN. Some of these standards are already ratified as International and European Standards. (See box)

3 Organisation for Data Exchange by Teletransmission in Europe.

4 Conseil Européen des Fédérations de l'Industrie Chimique -EDI project.

5 EDI Forum for companies with Interests in Computing and Electronics.

6 The International Article Numbering Association.

7 Reinsurance and Insurance Network.

**UN/EDIFACT: United Nations rules for Electronic Data Interchange For Administration, Commerce and Transport**

UN/EDIFACT comprises a set of standards, guidelines and directories for the electronic interchange of data related to goods or services, developed under the aegis of UN/ECE. The components of UN/EDIFACT are maintained under agreed procedures.

They include:

- the Syntax rules, also issued as ISO 9735 (EN 29735)

- the United Nations Trade Data Elements Directory (UNTDED), part of which constitutes ISO 7372 (EN 27372)

- the United Nations Trade Data Interchange Directory (UNTDID), which includes:
  . a directory of composite data elements (EDCD)
  . a directory of standard segments (EDSD)
  . a directory of United Nations Standard Messages (EDMD)

- Message design and syntax implementation guidelines

- Uniform Rules for Conduct of the Interchange of Trade Data by Teletransmission (UNCID)

- Explanatory material as appropriate

# T E D I S CONFERENCE

## BRUSSELS, 12-13 JULY 1989

**List of Messages already under development with UN/EDIFACT:**

| UNSM 6 letter code name | Descriptive Title |
|---|---|
| INVOIC | Invoice, Debit, Credit note |
| ORDERS | Purchase Order |
| ORDRSP | Purchase Order Response |
| ORDCHG | Purchase Order Change Request |
| CUSDEC | Customs Declaration |
| CUSRES | Customs Response |
| EURDEC | European Subsets including SAD, Simplified Procedures and specific national requirements |
| DESADV | Despatch Advice |
| DELFOR | Delivery Forecast |
| DELJIT | Delivery Just in Time |
| QALITY | Quality Data Message |
| REMADV | Remittance Advice |
| PAYORD | Payment Order |
| PAYEXT | Extended Payment Order Letter of Credit |
| CREADV | Credit Advice |
| DEBADV | Debit Advice |
| CREEXT | Extended Credit Advice Banking Statement |
| IFTMFR | International Forwarding and Transport Message (IFTM), consisting of:<br>Provisional Booking<br>Firm Booking<br>Booking Confirmation<br>Instruction<br>Instruction Contract Status<br>Arrival Notice<br>Manifest |
| CONTRL | Control Message |
| GENRAL | General Message |
| DIRMNT | Directory Maintenance Message |
| PRICAT | Price/Sales Catalogue |
| REQQTE | Request for Quote |
| QUOTES | Response for Quote |
| CURRAC | Current Account |
| REINAC | Reinsurance Account |
| PARTIN | Party Information (Trading Partner Profile) |
| INVRPT | Stock Report/Distribution Report |
| STATAC | Statement of Account |

COSINE NEWS

Cooperation for Open systems Interconnection Networking in Europe.

COSINE News intends to cover viewpoints of all parties with interest in COSINE.

# THE COSINE USERS' MEETING

## Brussels, June 23, 1989

Sixty-five data communications specialists, the majority of whom each represented a group of potential COSINE users, followed the invitation issued by the Commission on behalf of the COSINE Policy Group to participate in this meeting in Brussels on the 23rd June. Following the showing of a Video prepared for the EUREKA Ministerial Conference in Vienna earlier that week (which drew a parallel with the evolution of the European railway network during the nineteenth century), Dr. Peter Tindemans (Chairman of the COSINE Policy Group) outlined the overall structure of the COSINE Implementation Phase which will last for a three-year period. COSINE will provide the basic infrastructure up to and inclusive of the general application services such as the Message Handling System (MHS) in which user groups can build their specialised services. He introduced RARE as the organisation which would provide the management unit which will be the focus during the Implementation Phase.

The outline presented by Dr. Tindemans was then expanded by Mr Keith Bartlett (Department of Trade and Industry, UK, and a member of the COSINE Policy Group) who stressed that the proposed COSINE services would be OSI-conformant and where possible be based on known technology, available standards and products, be in accord with the current regulatory situation and would be operated by professionally managed organisations. Any new services to be introduced, such as the International X.25 Infrastructure project and the much needed gateway to North America, should be such that commercial operation after the COSINE Implementation phase was practicable and realisable. Other projects which were planned to start operation during the three-year period included directory and information services, security mechanisms and provision, and User Group Support. High-speed networking was also high on the list of priorities for early realisation. Mr Klaus Ullmann and Professor Christian Michau presented RARE. They indicated how RARE and the COSINE management unit propose to work by explaining how RARE is coordinating the various research networks that cooperate to realise a paneuropean X.25 backbone

The next two speakers, Mr Horst Hünke (DG XIIIA) and Mr Adriano Endrizzi (ISPRA Research Centre), both showed how networking was an essential aid in the various research programmes of the Commission and what help was and will be given to the Implementation phase. Rapid and unhindered communication and information sharing by researchers was an essential constituent of all research programmes. Mr. Hünke described the role of the IES services which had been initiated as part of the first Esprit phase. Mr. Endrizzi indicated that ISPRA and the other Community Joint Research Centres are actively identifying R & D user groups requiring network facilities and coordinating any Subject-oriented User Associations which might be formed in the future. He mentioned as examples of such User Communalities the European Research Community on Flow Turbulence and Combustion

# THE COSINE USERS' MEETING

## Brussels, June 23, 1989

(ERCOFTAC) where the European aerodynamics researchers, both industrial and academic, were actively pursuing the implementation of 2 Mbit links as a minimum to meet the needs of data exchange: aerodynamic research was costly and data exchange essential. Much had already been achieved here with ISPRA playing a coordinating role and acting also as a repository of data, which were subject to frequent updating. A similar situation existed in the Fusion Research area, where ISPRA was involved in design of a robot for maintenance purposes with the reactor design data coming from the FRG. The growing interest in environmental data with the probable establishment of an European Environmental Agency under the aegis of the Commission would also highlight the need for complete interconnectivity of networks and research centres.

There followed a short contribution by Mr J.P. Levaux of the Belgian RTT on the European Broadband InterconnectionTrial (EBIT) involving 18 participants in 14 countries. A RACE project, Ebit Service Provision (ESP), had now been started to provide a central group to push forward with this activity.

The afternoon session was devoted to short presentations of the current activities, and future requirements, of various actual and potential network user groups. The first dealt with the needs and plans of the European Marine Community for oceanographic and related data exchange which had become a high-priority item for the management of threatened marine resources. Rapid transmission of the large volume of monitored data, especially after accidents (oil spills) were a prerequisite for remedial action, with availability of a central datastore also of pressing necessity. The initial steps for this were now under way. A brief French paper described the provision, on Minitel, of information on French publicly-funded research projects. This service had been developed by the Ministry of Research in Paris to supplement the more sophisticated databanks on research information and to be more widely available to the general public. In Italy, the Consiglio Nacionale delle Ricerche had established a database containing information on over 10.000 new research projects started each year by more than 300 Research Institutions receiving public funds, and these data were available over the academic network service. The EXIRPTS Project (EXchange of Information on Research ProjecTS) was a joint venture by the 7 Industrialised Countries plus Sweden to share data on publicly funded research activities. At present, data exchange was between the various participating National Institutions, with user queries being handled off-line by the respective centres. (Editor's note: further information on this project will be available later this year, and will be reported in due course). The special requirements of mathematicians for networking which had led to the EUROMATH project under the aegis of the European Mathematical Society were then described with emphasis on the wider applicability of the experiences gained: here an estimated 200 institutions with 10.000 researchers will ultimately be involved. At present, National Mathematical Societies are coordinating local activities, but common standards and procedures were being evolved. Special attention is being given to the ease of encoding mathematical symbols for transmission and database storage, as well as to developing a standard user interface. The last two aspects discussed were the use made by university libraries in the UK of the JANET network which could serve as a model for other countries, as a result of the JUPITER project, (described briefly in IES News No. 21, page 8), and the library initiative of the Commission which was aimed at making library resources more widely shareable throughout Europe, by using networks for remote catalogue access and for the transmission of interlibrary loan requests.

Whilst the afternoon papers dealt with widely different aspects of research usage of networks, there was a common theme underlying all presentations at this most interesting meeting: the growing awareness that sharing of resources, results and information by the most modern means available was one of the certain ways forward for a unified and therefore stronger and more competitive European research environment.

# COSINE FINAL SPECIFICATION PHASE OVERVIEW REPORT

We bring below the conclusions and recommendations from the formal document terminating the work during the Specification Phase as a service to our readers. The full report (CPG/89/0066) as well as copies of the various Specification Phase Reports can be obtained from:

COSINE Secretariat
c/o CEC DG XIII-A-2
A25 5th Floor /11
200, rue de la Loi, B - 1049 Brussels

RARE Secretariat
Postbus 41882
NL - 1009 DB Amsterdam

## INTRODUCTION

### *Purpose and Scope of Document*

RARE (Réseaux associés pour la recherche européenne), the association of European research networks and their users, undertook the technical work of the COSINE Specification Phase under contract to the COSINE Policy Group. RARE set up a detailed plan, the execution of which involved specialists from all over Europe: from consultancy bureaux, individual consultants, software houses, universities and, of course, the RARE Working Groups.

The purpose of this document is to present the conclusions of the Specification Phase of the COSINE Project and the annexes summarising the implementation tasks to be completed at the international, national and local levels.

## CONCLUSIONS AND RECOMMENDATIONS

### *Conclusions*

The main conclusion of the COSINE Specification Phase is that the establishment of a pan-European communications infrastructure can be achieved if a coordinated approach is taken to the procurement and implementation of systems and services. The report has summarised the issues which must be addressed in order to make this happen.

COSINE therefore focuses on providing an enabling mechanism in support of this infrastructure.

### *Recommendations*

The principal recommendation of the report is that resources should be made available for the COSINE Project Management Unit (CPMU) to be established as soon as possible. The CPMU will be responsible for carrying out the tasks defined at the international level in the Annex (section 1). It is envisaged that these tasks will provide the necessary support to initiate the tasks defined at the national and local levels (sections 2 and 3).

The user requirements defined in the report are largely based on the use of a set of services offered by the research networks currently operating in the COSINE community. In order that COSINE continues to reflect the real communications needs of the community, it is recommended that:

- end-users and facilities managers are made aware of the potential benefits of COSINE

- resources are made available to enable end-users and facilities managers to participate in the continuing process of defining their requirements and enhancing the scope of COSINE specifications. These can then be fed into the base and functional standards making process as appropriate.

A number of specific technical requirements have been identified which require resolution very early in the Implementation Phase. It is recommended that the following are progressed as quickly as possible:

- addressing issues

- registration issues and responsibilities

- accounting principles

- security policy

It is recommended that, as soon as possible after the resolution of the above issues, the production of the various guides necessary as part of an awareness programme should be completed and the guides distributed to the COSINE community.

## ANNEX: IMPLEMENTATION PHASE TASKS

### *1. International Level*

The Implementation Phase will be coordinated at an international level and will require the following tasks to be undertaken:

- the development of a major awareness programme, directed at all levels of the COSINE community, showing the benefits to be gained

# COSINE FINAL SPECIFICATION PHASE OVERVIEW REPORT

from participation in the project

- the maintenance of the COSINE specifications and their expansion to provide a full set of OSI functional profiles to be used by facilities and national domain managers in procurement

- the identification of deficiencies in the OSI base and functional standards and the specification of any enhancements which are required to meet specific COSINE needs

- the provision of assistance to member countries with the updating and harmonisation of COSINE National Plans

- the establishment of formal liaisons with PTTs/PTOs and suppliers in order to make the requirements of the COSINE community known and to assist the "market pull" effect

- the allocation of funds for pilot projects, the subsequent monitoring of the projects' progress, and the dissemination of the projects' results to the COSINE community

- the provision of the following information services:
  a directory of COSINE users
  an interoperability register

- the identification of any new services which are required beyond the Implementation Phase

- the provision of help desk and fault reporting services for internationally provided services

- the establishment of a framework for reporting quality of service

- the production of guidelines for security, naming and addressing and procurement policies, and their dissemination as part of an educational programme for facilities managers and national domain managers

- the provision of input to standards making initiatives such as ETSI and EWOS

- an investigation into the requirements for the registration of information objects which are relevant to the entire COSINE community

- the establishment of a practical means by which the activities started by COSINE can be continued beyond the Implementation Phase.

*2 National Level*

At the national level the organisations responsible for promoting and/or implementing COSINE must undertake the following tasks if they are not already doing so:

- the migration of existing networks and systems to OSI

- procurement of new systems conforming to OSI standards

- the provision of a help desk and fault reporting services for nationally provided services

- the establishment of a framework for reporting quality of service

- the implementation of appropriate pilot projects and the dissemination of the results

- the operation of international gateways as appropriate, coordinated at the international level

- the maintenance of the security of any nationally provided service according to COSINE guidelines

- the provision of a registration authority or input to a national registration authority
- the provision of a national directory

- the production of any technical guides and awareness material tailored to meet specific national needs and in national languages as necessary

*3 Local Level*

In many ways the facilities managers' tasks are similar to those of the national domain managers. The following tasks will have to be integrated with those already being carried out:

- the migration of existing networks and systems to OSI

- procurement of new systems using OSI standards

- the provision of help desk and fault reporting services

- the establishment of a local framework for reporting quality of service
- the implementation of pilot projects as appropriate

- the implementation of gateways to external networks as appropriate

- the implementation of the security policy and the maintenance of the security of any nationally available system or service according to COSINE guidelines.

# SCOPE OF THE COSINE IMPLEMENTATION PHASE

## 1. Introduction

In April 1989 the COSINE Policy Group agreed upon the Project Plan for the Implementation Phase of COSINE. This plan builds upon the results of the Specification Phase. Copies can be obtained from the COSINE Policy Group Secretariat identified elsewhere. What follows is a summary of the major elements of this plan. In the last section the current status of the Implementation Phase is explained.

## 2. Objectives of COSINE

COSINE is essentially an infrastructure and enabling project with the following strategic objectives on the international level:

**a.** To create a common operational OSI interworking infrastructure on the basis of federated research networks to support all European research.

**b.** To establish and integrate on the required scale all the functions and support services necessary to allow the users to take full advantage of the infrastructure.

**c.** To take steps to ensure that the infrastructure remains available to European researchers after completion of the project.

**d.** To thereby contribute to the market pull for OSI.

By pursuing these objectives at the international level, opportunities emerge at the national level:

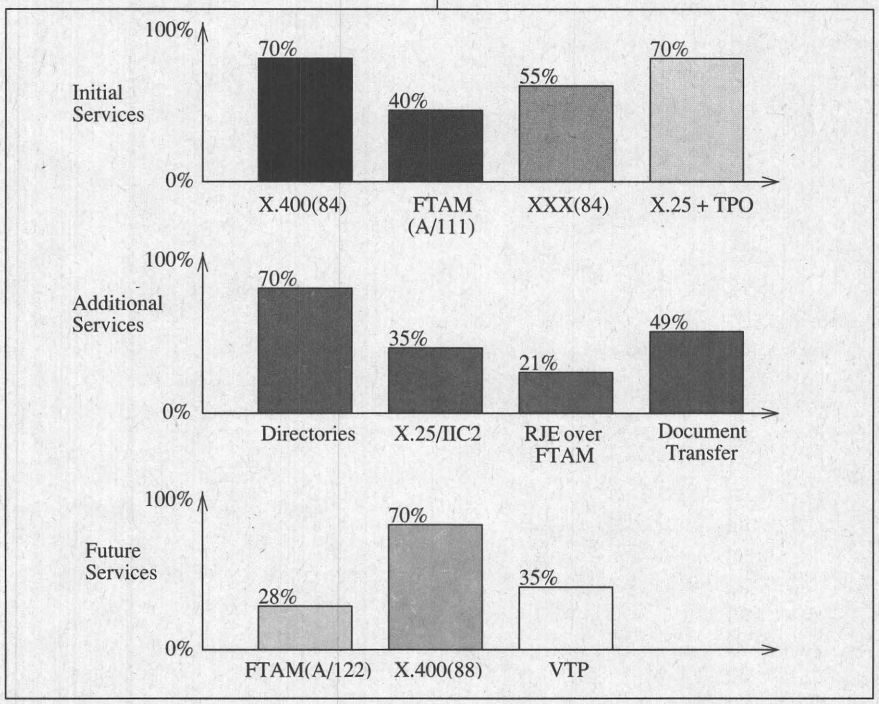
- To enhance the functionality of the national networks by expanding their connectivity though the adoption of international standards;

- To effectively work together with researchers from the total COSINE area to integrate into a European infrastructure the national infrastructures for research networking of the participating countries, together with the network for collaborative research of the Commission of the European Communities;

- To achieve a substantial national cost saving on research networking by reducing the need for duplication of telecommunications lines, equipment and software compared to current fragmented approaches.

## 3. Target markets for the COSINE services.

Requirements for the various communication services vary throughout the European research community. A scenario has been drawn up that assumes that in three years at least 225,000 scientists and engineers would use the most common OSI services such as message handling. Taking this as the 100% level, graphically the penetration targets for the various services are as follows:




## 4. Activities and organisation

Six initial user services have been defined which will be established directly as operational services. These are identified by S1 to S6 in the following list.

For other services, a pilot or development phase has to precede the operational stage. Ten sub-projects have been defined to investigate and pilot new products and services in international user communities. They are labeled P1 to P10. The total list is given below.

The Policy Group has decided as a first priority to focus on those services and projects that enable COSINE to establish operational networking quickly as well as work on future tasks and enlarge its support for those users involved in actual networking.

This core package aims at:

# SCOPE OF THE COSINE IMPLEMENTATION PHASE

**a.** setting up operational services quickly;
**b.** building up user and service providers' support;
**c.** setting up a professional management team;
**d.** working out detailed plans for the first priority items and for activities to be added later on.

This core package consists of

**S1** Provision of X.25 (1984) infrastructure (X.25 (1984) service provision; preparation, monitoring and evaluation).

**S2** Message handling services (interworking of existing X.400 administrative domains; gateway services to North America)

**P1.1** Pilot FTAM Gateway Services to North America

**P2** Pilot Information Services (International Directory Services, Support and Information Services)

**P3** International User Group Support

**P4** Pilot Projects on migration of existing networks or user groups

**P8** Security mechanisms: Study and pilots

Also a core COSINE Project Management Unit will be set up immediately.

The other services and sub-projects which will be decided upon later on, are:

**S3** Information services

**S4** Other gateway services to North America

**S5** International Directory Services

**S6** Security key management

**P1.2** Pilot gateway services to North America for remote access to computing services

**P5** Tools and techniques for OSI-adoption and migration

**P6** Pilots for implementations and demonstrations of multivendor interworking

**P7** Pilot procurement exercises for OSI based products

**P9** Future facilities (OSI over ISDN, Full screen terminal services, Job transfer and manipulation, High speed networking)

**P10** LAN/WAN interworking: investigation and testing

These activities will be carried out during a three year period by or under contract to a COSINE Project Management Unit that will provide consistency and coherence to the execution of the COSINE Project.

RARE, Réseaux associés pour la recherche européenne, the association of research network operations and their users, has been asked by the COSINE Policy Group to organise this unit. It will be the focus for the work in the implementation phase. The COSINE Policy Group, who represent the participating organisations who are funding the project, will retain overall responsibility, and will be assisted by a secretariat and a project officer provided by the CEC. A Technical Advisory Board will be set up to guide the Policy Group on difficult decisions where technical matters count.

It is COSINE's policy that services provided by COSINE should be operated on a commercial basis as soon as feasible, but during an initial period subsidising such services is planned.

Public calls for tender will be used, for the purpose of which a COSINE Register of companies showing an interest in carrying out work items will be established by the CPMU.

### 5. Current Status

Now that these plans have been finalised by the COSINE Policy Group, the necessary contractual documents have been prepared so that the Communities and participating countries can commit the necessary funds.

In the interim, the Commission on behalf of COSINE, is taking special steps to enable RARE to set up the Programme Management Unit and to consume the urgent activities already underway. This will rapidly enable COSINE to live up to the hopes so many European governments and the CEC have invested in it and reaffirmed at the EUREKA Ministerial Conference last June in Vienna.

Peter TINDEMANS
Chairman
COSINE Policy Group

# RECOMMENDATION FOR A SHORTHAND X.400 ADDRESS NOTATION

*One of the most frequently encountered queries in networking, especially by E-mail users, is the addressing of X.400 messages. One of the studies initiated by RARE was concerned with this aspect and we present below extracts from this work, published as RARE Report WG1-MHS-89.06.27*

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## Aims of this Recommendation

In X.400, messages are addressed to recipients by giving values to what are termed "attributes of the O/R-address (Originator/Recipient address)". The general attributes (1988) include Country code, Administration Management Domain, X121 address, Terminal identifier, Terminal type, Private Management Domain, Organisation Name, Organisational Units, Unique user agent identifier, Common name, Personal Name, Surname, Given Name, Initials and Generation Qualifier. X.400 does not however define a user interface for entering values for these attributes. Some X.400 systems prompt for values via menus, others define their own differing syntax for assigning values to attributes. This has the consequence that there is no standard textual representation for people to exchange their X.400 addresses, for example, on the back of a business card or attendance lists at meetings. If each attribute name is written in full then deducing the values is rather obvious, however the tendency is to use a short-hand representation. The objectives of this recommendation are therefore:

- To suggest a preferred shorthand notation for writing X.400 addresses which could be used and understood by any experienced X.400 user.

- To simplify local X.400 user guides which should define the mapping between the recommended notation and the local user interface. (Note that the recommended notation is not intended to replace the local user interface.)

- To give a meaning to some alternative notations already known to be in use.

Full copies of this and other RARE (Réseaux associés pour la recherche européenne) can be obtained from the RARE Secretariat

P.O. Box 41882
NL-1009 DB Amsterdam
Tel. +31 20 592 5078
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E-mail: raresec@nikhefh.hep.nl

### Examples of the Recommended Notation

C=de;ADMD=dbp;PRMD=gmd;OU=darmstadt;S=grimm

C=fr;ADMD=atlas;PRMD=aristote;O=inria;OU=mirsa;S=huitema

C=gb;ADMD=gold 400;PRMD=uk.ac;O=rutherford;S=craigie;G=jim

### Definition of the Notation

The notation takes the form:
<keyword>=<value>;<keyword>=<value>;...<keyword>=<value>
where keyword can be:

| | |
|---|---|
| C | Country name |
| ADMD | Administration management domain name |
| X121 | X121 address (network address) |
| T-ID | Terminal identifier |
| T-TY | Terminal type |
| PRMD | Private management domain name |
| O | Organisation name |
| OU | Organisation unit name |
| UA-ID | Unique user agent identifier (numeric user identifier) |
| CN | Common name |
| S | Surname |
| G | Given name |
| I | Initials |
| GQ | Generation Qualifier |

# RECOMMENDATION FOR A SHORTHAND X.400 ADDRESS NOTATION

**Note:**

1. Keywords and their values should be written in hierarchically descending order starting with country name.
2. Organisation Units are written in their natural hierarchically descending order (i.e. OU1>OU2...>OUn).
3. Keywords with empty values are omitted.
4. No distinction is made between upper and lower case although keywords in upper case and their values in lower case gives a clearer display.

Guidelines for Business Cards

Since business cards are mass produced, it might not be so important that the address is short to write, and the cards may be seen by a wide range of people, not all of them familiar with the short-hand notation described in this recommendation. A longer form of X.400 address may then be more appropriate. This longer form should be self-explanatory so there is no need to define a precise format, however some general guidelines are:

- choose attribute names which are obvious and unambiguous

- clearly separate attribute names from their values

- print attributes in descending order (i.e. country code first) so that the organisational units appear in their natural sequence. If attributes are printed in ascending order and include more than one organisational unit, the least significant should appear first (...OU2<OU1<O).

Below is an example format suggested, for use on the back of a business card, by the UK research community.

| | |
|---|---|
| Country | GB |
| ADMD | Gold 400 |
| PRMD | UK.AC |
| Organisation | Rutherford |
| Surname | Bloggs |
| Given-Name | Joe |

Rüdiger GRIMM (GMD)
and Denise HEAGERTY (CERN)

# BOOK REVIEW

## European Telecommunications Policy Research.

**Editors:** N. GARNHAM and
A. AKSOY.
Amsterdam: IOS, 1989, 242 pp. (DFl 105)

The Communication Policy Research Conference series started in 1986 and the present volume reports on the Proceedings of the 1988 Meeting, held in June of that year at Windsor, UK. The aim of these conferences supported by the UK Economic and Social Research Council, is to foster a network of European scholars researching contemporary communications policy issues. Emphasis has been on telecommunications policy since:

- it is a subject of growing policy relevance at both national and European level;

- it has not attracted academic research until recently, because both prior to liberalisation, it was considered uncontentious and within the dominant monopoly PTT framework, policy issues were the domain of a select group of network engineers, managers and civil servants;

- in a more liberalised environment, policy debate and formation tend to become a battle ground for vested interests and there is a greater probability of the academic sector with its critical inquiry tradition playing an increasing role in addressing issues of wider public interest.

The first session presented US and Australian experience in telecommunication deregulation with one paper describing the effects of US policy on the Bell group of Companies. Deregulation did not always bring only benefits to the users. Problems which had to be addressed included the vexed question of cross-subsidisation. A further contribution discussed the attempts to extend national telecommunication regulations to an international level.

The second part of the meeting

# BOOK REVIEW

dealt with problems arising from the introduction of Integrated Services Digital Network (ISDN), referred to by one speaker as Interests Submerged in a Digital Network. One of the principal conclusions of this group of papers was that there was an inherent danger in making a premature technical closure and giving preference, not always based on careful analysis of all policy aspects, to technical over economic and social aspects. The key issue, especially in the FRG, was the conceived threat to personal privacy and personal liberties, whilst this aspect was of little concern in France or the UK, the difference in views being the result of historical events in the recent past. The British and French worry was with who will use the service and who will pay for it. Ownership of information in an ISDN environment was also a matter for concern, particularly in the Netherlands.

In the session on User Perspectives, the point was made that there was a difference between Universal Service and Public Service and that to reach consensus on European regulatory policies will involve reconciliation of widely disparate views on legal and political issues and traditions. Universal service and bypass are closely related with technical and economic opportunities for bypass being particularly attractive in a liberalised environment with further encouragement to bypass being given to major corporate users if cross-subsidies needed to underpin universal service provision are maintained. The enormous growth of bypass networks resulting from intercorporate competition and the ensuing flexibility, ease and volatility of capital movements could undermine traditional notions of sovereignty and bring with it State intervention in the monetary flows. The possible disadvantages to small enterprises of liberalisation without ensuring application of universal service principles to new services and networks was also a subject which required careful investigation.

The final session addressed the key issue of whether or not telecommunications are natural monopolies and whether this position is reinforced or undermined by recent technological developments towards intelligent and broadband services, but it would appear that full benefits of the economies of scale have not always been achieved in telecommunications and that this sector has, furthermore, not always shown higher productivity gains than the less high-technology driven sectors of the economy. Cost-based pricing will ultimately not offer an escape from regulatory complexity arising from the need to integrate national regulatory networks.

One of the attractive features of the publication is the wealth of data, mostly very up-to-date, presented with full references to sources and further information. Reading thirteen papers made your reviewer regret that he was not at the meeting, all the more so, as the discussions, which must have followed the various presentations, are not included.

Peter Popper

## Suppliers' OSI Products and Plans.

In IES News No. 19 we published a Table summarising available OSI Products and Plans. We intend to present an update of this in the next issue. Your urgent help in this matter is required. Any information received by October 18 will be included.

### Your Attention, Please

Since the first issue of IES News, we have tried to bring you news and views of what we, on the editorial side, believe to be of importance and interest to you. With over 10 000 recipients of a publication, it is however difficult to judge whether we are meeting our aims. Considering the high number of address changes which reach us, we appear to be having success. It is also pleasant to note that there have been virtually no complaints, not even of the many small blemishes of which we have been guilty.

As we have repeatedly stated, this is YOUR newsletter and we want to have your views, suggestions, criticisms and even the occasional word of praise. We would like to reflect your views and opinions, but for this we need your feedback, so please resort to your terminals or pens. Naturally we will be at the Esprit Conference to meet you in person.

The Editor

**PS. Please address all correspondence, including requests to be put on the mailing list, to:**

**The Editor**
**IES-News**
**13, rue de Bragance**
**L-1255 Luxembourg**

# NEWS FROM CEN/CENELEC

## IT TESTING AND CERTIFICATION

In IES News No. 20, we reported that there were two conformance testing arrangements (i.e. arrangements for mutual recognition - by testing laboratories and certification bodies - of test reports and certificates) that were halfway to being accepted in the European System for IT Testing and Certification. Since the middle of May that acceptance has now been achieved, and under the authority of ECITC (European Committee for IT Testing and Certification), these are now the first two active in this European System.

The arrangements are:

- OSTC (Open Systems Testing Consortium), providing testing services in the areas of Message Handling Systems (MHS), Teletex, File Transfer and Management (FTAM), Transport and Session layers, and OSI networks (specifically X.21, X.25 and X.21 bis).

- ETCOM (European Testing and Certification for Office and Manufacturing Protocols), initially active in the areas of Manufacturing Message Specifications (MMS), Directory services and network management, plus various elements of the lower layers.

Further information can be obtained from OSTC, c/o NCC Ltd, Oxford Road, Manchester M1 7ED, UK; and ETCOM, c/o SPAG Services, Av. Louise 147, bte 7, B - 1050 Brussels.

Information in general on the European System (and how to have a recognition arrangement accepted) can be obtained from the CEN/CENELEC Central Secretariat. (N.B.: copies are still available of the Proceedings of the CEN/CENELEC/CEPT Workshop on IT Certification and Testing in Europe - a document of 200 pages which gives a very good background to the current activities. The price is Bfr 1.500).

## WORKSHOP ON SECURITY ASPECTS OF FUNCTIONAL STANDARDISATION

A workshop organised by CEN/CENELEC on the security aspects of functional standardisation in the OSI fields will be held in Brussels on 12 October. The programme has still to be finalised, but the overall objective of the workshop is to give guidance on how to include security aspects in the European OSI functional standardisation programme. More specifically, the aims are to

- provide an overview of the current work in the area of OSI security (architecture/concepts/framework; concrete solutions, offered in existing base standards);

- identify user requirements and priorities regarding security functions;

- propose concrete work items for security functions in Functional Standards;

- propose schedules for such work;

- help identify the necessary expertise for security work;

- help assign work items to European organisations such as EWOS, ETSI.

Readers interested in participation (which is free of charge), should contact CEN/CENELEC.

## CEN TECHNICAL COMMITTEE ON TRANSACTION CARDS STANDARDISATION

The May workshop on European standardisation of transaction cards (i.e. plastic cards not only for financial purposes, but including in particular IC Cards - "Smart" Cards - for many different application) caused considerable interest and some 100 persons attended and listened or offered their views. The outcome was an inventory of possible standardisation projects and a recommendation to the CEN Technical Board to set up a Technical Committee for this work, in particular for work on IC Cards.

The Technical Board met one month later and decided then that as a first step, the scope must be formulated and a work programme elaborated. At the end of August, therefore, an ad-hoc group will convene to propose to the Technical Board these two items. The final decision by the Board will then be taken in October.

Some copies of the 170-page report of this workshop are still available from CEN/CENELEC.

# NEWS FROM CEN/CENELEC

## STANDARDISATION OF BAR CODING

CEN has received from the Commission and EFTA a mandate for European standardisation on the use of bar codes. In order to find out the real needs in this area, a workshop will be held on 25-26 September in Brussels. The purpose is to have representatives from different fields of application inform CEN (and each other) on their respective work, their problems (if any) and to what degree they can be alleviated by standardisation.

The aim is to have the workshop organised like a committee, where everybody is supposed to represent a certain sector and everybody will make his (or her) own presentation, the attendance is limited to 30 persons. However, if readers feel that their presence will be useful, they should check whether or not their specific field of application is going to be represented. If this is not the case, the CEN secretariat should be approached.

The scope of the workshop is of course not only the actual symbology (the bars themselves and the way they are represented), but also the underlying data structure. A brief look at other, similar ways of presenting the same data (e.g. radio frequency coding, magnetic stripe coding) is also needed.

## X/OPEN ON ITS WAY TO BECOME A EUROPEAN PRESTANDARD

The X/Open Portability Guide has since February been under ballot to become a European Prestandard (ENV). However, some problems have been met in the process, which therefore now is being revised slightly. In the first place, it should be clear that it is not a matter of all or nothing; in other words it is perfectly in order for CEN to adopt some but not all seven parts of the Guide. This is in fact likely to happen.

In the second place, and in order to give more time to the National CEN members, the ballot has been changed from a correspondence vote with an August deadline to voting at a meeting next January. The deadline for comments on the documents is now 1 November; the comments will then be circulated to CEN and EWOS members and discussed at the EWOS workshop in January (subject to EWOS decision in October 1989). Immediately following the workshop meeting, the new draft is then expected to be produced for CEN members to vote on.

This procedure will also give the possibility of taking into account the results of the ISO meeting on POSIX in October and the IEEE POSIX 1003.1 meeting the week after (both in Brussels).

## ISO/IEC TR 10000 AND THE DIRECTORY OF FUNCTIONAL STANDARDS

The CEN/CENELEC/ETSI Memorandum M-IT-02 is the directory of OSI Functional Standards, including the ones already published and the ones where no work has as yet even started. ISO/IEC DTR 10000, expected to be published as a full Technical Report later this year, is essentially based on this directory and in particular, its way of classifying the standards.

However, the taxonomy of the International Standardised Profiles (ISPs) differs in some aspects - notably the designations - from M-IT-02. Therefore, CEN/CENELEC has been mandated by the Commission to align M-IT-02 (and also Memorandum M-IT-01, defining the principles for OSI functional standardisation) with TR 10000. The alignment will not only concern the taxonomy but also items such as the structure of the functional standards.

The actual work of outlining the work of the alignment has been subcontracted to EWOS. Once this work is completed - a final report is expected early next year.

## FOURTH ISSUE OF M-IT-02 PROPOSED

The above-mentioned M-IT-02 is now in the state of final draft of its fourth annual issue. This draft is the result of input from mainly EWOS and ETSI discussed at the Open ITAEGS (Information Technology Advisory Group for the Coordinated Planning of Open Systems Functional Standardisation) Meeting in July. The draft has now passed to ITSTC (CEN/CENELEC/ETSI IT Steering Committee) for adoption in August, with publication in September.

# NEWS FROM CEN/CENELEC

## NEW TYPE OF COMMISSION MANDATES FOR IT STANDARDISATION

Among the latest batch of IT standardisation mandates on its way to CEN/CENELEC are four "study and investigation" mandates. They are not intended to produce standards but rather to lay the theoretical foundations for later standardisation.

The mandate on the alignment of M-IT-01 and M-IT-02 with TR 10000 is such a mandate. Others in this first round are the study and investigation of problems related to

- OSI conformance testing methodology, including the methodology for the elaboration of test specifications for Functional Standards;

- the necessary steps to "guide the drafting of a framework for the elaboration of a consistent and integrated set of IT Functional Standards supporting the development and implementation of open systems";

- the use of OSI for bibliographic applications in libraries;

- the standardisation in medical informatics.

It is not clear to what extent these mandates will be accepted by CEN/CENELEC. For instance the last item is a very complex one, and it may be difficult to find expertise in the CEN/CENELEC IT sphere to handle it.

## NEW PROPOSALS OUT FOR BALLOT

At the EWOS workshop in April, the following documents were drafted and have since been sent to the CEN and CENELEC members for ballot as prENV:

- prENV 41 204, FTAM - Simple file transfer (unstructured). This is a revised version of the already published Prestandard;

- prENV 41 205, FTAM - File management;

- prENV 41 206, FTAM - Positional file transfer (flat);

- prENV 41 207, FTAM - Positional file access (flat).

The former ENV 41 102, Connection-mode transport service and connectionless-mode network service on a CSMA/CD LAN in a single or multiple LAN configuration, has had its allotted life-span as ENV and a revised version is now going to be balloted as a prEN.

Further information on all items mentioned can be obtained from

CEN/CENELEC
2, rue Brederode
BP 5
B - 1000 Brussels
Tel. +32 2 511 7932

# FURTHER PROGRESS MADE BY EWOS (European Workshop for Open Systems) IN THE DEVELOPMENT OF OSI STANDARDS:

RELEASE OF FIRST VIRTUAL TERMINAL PROPOSALS

More than 50 European User Organisations, IT-suppliers, Government bodies, and Academia, met on 7 July , 1989 in Brussels during the 6th Technical Assembly of EWOS.

On schedule, 2 new draft Functional Standards were approved and issued as EWOS DOCUMENTS ED 009 and ED 010, corresponding to:
- Profile A/4121: VT: Basic Class-S-mode-Forms, and
- Profiles Q/411-422: VT Control Objects

As was already done with the EWOS DOCUMENTS, released earlier this year (four on FTAM, three on ODA and one on Lower Layers), the new proposals will also be submitted to CEN/CENELEC for processing as European pre-Standards (ENV's).
The current EWOS proposals also comprise a first EWOS TECHNICAL GUIDE (ETG). This is a special type of EWOS output, aiming at facilitating the development, the implementation and the use of Functional Standards.

Procurers and users have a high interest in the production of such documents.

A few more ETG's are announced for delivery in the next months, aiming at clarifying issues on:
- addressing in the Layers 1-4
- use of Directory Profiles
-Taxonomy for Manufacturing Messaging Service (MMS).

It was furthermore decided to or-

ganise a Tutorial Session on SGML (Standard Generalised Markup Language) during the next EWOS Workshop and to examine its potential relations with the ODA Profiles.

A number of users and vendors would indeed appreciate assistance in finding decision criteria to determine their future choices in these domains.

After having defined, earlier this year, a General Policy for work on Conformance Test Specification Standards, EWOS has now taken initiatives to set up procedures for a coordinated development of such specifications in Europe.

A Study and Investigation Mandate has been issued by the Commission, after positive advice of the competent national representatives, in order to support a common action in this respect by the Standardisation Bodies ETSI and CEN/CENELEC (via EWOS), the Recognition Arrangements OSTC and ETCOM, and the Coordination Bodies ITSTC and ECITC (see also "News from CEN/CENELEC" on page 20).

The harmonisation on European level remains for EWOS an important goal, which is reached through a maximum of joint meetings with ETSI, especially for DIR and MHS developments.

On an international level, the Regional Workshop Coordinating Committee (RW-CC) guarantees the best possible global alignment by organising the ongoing cooperation between EWOS, the OSI Implementors' Workshop of NIST in the US and the Asia-Oceania Workshop for Open Systems, based in Tokyo.

Finally a number of EWOS results are contributions to the ISP (International Standardised Profile) process on the level of ISO/IEC. EWOS has therefore applied for S-liaison to JTC-1, Special Group on Functional Standards. This liaison is in the meantime established.

Further information on EWOS and its activities may be obtained from its secretariat in Brussels,
Tel. +32 2 511 74 55
Fax +32 2 511 87 23.

# VALUE PROGRAMME ADOPTED

At its meeting of 20 June 1989 the Council gave its final approval to the VALUE Programme, which complements the various R & D activities of the Community under the Framework Programme by specific measures for the evaluation, exploitation and dissemination of the research results. VALUE is thus the "technology transfer" programme for the results of the Commission's RTD activities.

Its budget will be 38 million ECU for the period 1989-92.

There will be two sub-programmes:

**SUB-PROGRAMME I: DISSEMINATION AND UTILISATION OF THE RESULTS OF COMMUNITY RTD ACTIVITIES**

The objective is to disseminate by appropriate channels the results of Community R & D activities, so as to ensure an improvement in the level of exploitation and the resulting creation of economic activities by the following means:

1. Collection and dissemination of information concerning existing or planned Community RTD programmes, . using appropriate methods and means, such as computerised data bases, electronic information services, information and dissemination centres in the Member States, and editing and distribution of printed matter (newsletter, brochures, reviews, articles).

2. Identification, characterisation and screening, to establish their suitability for dissemination or exploitation, of relevant results of Community RTD activities by examining contracts and reports, assessing their scientific/technical and utilisation potential and examining the need for protection by means of patent applications, etc.

3. Action on legal protection of the results by having recourse to selected patent agents/advisers, examining reports to ensure confidentiality and protection before publication, assisting contractors and inventors, and through information and awareness activities.

4. Dissemination of results which need not be protected by publications (books, reports, summaries, newsletters, etc), organisation of and participation in seminars, conferences, exhibitions, etc., organisation of targeted dissemination activities, transfer of knowledge by (short-term) secondment of research workers participating in Community RTD projects, collaboration with and assistance to organisations in the Member States in setting up mechanisms for dissemination and electronic means such as data bases and associated services.

5. Promotion of the exploitation of relevant results by assessing, with the help of experts, the potential for exploitation of the results, providing expert advice in the setting-up and planning of exploitation projects, assisting in matters of legal and technical protection, exhibitions, assisting in

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finding partners for joint ventures or work under licence, providing financial and technical support for developing laboratory prototypes for collaborative precompetitive use, and advising participants in finding financial support from third parties.

**SUB-PROGRAMME II: COMPUTER COMMUNICATIONS NETWORKS**

The objective of this sub-programme is to contribute to the creation of a common integrated computer communications infrastructure and associated services, as well as to develop a network linking up the research and development community in Europe.

1. General support to the development of computer communications networks in the field of RTD.

Technical assistance and support to the RARE (Réseaux associés pour la recherche européenne) Association, particularly its pan-European projects (e.g. in the message handling and file transfer areas), to the implementation phase of the EUREKA COSINE project, and to Member States wishing to develop or adapt networks for the purposes of this programme.

## VALUE PROGRAMME ADOPTED

2. Work on requirements for confidentiality and integrity of Community RTD information.

Further information on VALUE can be obtained from
Mr. J.N. Durvy, Commission of the European Communities, DG XIII-C-2, B4/107, Jean Monnet Building, L-2920 LUXEMBOURG
Tel.: +352-4301-3610
Tlx: 2423/3446 COMEUR LU
Fax:+352-4301-4129

## FUTURE EVENTS

*COMPUTER SUPPORTED COOPERATIVE WORK*
*Computer Sciences Company, Gatwick, 13-15 September 1989*

*EXPLOITING NETWORKS. N.C.U.F. C.S. Services Ltd. Nottingham, 19-21 September 1989*

*ITU-COM '89. 1er Symposium mondial et 1ère Exposition mondiale des médias électroniques. Geneva, 3-8 October 1989*

*E.D.I. AND THE LAW. Blenheim Online Ltd., London, 3-4 October 1989*

*SMART CARD 2000. Amsterdam, 4-6 October 1989*

*1ST EUROPEAN WORKSHOP ON HYPERCUBE AND DISTRIBUTED COMPUTERS. INRIA, Rennes, 4-6 October 1989*

*CERTIFICATION ET ACCREDITATION, CLES POUR L'EUROPE 1992. IBN and CEB, Brussels, 11 October 1989*

*THE CONSEQUENCES OF THE EUROPEAN DOMESTIC MARKET FOR THE TRAINING OF INFORMATION EXPERTS*
*Information Specialists for Europe, Hannover, 17-19 October 1989.*

## FUTURE EVENTS

*SITEF '89. International Market of Advanced Technologies, Toulouse , 17-22 October 1989*

*BIOWISSENSCHAFTEN UND INFORMATION, COMPUTEREINSATZ IN DEN BIOWISSENSCHAFTEN. GBF, Bike. Braunschweig-Stockheim, 20-21 October 1989*

*CD ROM EUROPE '89. PLF Communications Ltd., London, 24-26 October 1989.*

*ENTERPRISE, INNOVATION AND 1992. INNOVATION SUPPORT SERVICES IN EUROPE. Technology Innovation Information , Nice, 26-27 October 1989.*

*EDI '89. Blenheim Queensdale Ltd., London 31 October - 2 November 1989.*

*LOGICA, INFORMATICA, DIRITTO. THIRD INTERNATIONAL CONGRESS ON EXPERT SYSTEMS IN LAW. Juridical Documentation Institute of the National Research Council. Florence, 2-5 November 1989.*

*COMPUTER GRAPHICS '89. Blenheim Online Ltd., London, 7-9 November 1989.*

*ISDN'89 EXPO, 5th Congress. Congress Gesellschaft Starnberg. Rheingoldhalle Mainz, 7-9 November 1989.*

*SERVICE COMMUNICATION MOVING TOWARD INTERNATIONALISATION OF EXCHANGES. IDATE, Montpellier 15-17 November 1989.*

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