

INNOVATION AND TECHNOLOGY TRANSFER

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Note to readers

Only a few days after the final approval of the **new RDT Framework Programme** the Commission has submitted to the Council and the Parliament **13 out of its 15 proposals for specific programmes**. In this issue of I&TT you will find more information on these proposals.

You will see that the new Framework Programme gives more scope to environmental matters, even if R&D in the fields of information and industrial technologies maintains its predominance. The Framework Programme also envisages cooperation with third countries, in particular with countries from EFTA and Central or Eastern Europe.

Further to the request of the Council, the Commission has just put forward **two communications** on these issues. They propose concrete measures to strengthen **cooperation with third countries**. As regards **Central and Eastern Europe**, the transfer of appropriate technologies will be essential to speed up the recovery of industry, to tackle environmental pollution, and to facilitate the move towards a market economy.

In this issue of I&TT you will find more information on these two communications, too. Last but not least, I should like to draw your attention to the **multitude of technology conferences** being announced in this issue.

A. S. Strub
Director for Exploitation of Research, Technological Development, Technology Transfer and Innovation

SPRINT CALLS FOR PROPOSALS
see page 42

THIRD R&D FRAMEWORK PROGRAMME FINALLY APPROVED

COMMISSION ADOPTS 13 OF 15 SPECIFIC PROGRAMMES

Barely two days after the Council's formal adoption on 23 April of the **third Framework Programme** of Community research and technological development (1990-1994), the Commission **has adopted the proposals for almost all of the specific programmes** envisaged by the framework programme (13 out of 15).

The very marked simplification and formal harmonization of the new programmes (all the proposals are based on the same model) will, incidentally, smooth the procedure for approving them and subsequently facilitate their management and access to them by interested parties, especially small and medium-sized firms. A look at the different proposals reveals **a change in the priorities** for Community action. The share of funds allocated to research in the **environmental field** (ECU 414 million), to **biotechnology** (ECU 164 million), **research workers** (ECU 518 million) has increased significantly compared with the past. In absolute terms, however, **information technology** (ECU 1362 million) and the **industrial technologies** (ECU 748 million) maintain their predominance.

Contact: Mr M. André, CEC, DG XII, SDME 01/38, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 236.07.81, Fax.: (32) 2 235.88.65. The Council Decision on the framework programme is published in OJ L 117 of 8.5.1990.

Order form: Please send me a copy of the brochure on the third framework programme in EN F :
 Name:
 Address:
 Postal Code: Town: Country:
 Please return to the address above.

THIRD FRAMEWORK PROGRAMME
 FOR COMMUNITY RESEARCH AND
 TECHNOLOGICAL DEVELOPMENT
 (1990-1994)

PROPOSALS FOR
 SPECIFIC PROGRAMMES



ALLOCATION OF APPROPRIATIONS FOR THE THIRD 1990-1994 FRAMEWORK PROGRAMME

The allocation of appropriation (total of 5.7 thousand million ECU) between the different actions (in ECU millions):

	1990-92		1993-94	Total
A. ENABLING TECHNOLOGIES				
I. Information and communications technologies	974		1247	2221
1. Information technologies		1352		
2. Communications technologies		489		
3. Development of telematics systems of general interest		380		
II. Industrial and materials technologies	390		498	888
4. Industrial and materials technologies		748		
5. Measurements and tests		140		
B. MANAGEMENT OF NATURAL RESOURCES				
III. Environment	227		291	518
6. Environment		414		
7. Marine sciences and technologies		104		
IV. Sciences and technologies of living organisms	325		416	741
8. Biotechnology		164		
9. Agricultural and agri-industrial research(1)		333		
10. Biomedical and health research		133		
11. Sciences and technologies of living organisms for developing countries		111		
V. Energy	357		457	814
12. Non-nuclear energies		157		
13. Safety of nuclear fission		199		
14. Controlled thermonuclear fission		458		
C. EXPLOITATION OF INTELLECTUAL RESOURCES				
VI. Human resources and mobility	227		291	518
15. Human resources and mobility		518		
TOTAL	2500		3200(2) (5700)	5700 (3)

1) Including fisheries
 2) Including 57 million ECU for the centralized action of dissemination and exploitation provided for under Article 4, collected proportionately from each action
 3) Including 180 million ECU for 1990-92 and 370 million ECU for 1993-94 earmarked for the Joint Research Centre

SPECIFIC PROGRAMMES UNDER THE NEW R&D FRAMEWORK PROGRAMME

1. INFORMATION TECHNOLOGIES

The programme is aimed at strengthening the technological basis of the Community in the field of **information technologies** and simultaneously accelerating the spread of information technology in the business world, manufacturing and private life. The programme will be implemented in the following areas:

- **Microelectronics**;
- **Information processing** and software;
- Advanced **office automation** and intelligent home systems; peripherals.
- **Computer-integrated manufacturing** and engineering;
- **Basic research**;

The total appropriation for the programme is ECU 1352 million.

2. COMMUNICATIONS TECHNOLOGIES

This new research and technological development programme has been conceived in order to make a major contribution to the introduction of **Integrated Broadband Communications (IBC)**, with the development of the Integrated Services Digital Network (ISDN) and the national introduction strategies which are to result in the setting-up of services at Community level by 1995. This new programme will focus on the following themes:

- a) intelligent **broadband networks**, management of flexible communications;
- b) **mobile and personal communications**;
- c) **image and data communications**;
- d) **integrated services technologies**;
- e) technologies for **information security**;
- f) experiments on **advanced communications**;
- g) installations for **verification**.

The Community contribution will be ECU 489 million.

3. DEVELOPMENT OF TELEMATIC SYSTEMS IN AREAS OF GENERAL INTEREST

The programme is intended to provide the conceptual, technological and pre-normative basis for the gradual implementation of **trans-European telematics** service networks. Six large areas have been singled out as best able to benefit both from progress in information and communications technologies and from the European dimension:

- **administrations** most affected by the implementation of the internal market;
- **transport services**;
- **health services**;
- **libraries**;
- **linguistic research** and engineering.

The total appropriation proposed is ECU 380 million.

4. INDUSTRIAL AND MATERIALS TECHNOLOGIES

The objective of the programme is to contribute to the rejuvenation of European manufacturing industry by strengthening its scientific and technological basis through development of **basic technological research**, integration of the new technologies into the production processes and acquisition of the knowledge necessary for the establishment of standards and codes of practice. The programme will cover two areas: **materials and raw materials**, and **design and manufacturing**. The total appropriation proposed is ECU 748 million.

5. MEASUREMENT AND TESTING

The objective of the programme is to improve measurements, technical tests and chemical analyses wherever they are not sufficiently reliable and wherever the various laboratories do not agree on their results, so as to establish the common basis necessary for the operation of the internal market. The programme is divided into four parts: support for **regulations and directives, sectoral problems** of testing, **common calibration methods** for the Community, development of **new measurement methods**. The total appropriation proposed is ECU 140 million.

6. ENVIRONMENT

The objective of the programme is to develop the scientific and technical knowledge that the Community requires in the exercise of its powers with regard to the environment. It is divided into four parts: participation in the **Global Change Programme, technologies and engineering** for the environment, research on the **social and economic aspects** of environmental issues, **integrated research** projects. The total appropriation proposed is ECU 414 million.

7. MARINE SCIENCE AND TECHNOLOGY

The programme is aimed at promoting the application of knowledge and advanced technologies (remote sensing satellites, data processing systems, offshore intervention technologies etc.) to the study, management and protection of coastal waters in Europe. It is divided into three parts: **marine science, coastal engineering, and marine technology**. The total appropriation proposed is ECU 104 million.

8. BIOTECHNOLOGY

The aim of the biotechnology programme is to add to basic biological knowledge and develop application technologies for agriculture, industry, medicine, nutrition, etc. It consists of three parts: approaches at the **molecular level**, approaches at the **cell and organism level**, and the **ecology and biology of populations**. The total appropriation proposed is ECU 164 million.

9. AGRICULTURAL AND AGRO-INDUSTRIAL RESEARCH

The objective of the programme is to match the production of biological, terrestrial and aquatic resources better to their use by the consumer and industry. It will cover four main areas: **primary production** in agriculture, forestry, aquaculture and fisheries, agricultural and forestry **production factors**, processing of **biological raw materials**, and **end use** of products. The total appropriation is ECU 333 million.

10. BIOMEDICAL AND HEALTH RESEARCH

The programme's objective is to contribute to improving the efficiency of medical and health research and development in the Member States. Content: harmonization of methodologies and protocols in **epidemiology**, **biology** and **clinical research**, application to **diseases of major socio-economic impact**, and **human genome analysis**. The total appropriation is ECU 133 million.

11. LIFE SCIENCES AND TECHNOLOGIES FOR DEVELOPING COUNTRIES

The programme's objective is to increase cooperation between European scientists and scientists from the developing countries in order to enable these countries, on the one hand, to benefit from the scientific knowledge and technological developments available in the Community and, on the other, to develop their own research capacities. The programme covers the two areas: **agriculture**, **medicine**. The total appropriation proposed is ECU 111 million.

12. NON-NUCLEAR ENERGIES

The objective of the programme is to contribute to the development of new energy options that are both economically viable and more respectful of the environment, including all technologies that allow energy to be saved. The programme will cover four different areas: **analyses and modelling**, improved use of **fossil fuels**, **renewable energy sources**, and **rational use of energy and energy saving**. The total appropriation proposed is ECU 157 million.

13. HUMAN CAPITAL AND MOBILITY

The programme's objective is to contribute to increasing human capital and optimizing the use of the scientific and technical infrastructures of the Member States, while helping to create a real European scientific and technical community. Content and implementation: development of a **training system for high-level research**, **selection of research workers** to take part in the programme. Areas covered: no particular area of research is defined a priori, but the training programme will develop consistently with the other 14 specific programmes of the framework programme. The total appropriation proposed is ECU 518 million.

ENS: EUROPEAN NERVOUS SYSTEM

HIGH-PERFORMANCE TRANSEUROPEAN TELEMATIC SYSTEM

One of the essential new features of the Commission's proposal for the new R&D Framework Programme is the **establishment of high-performance, trans-European telematic systems — a European Nervous System (ENS)**. The ENS will initially design the interconnection of information systems, currently confined within each Member State, in areas such as customs, transport and social security systems. Indeed, besides the need for deregulation in European telecommunications, it is also clearly necessary to establish adequate infrastructures and services to let national administrations interwork efficiently. Such a system is essential for the completion of the single market. Only when it is in place will effective management of information flows be possible after the frontiers have been legally abolished.

AZIONI COMUNITARIE NEL CAMPO DELLA RICERCA

GUIDA PER I PARTICIPANTI

La Commissione delle Comunità Europee ha pubblicato il primo manuale completo contenente informazioni sia sugli aspetti legali amministrativi ed economici che sul contenuto di tutti i programmi di R&D.

In un'epoca in cui l'interesse per le componenti tecnologiche del Mercato Interno è in continuo aumento, la Commissione ha ritenuto di dover colmare le lacune d'informazione, spesso espresse dalle parti interessate, particolarmente le PMI e le istituzioni di ricerca.

Cedola di ordinazione

Nome:

Indirizzo:

C.A.P.: Città



Per ordinazioni rivolgersi a: Signora K. Kania, CEC, DG XII, SDME 1/34, 200, rue de la Loi, B-1049 Bruxelles, Tel.: (32) 2 235.64.19, Tlx.: 21877 Comeur B, Fax.: (32) 2 235.88.65.

PHARE: ASSISTANCE FOR ECONOMIC RESTRUCTURING IN POLAND AND HUNGARY

EXTENSION TO OTHER STATES IN CENTRAL AND EASTERN EUROPE EXPECTED SOON

The **PHARE Programme** forms the basis for CEC activities in favour of the countries of Eastern and Central Europe. PHARE has been set up in close cooperation with the 'Group of 24' (CEC and OECD). The Commission has set up the following cooperation guidelines for PHARE:

1. AGRICULTURE

In *Poland*, agriculture accounts for 30 % of production and employment. Two types of project are planned for this year:

1. import aid programmes for arable and livestock production;
2. sectoral studies, in collaboration with other donors, to define the agricultural objectives and priorities for the coming year.

In *Hungary*, agriculture accounts for 20 % of production and employment. Aid in the current year is planned for:

1. training, modernizing technological research and investment in the agrifoods sector;
2. sectoral studies (in collaboration with other donors).

2. INDUSTRY AND INVESTMENT

In the medium term the Community and its partners must help both countries to formulate sectoral development strategies by sustaining the privatization and liberalization process. In the short term, operations will be concentrated on two areas of the private sector:

- developing a favourable business environment, particularly by setting up productivity centres able to advise firms,
- developing small and medium-sized enterprises.

This will involve transferring the know-how acquired from promoting small industry and setting up business innovation centres.

3. ENVIRONMENT

Protecting the environment is an absolute priority in Poland and Hungary, since, for example, no new factory can be set up in certain industrial areas because pollution is already far too high (industry accounts for 70 % of pollution problems). This is for health reasons (reduced life expectancy), but also in the interests of a «good neighbour» policy (the Baltic is severely polluted). In 1990 the Community will essentially provide equipment for monitoring pollution in the air and lakes and the operation of some sewage plants. Areas for immediate and long-term action include: industrial pollutants, nuclear safety, treatment of waste water, air and water pollution monitoring equipment, the elimination of toxic waste, training of local specialists and management. These actions must be part of an overall and multi-annual strategy formulated with local authorities and in cooperation with international institutions.

4. TRAINING

Community action in this area will be based on a threefold approach: diagnosing needs, deciding priorities, selecting programmes. The countries concerned have underlined the need for training in the management, administration field, financial services and in the languages. The Community plans to help these countries take advantage of programmes implemented by the European Foundation for vocational training and the TEMPUS programme (see page 6).

IMPLEMENTING PROCEDURES

Operations will have to be at short notice to meet the urgent training requirements and equipment shortages in Poland and Hungary. Most training operations will focus on the following areas: shop-floor industrial training tied in with industrial restructuring; looking for export markets; management training and training in financial services.

The Group of 24 has already agreed in principle to examine the possibility and terms of **extending aid to other countries of Central and Eastern Europe**. A formal decision will probably be taken by beginning of July 1990. The Council Regulation sets out the main areas for technical cooperation. The Commission, in coordination with its partners in the Group of 24, will respond to requests for assistance from the Polish and Hungarian Governments. The Commission will not be promoting projects to the Polish and Hungarian Governments, although there will be frequent consultations on priority areas.

Firms, institutions, federations, training centres and consultancies which feel that they can offer assistance in restructuring the Polish and Hungarian economies must first approach the government of the country concerned.

In accordance with the general rules for administering public funds and its long tradition of development cooperation, the Commission will issue invitations to tender within the Community and in the countries concerned for the implementation of technical assistance projects requiring expertise, supplies or public works.

The PHARE brochure can be obtained from the press and information centres of the CEC (see page 51).

Further information on PHARE can also be obtained from: Mr N. Wegter, CEC, BERL O6/5, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.30.69, Fax.: (32) 2 235.01.43/60.309, or Mr G. Bursi, CEC, BERL O6/6, Tel.: (32) 2 235.47.21, Fax.: (32) 235.01.43/60309.



CEC COMMUNICATIONS TO THE COUNCIL CONCERNING SCIENTIFIC AND TECHNOLOGICAL COOPERATION WITH THIRD COUNTRIES IN GENERAL AND EASTERN EUROPEAN COUNTRIES IN PARTICULAR

The CEC, upon a proposal of Vice President Pandolfi, has approved two communications to the Council concerning **scientific and technological cooperation with third countries** and **R&D cooperation with the countries of Central and Eastern Europe**.

1. SCIENTIFIC AND TECHNOLOGICAL COOPERATION WITH THIRD COUNTRIES

The Communication recalls first of all the various forms of cooperation tried out in past years with third countries. Next to these bilateral cooperations arrangements, multinational actions such as COST and EUREKA are mentioned, as well as specific agreements such as these concerning the international thermonuclear experimental reactor (ITER), which brings together the EEC, the United States, Japan and the USSR, the **Intelligent Manufacturing System (IMS)** initiated by Japan, and the **Superconducting Supercollider (SSC)**.

The communication then highlights the main principles and guidelines for a Community policy, namely:

a) horizontal principles determining the objectives of cooperation in the area of science and technology: — support of initiatives of a global nature, such as the environment, — selective cooperation activities in the area of S&T, as a useful contribution to industrial and economic development at world level.

b) vertical principles concerning the geographical characteristics and situations of third countries: — as concerns neighbouring countries of the EEC, the intensity of the possible initiatives will depend upon the degree of implementation of the European Economic Space; — particular attention will be paid to the interests of developing countries.

2. SCIENTIFIC AND TECHNOLOGICAL COOPERATION WITH THE COUNTRIES OF CENTRAL AND EASTERN EUROPE

S&T cooperation under this scheme will take three forms, namely:

a) scientific cooperation strictly speaking, a domain in which not only the third countries concerned but also the Community will have advantages. In the field of mathematics, for example, Hungary ranks high in statistics.

b) Research and development activities encouraging technology transfer: there is a need to close the technological gap between industries in Central and Eastern Europe, in particular in the fields of energy saving, environmental protection and consumer goods.

c) Cooperation in the field of human resources: under this title the Commission includes in particular the extension to East European countries of the programme on the freedom of movement of researchers provided for in the 3rd R&D framework programme. From a practical point of view, cooperation should be achieved through the coordinated assistance form the 'Group of 24' and other institutions concerned.

Contact: **Communication N° 1** Mr A. von Klose, CEC, DG XII, SDME 03/76, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 235.39.98, FAX.: (32) 236.30.25, **Communication N° 2** Mr G. Valentini, CEC, DG XII/G, SDME 02/26, Tel.: (32) 235.4086, Fax.: (32) 236.33.08.

TEMPUS: TEACHING AND LEARNING ACTIVITIES FOR EASTERN EUROPE FINANCIAL SUPPORT FOR COOPERATION AND MOBILITY IN HIGHER EDUCATION

APPLICATIONS NOW INVITED

TEMPUS is the acronym for the Trans-European Mobility Scheme for University Studies, adopted by the Council of Ministers of the European Communities on 7 May 1990. The main goals of **TEMPUS** are to promote the quality and support the development of the **higher education systems in the countries of Central/Eastern Europe and to encourage their growing interaction** with partners in the EC, through joint activities and relevant mobility.

All financial support under **TEMPUS** is available for **trans-European** activities only, namely activities in which there is participation by organisations within countries of Central/Eastern Europe and organisations within Member States of the EC. At the moment 'eligible countries' designated as falling within the terms of the **TEMPUS** scheme are as follows: Hungary and Poland. **TEMPUS** will concentrate on priority subject areas identified as being of particular importance. They include: management and business administration, applied economics, applied sciences, technologies and engineering, modern European languages, agriculture and agro-business, environmental protection, and social and economic sciences. Financial support under the **TEMPUS** scheme falls into three categories:

ACTION 1: JOINT EUROPEAN PROJECTS (JEP)

Financial support for eligible organisations (universities or enterprises) which jointly organise higher education projects involving partner institutions in Central/Eastern Europe and the EC.

ACTION 2: MOBILITY GRANTS FOR STAFF AND STUDENTS

Grants for **staff** and students (higher education teachers and administrative staff, trainers from enterprises) moving from Central/ Eastern Europe to the EC or vice versa.

ACTION 3: COMPLEMENTARY ACTIVITIES

Financial support for **eligible organisations** (universities or enterprises) or individuals which jointly organise higher education projects involving partner organisations in Central/Eastern Europe and the European Community, i. e.:

- support for European associations in higher education
- grants for publications and information activities
- grants for surveys and studies
- grants for youth exchanges

The final date for the submission of applications for projects starting in the academic year 1990/91 is 30 September 1990.

The TEMPUS VADEMECUM (GUIDE FOR APPLICATIONS) can be obtained from: TEMPUS Office, 45, rue de Trèves, B-1040 Brussels, Tel.: (32) 2 238.78.33, Fax.: (32) 2 238.77.33 (see also OJ L 131 of 23.5.1990).

A.C.E: COMMUNITY ACTION FOR COOPERATION WITH THE COUNTRIES OF EASTERN EUROPE IN THE FIELD OF ECONOMICS

The programme aims at promoting the exchange of scientific knowledge and experience in the **field of economics** between professional and academic economists **in the European Community and Poland and Hungary**. Specific topics are to be related to the process of economic reform and integration including the diagnosis and therapy of macro-economic disequilibria, micro-economic liberalization and reform and economic integration issues. The main forms of support are **subsidies for research networks** and projects, and **subsidies for high-level scholarships and fellowships**. The programme supports the following:

- Subsidies for multinational (including at least one Polish/Hungarian and two EC universities or research units) research projects/networks;
- Scholarships for professional and academic economists from Poland/Hungary to stay at a Community research institute;
- Subsidies for high-level seminars;
- Subsidies for Polish and Hungarian professionals to attend congresses.

For further information, please contact: Mr H. Reichenbach, CEC, DG II/B/1, 200, rue de la Loi, B-2040 Brussels, BERL 07/103, Tel.: (32) 2 235.64.08, Fax.: (32) 2 235.89.81 or Mr R. Thomas, CEC, DG XII, MO75 04/24, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.47.07, Tlx.: 21877 COMEUR B, Fax.: (32) 2 236.33.07.

EFT: EUROPEAN TRAINING FOUNDATION TO ASSIST THE COUNTRIES OF CENTRAL AND EASTERN EUROPE

The Council has approved the creation of the **European Foundation for Training**. Its field of operation will include initial and continued vocational training as well as retraining of young people and adults, amongst others in the area of management. To achieve these goals, the Foundation is:

- contributing to **identifying the training needs and priorities**;
- acting as a **clearing house** through which information on demands and offers of assistance can be filtered;
- promoting and facilitating **multilateral assistance** by arranging for specific multinational teams or multinational co-financing of specific projects.

The Foundation will have a Governing Board made up of representatives of the Member States and the Commission — and in cases of participation by third countries, of these countries as well. Its task will be to establish the annual programme of work and its annual budget in collaboration with the Commission.

For further information, contact: Mr D. O'Sullivan, CEC, TFHR, rue Joseph II, 37-4/39, 200, rue de la Loi, B-1049 Brussels, Fax.: (32) 2 23.72.95 (see also OJ L 131 of 23.5.90)

TELECOMMUNICATIONS FOR CENTRAL AND EASTERN EUROPE

In addition to the two communications on cooperation in the area of science and technology (see above), the CEC has adopted a communication on cooperation with the countries of **Eastern and Central Europe in the specific area of telecommunications**. The Commission is proposing a series of actions: **1) Immediate assistance** in the area of sources of information, services and methods of access to information; **2) Greater integration** of these countries' telecom networks and services into the trans-European telecom system. The Commission suggests opening up to these countries the **TEDIS II programme**; **3) The promotion of trade and technology transfer** through the establishment in these countries of '**Europe Houses**' which would encourage familiarity with the EC's experience in these areas; **4) Study of programmes and projects** that are potentially eligible for **financial aid from the EC and the Group of 24**.

Copies of the communication can be obtained from: Mr R. Meijer, CEC, DG XIII/E/3, 200, rue de la Loi, B-1040 Brussels, Fax.: (32) 2 236.23.90.

THE EASTERN EUROPEAN COUNTRIES — NEW EUROPEAN PARLIAMENT PUBLICATION

These EP papers allow a better understanding of developments in the Eastern European countries, with regard to the political situation as well as the economic situation. Among the practical information published here is the list of members of the governments in these countries. Emphasis is given to relations with the European Community. Some papers focus on contacts with the Parliamentary Assembly of the Council of Europe, the PHARE project and relations with various international organisations.

This publication can be obtained from: Office for Official Publications of the EC, 2, rue Mercier, L-2985 Luxembourg, or Directorate-General for Research, European Parliament, Plateau du Kirchberg, L-2929 Luxembourg, Fax: (352) 43.70.09.

COMMUNITY RESEARCH AND DEVELOPMENT PROGRAMMES
DEADLINES FOR THE NEXT CALLS FOR PROPOSALS

Programme	Directorate-General responsible	Deadline
BRITE/EURAM (see page 23)	XII	14.09.1990
AGRICULTURAL RESEARCH PROGRAMME (see page 20)	VI	11.10.1990
FLAIR — GRANTS FOR AGRICULTURAL RESEARCH (see page 20)		
SCIENCE — SCIENTIFIC COOPERATION (see page 15)	XII	no deadline
SPES — ECONOMIC RESEARCH (see I&TT, 2/90, page 12)	XII	no deadline
A.C.E. — R&D IN ECONOMICS FOR EASTERN EUROPE (see page 7)		03.10.1990 ¹
TEMPUS — TEACHING AND LEARNING FOR EASTERN EUROPE (see page 6)		30.09.1990
SPRINT — NETWORK SUPPORT MEASURES (see page 43)	XIII	12.10.1990 ¹
SPRINT — SPECIFIC PROJECTS (see page 44)	XIII	07.12.1990 ¹
SPRINT — SCIENCE PARK SCHEME (see page 42)	XIII	15.09.1990 ¹
SPRINT — INNOVATION MONITORING SYSTEM (see page 42)	XIII	15.10.1990 ¹
BRIDGE — BIOTECHNOLOGY RESEARCH (see page 20)	XII	15.09.1990
VALUE (see page 24)	XIII	20.07.1990
SAFETY IN COAL AND STEEL INDUSTRY (see page 21)	V	01.10.1990
ERASMUS — INTERUNIVERSITY COOPERATION PROGRAMME (JCP) (see page 31)	TFHR	31.10.1990
— STUDENTS NOT PARTICIPATING IN AN JCP	TFHR	01.10.1990
ERASMUS — VISITS FOR HIGHER EDUCATION STAFF etc.	TFHR	6 months before the project
EURET — R&D ON TRAFFIC (see page 19 and below)	VII	13.07.1990
ACE — ENVIRONMENTAL DEMONSTRATION PROJ. (see page 9)	XI	30.6.1991

¹ Definitive deadlines not yet fixed

Application forms can be obtained from the Directorate-General concerned (Commission of the European Communities, DG, 200, rue de la Loi, B-1049 Brussels). TFHR stands for Task Force Human Resources.

Programme	FORTHCOMING CALLS	Call expected
SPRINT — EUROPEANISATION OF TECHNOLOGY CONFERENCES (see page 41)		End of 1990
ANALYSIS OF THE HUMAN GENOME (see below)		Summer 1990

The information above is a sort of early warning system. The dates indicated may change and are not definitive. 'I&TT' declines all responsibility for any changes. Proposals should be prepared well in advance of this deadline in order to avoid last-minute problems. Proposers should consult the programme managers for advice on questions of presentation.

COMMON POSITION ON THE LAST R&D PROGRAMMES OF THE CURRENT FRAMEWORK PROGRAMME

Further to the adoption of three programmes, only one remaining dossier will still require approval under the old Framework Programme, namely, the **SPES programme**. The three new programmes are as follows:

a) ANALYSIS OF THE HUMAN GENOME: The funding needed for this programme totals 15 million ECUs. Predictive medicine is based on knowledge of the human genome and its objectives include preventive measures in regard to susceptibility to illnesses, early diagnosis, and improved prognosis and treatment (see also page above).

b) SPECIFIC R&D PROGRAMME (61990-1993) IN THE AREA OF TRANSPORT (EURET): This project is funded with 25 million ECUs; its objective is to provide transport in the EC with the highest quality technical means available in order to increase competitiveness, safety, the quality of service and compatibility with the environment (see also page above).

c) THE EUROTRA PROGRAMME IN THE AREA OF TRANSLATION: With an appropriation of 10 million ECUs and covering all Community languages, this programme has already entered its final phase (1988-1990). It is now question of preparing the development of an **operational EUROTRA system**.

NETT: NETWORK FOR ENVIRONMENTAL TECHNOLOGY TRANSFER

INFORMATION ON NEW TECHNOLOGIES IN THE FIELD OF ENVIRONMENTAL PROTECTION

NETT — The Network for Environmental Technology Transfer now provides companies, research institutions etc. with a new **European information system for environmental matters**. NETT is an international non-profit-making association set up with the help of the European Communities (see I&TT, 4/89, page 5). The latter considered it was necessary to **centralise information concerning environmental protection** in order to avoid the risk of stocks of incomplete information or data unsuited to the rapid evolution of the sector. The **world market** for environmental technologies is evaluated at 75 billion ECU, of which 40% is represented by the European market alone. All organisations interested in such information, with an average subscription fee of 400 ECU per year for all EEC countries, and 750 ECU for third countries, can now benefit from **NETT services**, namely:



I) four **computerised data banks** which comprise: 1) 'Nett's Databases' offering three possibilities: a. the list of members and their activities, b. the list of technological processes offered by their owners, which members can use through a message service for bids and orders, and c. a general information magazine on environmental matters.

2) 'Selected data bases', based on two services: a. environmental information relating to water, air, ground, noise and waste management, and b. Community legislation together with national and Community programmes providing for subsidies. 3) 'External Databases' which gather information related to fields connected with the environment, in particular: a. the 'infosearch' service, covering about 1000 data bases in the fields of chemistry, physics, engineering, agriculture, finance, etc., b. the 'Special Service' which enables the user to find a data bank adapted to his problem, and an 'S.O.S' service; 4) 'Communication facilities' which enable NETT members to dialogue through the intermediary of a message service.

II) The 'Information research and development' service, for those who can offer, on request, a personalised service to each member.

III) The NETT 'meetings' service, to organise conferences, seminars and symposia.

For further information please contact: NETT, 207 Avenue Louise, bte 10, B-1050, Brussels, Fax.: (32) 2 646.42.66, Tel.: (32) 2 645.09.40.



Michel Annez de Teboada, Secretary General of NETT

ENVIRONMENT AND CITIES: COMMISSIONER RIPA DI MEANA PRESENTS THE GREEN PAPER ON FUTURE EC URBAN ENVIRONMENTAL POLICY

Commissioner **Carlo Ripa di Meana** presented the 'Green Paper' on the urban environment, adopted as an official CEC communication, as a 'preliminary, not yet operational' document that should serve as the starting point for a broad interinstitutional debate on the approach of future Community actions aimed at **resolving the environmental problems existing in European cities**.

The commissioner particularly stressed the ill effects of private automobile traffic in EC cities, in which 80% of the population lives. 'Cities represent the most serious pollution concerns', he stated, because in addition to cars, others sources of pollution are concentrated in cities: heating, waste, used water. Operational measures concerning the following items should be formulated: **a) air quality**: the Commission, Mr Ripa di Meana recalled, has just submitted a proposal on **clean lorries**, but 'we need to go further'; **b) the protection of green zones**; **c) water management**: Mr Ripa di Meana launched an appeal for a **healthier water supply for Naples** and for water treatment centres in Brussels, Milan and other cities where their absence is transforming our rivers and seas into open sewers; **d) the protection of monuments**.

Contact: Mr N. Hanley, CEC, DG XI/A/4, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 23.58.708.



Carlo Ripa di Meana

ACE FINANCIAL SUPPORT FOR DEMONSTRATION PROJECTS IN THE FIELD OF THE ENVIRONMENT - CALL FOR TENDERS 1990

Invitation to submit proposals on the following subjects: **1.** Separation, treatment and utilization of **plastic refuse** arising from: a) commerce and industry, b) agricultural waste, c) urban waste. **2.** Utilization and recycling of used **non-retreadable tyres**. This call for tenders runs until 30 June 1991. The Commission will start evaluating projects from 1 January 1991.

To obtain the specifications, compulsory application form and the questionnaire for this call for proposals, please apply in writing before 30 May 1991 to the address below: Mrs M. Suain, CEC, DG XI/C/2, ACE Environmental Programme, 200, rue de la Loi, B-1049 Brussels, Fax.: (32) 2 235.01.44, Tel.: (32) 2 235.68.95

ENVIRONMENT COUNCIL: AGREEMENT ON DIRECTIVES ON WASTE, BATTERIES, DANGEROUS SUBSTANCES AND ON GREATER PROTECTION OF THE OZONE LAYER

The Environment Council of 8.6.1990 reached agreement on directives concerning:

1. Free access to information on environmental matters: Following the agreement in principle reached at the March session (I&TT, 2/90, page 13), the Council formally adopted the directives on this subject. **Contact:** Mr H. Scheuer, CEC, DG XI/3, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.35.30, Fax.: (32) 2 235.01.44.

2. A new principle for waste management foresees that Member States should be able to dispose of all their own hazardous waste and to stop exports of waste. The new directive commits the Member States to 'take steps' to make the EC as a whole and individual countries self-sufficient. **Contact:** Mr J.M. Junger, CEC, DG XI/A/3, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.54.42, Fax.: (32) 2 235.01.44 (see also OJ C 122 of 18.5.1990)

3. Batteries and storage batteries containing certain dangerous substances: The Ministers agreed on measures designed to make batteries safer and establish rules for their safe disposal. Starting from 1993, all batteries will have to be marked with disposal instructions and any recycling details. A maximum mercury content for long-life batteries was established (0.025 per cent by weight) and will take effect by 1993. **Contact:** Mr J. M. Junger (see 2.)



4. Water pollution from four dangerous substances: The Council reached an agreement under which the directive — setting limit values and quality objectives — will be changed to include four new substances: dichloroethane (DCE), trichloroethylene (TRI), perchloroethylene (PER) and trichlorobenzene (TCB). **Contact:** Mr P. Stief-Tauch, CEC, DG XI/B/2, BREY 5/177, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 235.10.50, Fax.: (32) 235.01.44.

5. Monitoring of water quality: little progress was made in regard to the updating of the following directives: a) of 1976, on measurement methods and the frequency of analysis of surface waters; b) of 1975, on surface waters; c) of 1980, on water for human consumption. **Contact:** Mr V. Mandl, CEC, DG XI/B/1, BREY 6/293, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.42.49, Fax.: (32) 2 236.06.26.

6. Protection of the ozone layer: the Council adopted the EC negotiation mandate for the review of the Montreal Protocol. **Contact:** Mr G. Strongylis, CEC, DG XI/A/2, BREY, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.72.60

7. Pollution caused by nitrates: the brief Council examination of the draft directive on the protection of fresh waters, coastal waters and sea waters from pollution caused by nitrates from diffuse sources did not conclude with any notable progress. **Contact:** Mr V. Mandl (see 5.)

8. Urban waste water: the Council was informed of progress in the work on a draft directive concerning the treatment of waste water. **Contact:** Mr V. Mandl (see 5.)

9. Protection of habitats: the Council held a quick exchange of views on the draft directive on the protection of natural and semi-natural habitats and wild flora and fauna (see below).

Regarding the **greenhouse effect**, the Council will have to reach an agreement at the October session to allow the EC to defend its joint position at the second world conference on the climate, to take place in early November. **Contact:** Mr B. Delogu, CEC, DG XI/B/2, BREY 7/223, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 23.57.172, Fax.: (32) 2 23.50.144.

EUROPEAN ENVIRONMENT AGENCY: OFFICIALLY ADOPTED

The Council has adopted the regulation relating to the **creation of the EEA, European Environment agency**, and the European Network for environment control and information. This official approval follows the overall agreement on the regulation achieved at the Environment Council session of 23 March last. The Ministers had, on that occasion, agreed to modify the preceding position of the Council by introducing amendments proposed by the Commission further to the European Parliament's Opinion. Above all, the Council had accepted the principle of revision of the functions of the Agency in two years time, together with the appointment by the Parliament of two members of the Agency's Administrative Board. This regulation will come into force as soon the decision concerning the head office is reached.

Despite this decision the EP environmental committee recommends that the legal affairs committee of the EP take the steps necessary for appealing to the Court of Justice to cancel the Council's ruling on the creation of the European Environmental Agency. I&TT will keep you up to date with further developments.

COMMISSION PROPOSES NEW EEC ACTION FROM 1991 FOR NATURE CONSERVATION

The CEC has approved a proposal submitted to the Council for Community action with regard to nature conservation, aimed at creating a separate instrument for the **protection of habitats and biotopes**. It is proposed to support projects contributing to keeping or reestablishing biotopes which are severely threatened but which shelter endangered species. Financial aid will be a maximum of 50% of the cost of projects and could be raised to 75% in certain cases. The Commission is requesting at least 11 million ECU for 1991 (first year of implementation of the new regulations, which will cover the period 1991-1995).

Contact: Mr R. Klein, CEC, DG XI/B3, BREY, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 23.52.898; Fax.: (32) 2 23.62 726

EUROPEAN BETTER ENVIRONMENT AWARDS FOR INDUSTRY 1990

REFRIGERATION WITHOUT CFCs, CATALYST FOR DIESEL ENGINES

Commissioner Ripa di Meana presented the awards in the **1990 Better Environment for Industry** competition, in four categories. Here is the list of winners and highly recommended entrants in each category:

1) 'Good Environmental Management' Award:

- winner: Yamanouchi Ireland Co Ltd, for a comprehensive environmental protection system at a **bulk pharmaceuticals Manufacturing plant**;
- highly recommended: Associated Chambers of Commerce Gelderland (Netherlands) for an **environmental protection system for SMEs**, and Stocksbridge Engineering Steels, UK, for environmental improvements on an **old industrial site**, in partnership with the local community.

2) 'Clean technology' award:

- winner: BP Chemicals SA (France) - for a **low - waste gas-phase process production** of high-density and linear low-density polyethylene;
- highly recommended: Vald Henriksen A/S (Denmark), for a continuous **dyeing machine** for tubular knitted cotton fabric.

3) 'Eco-product' award:

- winner: Société Calude Blaizat (France), for Zeoroll, a **refrigeration system without the use of CFCs**;
- highly recommended: Volkswagen AG (FRG) for a smoothly turbo-charged **Diesel engine with a catalyst**, and Retiflex S.p.A (Italy) for a fibrillar net of polypropylene to **replace asbestos** reinforcing in cement.



4) Environmental Technology Transfer award: no winner.

- highly recommended: Treco Energy System SA (Belgium), for a **wind turbine system**.

The competition is organised by the CEC and co-sponsored by the United Nations Environment Programme (UNEP).

The brochure on the awards and further information can be obtained from: Mrs R. Lambert, CEC, DG XI/3, BREY V, 200, rue de la Loi, B-1040 Brussels Tel.: (32) 2 23.51.909, Fax.: (32) 2 23.62.726

ENVIREG: NEW REGIONAL INITIATIVE ON PROTECTION OF THE ENVIRONMENT

The CEC decided on 2 May 1990 to establish a new Community initiative contributing to the **protection of the environment and the promotion of economic development**, 'Envireg'. The aim is to help the least-favoured regions in the Community tackle some of their environmental problems and thereby help put their economic and social development on a firmer footing.

Community assistance in the form of loans and grants may be provided under Envireg for measures and in areas respecting the guidelines set out and which are included in operational programmes submitted by the Member States and approved by the CEC (chiefly in objective 1&2 regions — see map).

Further information: Mr E. Landaburu, DG XVI, CEC, 200, rue de la Loi, B-1049 Brussels, Fax.: (32) 2 235.01.49.



ECDIN: ENVIRONMENTAL CHEMICALS DATA AND INFORMATION NETWORK

ECDIN is design as an instrument for all people engaged in environmental management and research to obtain **reliable information** on chemical products of environmental significance. It concerns the whole spectrum of parameters and properties that might help the user to evaluate real or potential risks linked to the use of a chemical and its economic and ecological impact. The following major sectors are covered: Identification (chemical names and synonyms), chemical structure information, chemical economics, analytical methods, use of the chemical, toxicity with reference to various targets, occupational health and safety, and odour and taste threshold values. ECDIN was developed and is maintained by the EC Ispra Establishment (JRC). It is at present publicly available on-line through the main international computer networks. Commercial distribution has been entrusted to the Danish host DATACENTRALEN IS, Copenhagen, which must be directly contacted for subscriptions (see address below). Other distribution media are under study. It is expected that a CD version will be available by the end of 1990.

For further information please contact: Dr M. Boni, ECDIN Team, Ispra Establishment, I-21020 Ispra (VA), Tel.: (39) 332 78.97.20 or DC host centre, Retortvej 6-8, DK-2500 Valby Copenhagen, Tel.: (45) 31 468.122, Tlx.: 27122.

NEW COST PUBLICATIONS

KNOWLEDGE-BASED SYSTEMS TO AID MEDICAL IMAGE ANALYSIS

Edited by: D.P. Pretschner, B. Urrutia — Volume 1. EUR 12797 EN, ISBN 92-826-1342-9, ECU 16.25

Within the framework of the COST B2 project 'Quality Assurance in Nuclear Medicine Software' this book, which is the first of a projected series, presents an up-to-date overview of the application of KBS in medicine.

Available from the Office for Official Publications of the European Communities, 2 Rue Mercier, L-2985 Luxembourg.



A STANDARD PROTOCOL FOR THE EXCHANGE OF NUCLEAR MEDICINE IMAGE FILES

Edited by: T.D. Craddock, F. Deconinck, B. Urrutia — EUCO-B2/01/89

This is the first publication resulting from a collaboration between the COST B2 working group 1 'A standard protocol for the exchange of nuclear medicine files'. The main purpose of this common file exchange format termed 'Interfile', which is described in the paper, is **to facilitate image file exchange between different vendors' systems whether located at a single site or at different centres.**

SELECTION OF CLINICAL STUDIES FOR USE AS RENAL SOFTWARE PHANTOMS

Edited by: H. Bergmann, B. Urrutia — EUCO-B2/02/90

These clinical validation protocols are designed to ensure that patients satisfying the criteria can be classified in the groups of renal function disorders listed in the protocol (or in a normal group) with as high a degree of accuracy as possible. They constitute the first report of COST B2-Working Group 3 'Software Quality Assurance of Renal Radionuclide Studies'.

Further information relating to participation in the above-mentioned projects, as well as the two EUCO publications, is available on request from: Mr K. Pithan, CEC-DG XII/G/1, SDME 3/82, 200 Rue de la Loi, B-1049 Brussels, Tel (32) 2 235 76 69, Tlx 21877 COMEUR B, Fax (32) 2 236 42 89.

COST PARTICIPANTS ARE READY FOR THE LAUNCHING OF FIVE NEW R&D ACTIONS

Participants in European cooperation in the field of scientific research (COST) are preparing to sign statements of intent for implementation of **five new COST actions**:

1. **Application of the digital processing of signals in communications:** This action proposes the coordination and promotion of European research in the field of digital processing of signal processing techniques, in order to establish guidelines for pre-competitive actions.
2. **Techniques to reduce coding redundancy in video signals** for multi-media transfer mode.
3. **Retrospective ionospheric forecasting and modelling in Europe.** The main objective of this action is to obtain synoptic ionospheric measurements.
4. **Research in the area of express courier services.** The main objective is to analyse and assess the modalities, the causes and the consequences of the development of courier services in Europe, by European and non-European companies.
5. **Hydrogeological aspects of the protection of underground waters in karstic zones.** The main objective is to protect underground waters in karstic zones, which play a fundamental role in the Community's Mediterranean area.

For further information, contact: Mr E. Ballabio, CEC, DG XIII-D-1, BRE 7/223, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 23.57.77, 55, Fax.: (32) 2 23.56.828 (projects 1-3); Mr F. Fabre, CEC, DG VII/B/3, B-34 02/13, Tel.: (32) 2 235.39.99, Fax.: (32) 2 235.01.33, Tlx.: 21877 COMEUR (project 4); Mr H. Ott, DG XII/E/1, SDME 03/60, Tel.: (32) 2 23.51.182, Fax.: (32) 2 23.63.024 (project 5).

2ND EUROPEAN CONGRESS ON TECHNOLOGY ASSESSMENT

MILAN, ITALY 14 - 16 NOVEMBER 1990

The congress is sponsored and organized by the MONITOR Programme (FAST) of the EEC, ENEA (I), NOTA (NL), the Italian Ministry of Research and The Danish Board of Technology.

The congress offers a possibility of discussing and defining critical areas where the management of technology has been challenged. Special attention will be paid to the potential users/demanders of technology assessment: parliaments, industry, researchers and trade unions.

Please include me on the mailing list of the 2nd European Congress on Technology Assessment.

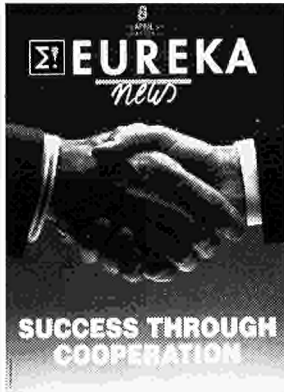
Name: Company/Organization

Address

Postal Code Town Country

To be sent to: Mrs Anne de Greef, Commission of the European Communities, DG XII, FAST, Rue de la Loi 200, B-1049 Brussels, Fax: (32) 2 235.06.56

EUREKA AND THE EUROPEAN COMMUNITY



The European Community has been a full member of the Eureka Initiative since its inception and has contributed to its development. The Community programmes are especially focused on precompetitive activities, including precompetitive phases of EUREKA projects which are expected to lead to applications.

Good progress has been made in developing synergies between the Community R&D programmes and EUREKA. At present, the European Community involvement in EUREKA projects takes the following forms: **1. Providing a direct financial contribution to projects**, e.g. EUROTRAC, COSINE, JESSI, or the realisation of some research activities by the Community's Joint Research Centre as a project participant, e.g. in EURO-TRAC, FORMENTOR. **2. Cooperating on specific projects** linked to EC programmes. On a case-by-case basis, some Community programmes have taken EUREKA projects into account, e.g. the programmes ESPRIT, DRIVE, STEP, RACE and MAST. Conversely, the participants of some EUREKA projects are taking the Community programmes into consideration. **3. Taking Supportive Measures:** Examples are HDTV, EUROLASER and the EUREKA Road Transport projects.

For further information, contact: Mr N. Newman, CEC, DG XII/G/2, BREY 10/160, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.55.976, Tlx.: 21877 COMEUR B, Fax.: (32) 2 236.56.502 or the EUREKA Secretariat (see address below).

EUREKA TO FOCUS HIGH-TECH RESEARCH ON ENVIRONMENT, PARTICIPATION OF EASTERN EUROPEAN COUNTRIES, HDTV

DECISIONS OF THE 8th EUREKA CONFERENCE

The Research Ministers of the 19 European countries belonging to EUREKA (the Twelve, the EFTA Six and Turkey) adopted **91 new EUREKA projects** at their conference in Rome (1.6.1990). The '19' and CEC Vice-President Mr Pandolfi also debated relations with third countries, in particular those in Eastern Europe, and high-definition television.

a) relations with third countries: the '19' firmly supported the idea of taking advantage of the flexibility of EUREKA regulations to encourage closer collaboration with countries in Eastern Europe.

b) high-definition television: the EU HDTV 95 project is now entering its second phase. Production and broadcasting standards have been defined. Special emphasis will be placed on developing a European high-definition television standard called MAC.

c) new Eureka projects: Out of the 91 projects chosen, 37 concern the environment (for total expenditure estimated at 253 million ECU); the environment is followed by robotics, with 22 projects (estimated cost 264 million ECU), then biotechnology (9 projects, 48 million ECU), data processing and information technology (9 projects, 96 million ECU), new materials (5 projects, 36 million ECU), transport, (4 projects, 191 million ECU), communications (3 projects, 47 million ECU), and energy (2 projects, 27 million ECU).

EUREKA participation in the 91 new projects by countries (Number of Projects):

Luxembourg	: 1	Sweden	: 20	France	: 26	Portugal	1
Belgium	: 3	Norway	: 17	FRG	: 26	Spain	21
Switzerland	: 12	Austria	: 15	Greece	: 2	Turkey	1
Netherlands	: 14	Finland	: 13	United Kingdom:	13	CEC	1
Italy	: 40	Ireland	: 2	Denmark	: 7		



EUREKA ANNUAL REPORT 1989 NOW AVAILABLE

The Annual Project Report 1989 provides a description of the projects announced up until June 1989. The nearly 300 projects covered in this report have a total estimated cost of more than 6.4 billion ECU and involve over 1500 participants, 700 of which are larger companies, 300 SMEs, 450 research institutes including universities, and 80 other organizations.

EUREKA TECHNOLOGICAL CAPABILITIES DIRECTORY

This directory contains an alphabetical list of names of all participants, with the indication of the country and a description of all the companies, research institutes and public organisations involved. Some 1250 European research organisations are catalogued.

Copies of the reports above can be obtained from: The EUREKA Secretariat, 19H, av. des Arts, Bte 3, B-1040 Brussels, Tel.: (32) 2 217.00.30, Tlx.: 29340 EUREKA B, Fax.: (32) 2 218.79.06.

INTERNATIONAL SCIENCE & TECHNOLOGY COOPERATION NEWSLETTER

NEW INTERNATIONAL R&D NEWSLETTER PUBLISHED BY THE OECD

This new newsletter — being published on a trial basis — from the Science and Technology Policy Division, DSTI, of the OECD, reports on R&D policies all over the world. It can be obtained from: Mr M. Shinohara, Information Clearing House, STP/DSTI/OECD, 2, rue André-Pascal, 75775, F-75775 Paris, Fax.: (33) 1 45.24.85.00.

S&T PROGRAMMES IN THE USSR

A publication entitled **Government Science and Technology — Approved Decision at the USSR Council of Ministers 30 December 1988**, written in Russian, sets out the **S&T priorities in the USSR**. They are surprisingly similar to those of OECD member countries. The following is a translation of the table of contents:

- | | |
|--|---|
| 1. High-energy physics, | 9. High-speed ecologically clean transport, |
| 2. High-temperature superconductors, | 10. Ecologically clean energy, |
| 3. Space, | 11. Resource-saving and ecologically clean steelmaking and chemical production processes, |
| 4. Human genomes, | 12. Highly efficient processes for the production of foodstuffs, |
| 5. Long-range information technologies, | 13. Campaign against the most widespread diseases, |
| 6. Technology equipment and future production, | 14. Building technology programme — 2000. |
| 7. Future materials, | |
| 8. New methods in bioengineering, | |

(Reprint of an article in the new OECD Newsletter, see above)

A photocopy of the publication can be obtained through the office of the Head of the Science and Technology Policy Division, DSTI/OECD, Tel.: (33) 1 45.24.93.40, (see address above).

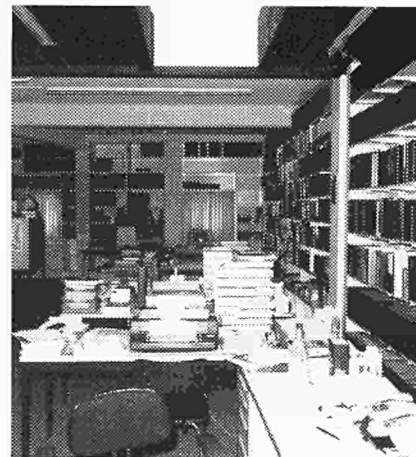
AKSES TECHNOLOGY TRANSFER LIBRARY PROVIDES INFORMATION ON R&D

The AkSES library is a private and independent documentation centre on **technological and industrial research and innovation**. Its collections include 4 000 current journals and newsletters, 5 000 in-house bulletins and 50 000 volumes of directories and reports and a worldwide file of press releases. AkSES has been set up to:

- pinpoint and examine the sources of information on research and development worldwide
- design end products of information dissemination on such matters
- perform market research for such products.

Akses is **seeking correspondents and partners to exploit commercial products** from the documentation pool.

Further information can be obtained from: Dr John D. Hess, AkSES Library, Parklaan 2, B-2700 Sint Niklaas, Tel.: (32) 3. 7765063, Fax.: (32) 3.7780785.



ICSTI — NEWSLETTER OF THE INTERNATIONAL COUNCIL FOR R&D INFORMATION

ICSTI — formerly ICSU AB — is an international non-profit organization which aims at increasing accessibility to, and awareness of, **scientific and technical information**. Through its activity programme, ICSTI fosters communication and interaction among all participants in the information transfer chain, in order to develop appropriate tools better able to meet the information requirements of the world community of scientists and technologists.

Copies can be obtained from: ICSTI, 51, Bld de Montmorency, F-75016 Paris, Tel.: (33) 1 45.25.65.92, Fax.: (33) 1 42.88.14.66, Tlx.: ICSU 630 553 F.

THE ARCTIC CENTRE — NEW R&D CENTRE IN THE ARCTIC AND SUB-ARCTIC REGIONS



The international Arctic Centre officially commenced operation in February 1989. Its role is to maintain an information service, to facilitate research into natural conditions, culture, economics, resources and technology **in the arctic and sub-arctic regions**, to maintain an Arctic Science Centre and to practice and promote education, research and co-operation in these fields on an international level. Construction of the Arctic Centre will begin in April 1990. An Arctic Science Centre with exhibition space of over 2000 m² is planned in stage one, to be completed by 1992.

Contact: Arctic Centre, University of Lapland, P.O. Box 122, SF-96101 Rovaniemi, Tel.: (35) 860 32.42.71, Fax.: (35) 860 32.42.70, Tlx.: 19205519.

SCIENCE — STIMULATION OF THE INTERNATIONAL COOPERATION AND INTERCHANGE NEEDED BY EUROPEAN RESEARCH SCIENTISTS

NEW GUIDE FOR APPLICANTS NOW AVAILABLE

The **SCIENCE** programme is a CEC initiative aimed at the stimulation of **cooperation and interchange among European scientists**. Its specific objectives are to:

- promote training through research and, by means of cooperation, the better use of high-level researchers in the Community;
- improve the mobility of research scientists in the Member States;
- develop and support intra-European scientific and technical cooperation;
- promote the setting-up of intra-European cooperation and interchange networks.

The **SCIENCE** plan applies to all fields of the exact and natural sciences. For assessment and handling purposes proposals are divided into the following categories: mathematics, physics, chemistry, life sciences, earth sciences and ocean sciences, scientific instrumentation, and engineering sciences.

It should be recalled that particular attention has been given to this issue under the new framework programme (see page 2). The specific programme on this is intended to encourage, in part by awarding training grants, the participation of research workers (especially young ones) in high-level research activities in centres of excellence, networks of centres of excellence or specialist installations. The objective is to provide training and mobility opportunities for some 5 000 researchers over the five years of the programme.

Further information and the new **guide for applicants** can be obtained from: Mrs J. Shiel, CEC, DG XII-H-1, MO 75-04/7, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 23.62.984, Fax.: (32) 2 23.50.656.



SCIENCE PLAN
(1988-1992)
LEITFADEN FÜR ANTRAGSTELLER
KOMMISSION DER EUROPÄISCHEN GEMEINSCHAFTEN

.....<

Order form: Please send me a copy of the SCIENCE Guide for Applicants in:

DE	FR	IT	NL	EN	DA	GR	PT	ES
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Name:

Address:

Postal Code Town: Country:

Please return to Mrs J. Shiel (see address above).

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2nd EUROPEAN COMMUNITY CONTEST FOR YOUNG SCIENTISTS 1990



The **European Community Contest for Young Scientists** was set up to promote the ideals of cooperation and exchange between scientists and to provide a stimulus for the development of **promising young scientific talent**. The European final is being organised in close contact with national Young Scientists' Associations in the participating European countries, who will send the top finalists of their national contests to Brussels.

Finals to be held on 15-19 October 1990 at the Falkoner Centret, Copenhagen. Jury dates 17-18 October, award ceremony 18 October in the Copenhagen Town Hall.

Contact: CEC, DG XII, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.52.76, Fax.: (32) 2 236.33.07.

LE LEADER — NOUVEAU GUIDE DES ACTIONS EUROPEENNES DANS LE DOMAINE DE R&D

La rapidité d'évolution des techniques, les rotations des technologies de pointe, les progrès des moyens de traitements, la diversité des sources font de l'information actuelle un outil aussi précieux que fondamental dans le délicat exercice du management stratégique de l'entreprise. Ce nouveau guide — publié par le bureau de la CEE à Marseille — **informe régulièrement sur toutes les initiatives de la Commission dans le domaine de R&D.**

Pour plus de renseignements, s'adresser à: S.A.R.L EUROPE-INITIATIVE, 17, rue du Capricorne, F-13320 Bouc-Bel-Air, Tél.: (33) 42 22.25.75 ou le bureau de la CCE, 2, Rue Henri Barbusse, F-13001 Marseille, Tél.: (33) 91 91.46.00, Fax.: (33) 91 90.98.07.



COMMISSION OF THE EUROPEAN COMMUNITIES



EURO COURSES



EURO COURSES

The Joint Research Centre of the CEC presents its **1990 programme of courses and seminars**. Essentially this programme reflects the subjects or aims of the research activities carried out in the establishments of the four JRC sites.

The programme includes:

- **basic or advanced courses** in specialized disciplines,
- **seminars at research level** discussing the state of the art in sectors of science where rapid development is taking place.

The lecturing staff is composed of members of the JRC establishments and visiting lecturers from universities, research organizations and industrial firms. The international character of the courses is emphasized as a means of extending sources of information and encouraging fruitful exchanges and discussions.

Information:

Mr G. Pellegrini
 JRC, I-21020 Ispra (Varese)
 Tel.: (39) 332 78.98.19
 Tlx: 380042 / 380058 EUR I
 Fax: (39) 332 78.98.39

PROGRAMME

Remote Sensing

24-28 Sept. Application of Remote Sensing to Agricultural Statistics. Crop Inventories and Area Frame Sampling RSA/90

Chemical and Environmental Science

3-7 Sept. Sulphur Dioxide and Nitrogen Oxides in Industrial Waste Gases : Emission, Legislation and Abatement IWG/90

Information Science

10-14 Sept. Cellular Automata : Methods and Applications CAM/90

6-9 Nov. Industrial Application of Electromagnetic Computer Codes ECC/90

12-16 Nov. Architecture and Programming Environment of the Supernode Network of Transputers APE/90

Reliability & Risk Analysis

17-21 Sept. Safety of Chemical Batch Reactors and Storage Tanks BSR/90

8-12 Oct. Reliability Data Collection and Analysis RDA/90

Advanced Techniques

15-19 Oct. Advanced Techniques for Nuclear Medicine TNM/90

Technological Innovation

22-26 Oct. Forecasting Technological Innovation FTI/90

EURO COURSES

Request for Information

Please send the programme for the EUROCURSES as indicated on the right of the order form (please tick).

Name: _____

Organisation: _____

Address: _____

Postal Code: _____

Town: _____

Country: _____

Please return the whole page to the address below:

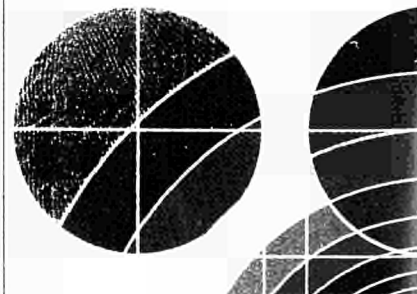
Secretariat: Eurocourses, Joint Research Centre, I-21020 Ispra (Varese), Tel.: (39) 332 78.98.19, Tlx: 380042 / 380058 EUR I, Fax: (39) 332 78.98.39



The EUROCURSES building at Ispra



Course on Radioprotection



COMMISSION VICE-PRESIDENT PANDOLFI PROPOSES HARMONISATION OF CORDLESS TELEPHONES AND COORDINATION OF FREQUENCIES

The development and dissemination of **mobile communications equipment** is very much on the agenda at present. On the initiative of Vice-President **Pandolfi**, the Commission is proposing a directive and a recommendation on **digital European cordless telephones (DECT)**. The retransmission quality of this second generation of mobile telephone equipment is better than that of the systems currently in use. Using fewer frequencies and costing very little, this equipment will be accessible to a large number of users (100 million DECTs will be in use by the year 2 000).

The Directive will ensure that a **band of common frequencies is made available for DECTs in the Community by the end of 1992**. By coordinating frequencies in this way it will be possible to **introduce a harmonized DECT service**. This forms part of the more general move towards the coordination of radiocommunication frequencies within Europe. The purpose of the Recommendation is to **encourage the coordinated and generalized introduction of DECT** by the end of 1992 in order to strengthen the dynamics of the market. The Commission is also proposing to the Council a resolution on **increasing the coordination of radiocommunications frequencies in Europe**.



CEC Vice-President F. M. Pandolfi (right), Mr. Parajon Colada, Deputy Director General of DG XIII-O, and Mr. A. Poos, Head of Protocol, CEC Luxemburg

A CONCEPT FOR FUTURE R+D IN ADVANCED COMMUNICATIONS



The Commission's service responsible for the RACE programme and the development of advanced telematics services (Directorate General XIII-F) has compiled and just published the consolidated results of its '**Operation 1992**', which has been carried out in close cooperation with leading experts from all over Europe. The operation had been initiated with the purpose of **identifying areas and priorities for future R+D work** which — according to the EC Commission and the outside experts — should be carried out in transnational European cooperation.

Insofar the consolidated results of the '**Operation 1992**' are **likely to serve as the basis for the work programme proposals which the EC Commission is due to make**, once the Council of Ministers has approved the various action lines of the EC's overall 'Framework programme for research and technological development'. The '**Operation 1992**' reports cover **four areas**: Integrated Broadband Communications (IBC), which is the subject of the Community's RACE programme and the use of Medicine/Healthcare and in Distance Learning and Training. In the latter three areas exploratory Community actions have been carried out since 1988, under the names of DRIVE, AIM and DELTA respectively.

A limited number of copies of the said reports is available upon request from Mr. J. Rosenbaum, Commission of the European Communities, DG XIII-E, BREYDEL 06/83, 200, rue de Loi, B-1049 Brussels, Tel.: (32) 2 235.92.35/235.05.60, Tlx: 21877 COM-EUR B, Fax: (32) 2 236.27.23.

INFORMATION SECURITY — A EUROPEAN ISSUE

CONFERENCE IN BRUSSELS, 25/26 SEPTEMBER 1990

Information security is of increasing concern to **users and vendors of advanced computer and communication systems**. Users expect that systems will meet security requirements such as availability, integrity and confidentiality of their information and data. Vendors must be able to supply the necessary products and services. These problems and challenges need to be seen in a European context. In order to increase the general awareness for information security issues, but also in order to stimulate markets, products, services and the development of standards, an EC-sponsored **Conference on 'Information Security Evaluation Criteria — ISEC'** is to be organized in Brussels on 25/26 September 1990. Details on the conference can be obtained from Mr U. Gebel, CEC, DG XII, 200 rue de la Loi (Trèves 2/31), B-1049 Brussels, Fax: (32) 2 23.50654.

INFORMATION TECHNOLOGY SECURITY ÉVALUATION CRITERIA

As regards the definition of evaluation criteria for information security, European cooperation is already well under way. France, Germany, the Netherlands and the UK have developed a common approach with regard to the evaluation of security criteria, to be applied to products and systems. These criteria will meet the requirements of government, commerce and users in general. A document entitled '**Information Technology Security Evaluation Criteria**' presenting the results of cooperation between the above-mentioned EC Member States has just become available. Copies of the report can be obtained from Mr J. Rosenbaum, CEC, DG XIII, 200 rue de la Loi (Breydel 6-83), B-1049 Brussels, Fax: (32) 2 23.62723.

DRAFT DIRECTIVE ON PROTECTION OF DATABASES AND COPYRIGHT

M. Bangemann, CEC Vice-President, announced that the CEC would transmit to the Council before the end of the year, a draft directive on the harmonization of national provisions relating to the protection of databases and copyrights.

Contact: Mr B. Schwab, CEG, DG II/D/3, RP 3/02-3, 200, rue de la Loi, B-1049 Brussels, Fax: (32) 2 23.59331

ESPRIT: NEW PROJECTS LAUNCHED FOR A TOTAL COST OF 690 MILLION ECU

107 new projects have been selected by the CEC for launching within the European Strategic Programme for Research and Development in Information Technology (**ESPRIT**). This is the result of Esprit's latest general call for proposals. Also included are three projects forming part of the 18-month start-up phase of **JESSI** (Joint European Sub-Micron Silicon). JESSI is a Eureka initiative designed to strengthen Europe's international competitiveness in the design, manufacture and application of a new generation of standards and customised microchips. In addition to the 107 new projects, 43 exploratory actions, comprising workshops, demonstrations and studies will be initiated, to further increase the involvement of SMEs in the Esprit programme.

Further information and a list of the selected projects can be obtained from: Mr J. Collisson, CEC, DG XIII-A, BRE 10/191, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 236.20.67, Tlx.: 21877 COMEUR B, Fax.: (32) 2.236.33.91.

DELTA: DEVELOPMENT OF LEARNING THROUGH TECHNOLOGICAL ADVANCE TWO CONFERENCES ANNOUNCED

The first major European conference on **collaborative industrial research and development in learning technology** is to be organized on 18/19 October 1990 in The Hague/Netherlands. The conference will allow for the presentation of results of cooperative R&D carried out by transnational consortia under the EC's DELTA programme, which will complete its 24-month exploratory action during the course of 1990. At the same time future prospects for R&D activities and programmes in the field of learning technology are planned to be featured prominently within the conference. The following subjects will be dealt with in special sessions: Paedagogical Issues, Market Issues, Telecommunications, Artificial Intelligence, Multi/Hyper Media, Authoring Environment, Cross-Cultural Dimensions.

The conference '**DELTA and Beyond**' takes place immediately after the ETTE conference (ETTE — European Training Technology Event) which is scheduled for 16-18 October 1990. The ETTE event will be devoted to the application and implementation of training technologies in businesses, whereas '**DELTA and Beyond**' will focus on R&D aspects.

Further details about both conferences can be obtained from: Educational Computing Consortium Inc., DELTA and Beyond, PO Box 217, NL-7500 AE Enschede.

COOPERATION BETWEEN LIBRARIES IN THE SPHERE OF INFORMATICS NEW CEC SCHEME PROPOSED

Mr Dondelinger, Member of the Commission, reported to the Council on progress with regard to **cooperation between libraries in the sphere of informatics**. He announced that the Commission would be submitting a proposal for a Decision in the context of the third Framework Programme for Research and Development 1990-1994, to make it possible for the programme to be implemented from 1991 (see also I&TT, 1/90, page 12). The library area will be included in the specific programme concerning telematic systems (see page 3).

The relevant document (COM 90155) and further information can be obtained from: Mrs A. Iljon, CEC, DG XIII-B, JMO B4/013, L-2920 Luxembourg, Tel.: (352) 4301-2923, Tlx.: 3446/3423 COMEUR LU, Fax.: (352) 4301-2847-3909.

NEWS FROM THE EUROPEAN FOUNDATION CENTRE

The **European Foundation Centre**, a non-profit making organisation of Foundations is announcing its **first Annual General Meeting (AGM)**, which will be held at the College of Europe in Bruges, on November 9th, 1990, one year after the EFC was founded on the day the Berlin wall began to crumble. **Contact:** European Foundation Centre, 51, rue de la Concorde, B-1050 Brussels Belgium, Tel.: (32) 2 512.89.38, Fax.: (32) 2 512.32.65.

DATABASES IN JAPAN: UPDATED STATISTICS NOW AVAILABLE

In Japan similar trends are being observed both in the production and distribution of database services as within the EEC and the USA. The number of databases **produced** in Japan **has increased by a factor of four since 1982**, to 528 databases by the end of 1988. Half of the databases produced related to **business information**. As regards **distribution** of databases, **there were 2 858 distributed in Japan**, of which 2 040 were imported from overseas. The actual number of different databases distributed in Japan amounts to 1 964, of which 1 436 are of foreign origin. The share of domestic production has increased steadily since 1986.

A more detailed analysis of the supply of databases distributed in Japan shows that **STI (Scientific and Technological Information) databases** predominate in the imports of foreign databases. **Business databases** predominate in domestic production. STI databases are aimed at a narrow market which generates little revenue, whereas business databases are more profitable. Four years ago, STI databases were predominant (over 46%) in the distribution of database services in Japan. They were **overtaken in 1986 by business databases**. Another striking feature is the growing share of source databases as opposed to reference databases in the supply.

Further information is given in the IMO Working paper (Information Market Observatory), which can be obtained from: Mr S. Lustac, CEC, DG XIII-B, JMO B4/016, L-2920 Luxembourg, Fax.: (35) 2. 4301-2847, Tlx.: 3423/3446 COMEUR LU.

CONFORMANCE TESTING SERVICES (CTS): NEW FACTSHEETS NOW AVAILABLE

Information technology and telecommunications are playing an increasingly essential role in answering the need for open exchange of data. **Testing and certification** represent the key component, essential to the achievement of Community standardization policy. Therefore, the need for an adequate guarantee that products conform to standards emerges as a decisive condition for building up confidence in standard product interoperability.

The CTS 1990 leaflets set (CD-NB-12841-EN-C — ISBN 92-826-1489-1) will be available from the CEC Information Offices in the Member States (see page 51), or can be requested in writing from: CEC, DG XIII/E/4, BREY-6/22, 200, rue de la Loi, B-1049 Brussels, Fax.: (32) 2 235.93.79.



PROCEEDINGS OF CONFERENCE ON CTS

The European Conference on **Conformance Testing & Certification in Information Technology & Telecommunications** sponsored by the CEC and the EFTA secretariat and organized by CEC/CENELEC & ETSI took place on 13, 14 and 15 June 1990 in Brussels. The Proceedings containing the papers presented will be published by: I.O.S, Van Diemenstraat 94, NL-1013 CN Amsterdam, Fax.: (32) 31 20.22.60.55.

BCR: MEASUREMENT AND TESTING CEC OFFERS ASSISTANCE TO LABORATORIES

The BCR programme supports projects to improve measurements when there are differences between laboratories and when the discrepancies are causing difficulties in the Internal Market. The main areas of activities are analysis of agriculture and food products, analysis related to the environment, biomedical analysis, analysis of industrial products and industrial metrology and testing. Projects involve collaboration between many laboratories in the Member States.

The programme also produces reference materials, the importance of which is easily understood when one remembers that in some analyses, such as those related to the environment, results from different laboratories may differ by a factor of 100 or more.

Information can be obtained from: Mr H. Marchandise, DG XII, Community Bureau of Reference, rue de la Loi, 200, 1049 Brussels, Fax: (32) 2 235 80 72



THE CENTRAL BUREAU FOR NUCLEAR MEASUREMENTS

Common European norms and standards are vital if the 12 Member States are to achieve their Single Market goals. Since 1960, the Central Bureau for Nuclear Measurements (CBNM) at Geel has been applying its own highly-developed expertise to the pursuit of these goals. CBNM scientists determine precise data on neutron-nuclear interaction and on radionuclide decay and prepare actinide and other nuclear reference materials to be used for the calibration of measuring devices, particularly in the field of nuclear safeguards.

A brochure on these activities can be obtained from: Mr H. Hansen, Joint Research Centre, CBNM Geel, Steenweg op Retie, B-2440 Geel, Tel.: (32) 14 57.12.80, Fax.: (32) 14 58.42.73, Tlx.: 33.589 EURAT B



EURET: R&D IN THE FIELD OF TRANSPORT CALL FOR EXPRESSIONS OF INTEREST

The EC is calling for expressions of interest in a multiannual research and technological development programme **in the field of transport (Euret)**, in advance of a call for proposals to be launched probably in July. Research topics include:

1. Optimum network exploitation

- 1.1 New road construction
- 1.2 European rail traffic management system
- 1.3 Vessel traffic management system
- 1.4 Trials in automated air/ground data exchange for air traffic management
- 1.5 Study on the controller working position in air traffic management

3. Reduction of harmful externalities

- 3.1 Evaluating the road safety of car and trailer trains

2. Logistics

- 2.1 Economic scenario for freight transport in the Community
- 2.2 Economic and technical research on the transfer of goods (rapid transfer)
- 2.3 Optimization of manpower in maritime transport
- 2.4 Taking human factors into consideration in the man/ship system

- 3.2 Driving safety of possible truck and trailer combinations.

Deadlines: 13.7.1990. For further information, please contact: Mr F. Fabre, CEC, DG VII/B/3, B-34 02/13, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.39.99, Fax.: (32) 2 235.01.33, Tlx.: 21877 COMEUR B or Mr P. Stalins, 2/9, BERL 34, Tel.: (32) 2 235.15.80, Fax.: (32) 2 235.26.50.

R&D PROGRAMME IN THE FIELD OF AGRICULTURE AND MANAGEMENT OF AGRICULTURAL RESOURCES — DEADLINES FOR THE RECEIPT OF PROPOSALS

The CEC published a **call for proposals** to participate in the Community **research programme on the competitiveness of agricultural resources** in OJ C 269 of 21 October 1989 (see also I&TT, 5/89, page 10). The **second deadline** for the receipt of proposals will be 11 October 1990. The **third and last deadline** will be 31 December 1991.

Further information on the call for proposals may be obtained from the following: CEC, DG VI, Coordination of Agricultural Research (VI/F-II-3), 200 rue de la Loi, B-1049 Brussels, Tlx.: 22037 AGREC B, Fax.: (32) 2. 236.30.29.

BRIDGE: BIOTECHNOLOGY RESEARCH FOR INNOVATION CALL FOR PROPOSALS

In the framework of the BRIDGE programme (see I&TT, 1/90, page 8) the CEC **calls for proposals** for participation in R&TD actions contributing to '**safety assessments associated with the release of genetically engineered organisms into the environment**'. Two types of transnational projects are organized for the implementation of these research activities:

'**N**' projects for the integration of research efforts in areas of monitoring and control techniques, and novel constructions. '**T**'-projects will cover research in the area of 'high-resolution automated microbial identification'. Proposals have to reach the Commission (address below) before 15 September 1990.

Detailed information on the objectives and content of the programme can be obtained from: DG XII-F/2, BRIDGE, 200 rue de la Loi, B-1049 Brussels, Tlx.: COMEU B 21877, Fax.: (32) 2. 355.365.

NEW CEC INITIATIVE: EUROPEAN BIOTECHNOLOGY INFORMATION SERVICE PAPER BULLETIN AND ELECTRONIC BULLETIN BOARD

The EC has initiated the development of an **information service for European Biotechnology**: 'EBIS'. The service will include a paper bulletin and electronic bulletin board, and will be initially in English only. It will be distributed to interested persons on demand.

Contact: Mr M.F. Cantley, CEC, DG XII-F-1, SDME 02/67, 200, rue de la Loi, B- 1040 Brussels, Tel.: (32) 2 235.58.145, Fax.: (32) 2 235 55.365.

EUROPEAN ASSOCIATION FOR BIOMASS NOW ESTABLISHED

Several national organisations established the **European Association for Biomass (AEBIOM)** in Brussels on 11 May. The aim of this association will be to promote the image of biomass. The biomass represents all matter of vegetable or animal origin mainly earmarked for industrial (papers, materials, chemicals) or energy uses (heat, electricity, fuels).

Contact: Mrs De Silguy, 9 avenue Georges V, F-75008 Paris, Tel (33) 47.23.55.40.

EC TRAINING AND MOBILITY GRANTS IN FLAIR — FOOD LINKED AGRO-INDUSTRIAL RESEARCH PROGRAMME

Applications are invited for **training/mobility grants** provided for periods ranging from 6 to 24 months. Their aim is to provide training and mobility through research in a Member State other than the country of the scientist or the country where he/she normally resides. The programme of work proposed by the applicant must fit into one or more areas defined by the **FLAIR Programme** (OJ L 200 of 13.7.1989) and be carried out in one of the research organizations involved in the Programme. Applications may be submitted at any time during the year. The Selection Committee will meet twice a year with deadlines for submissions of 1 March and 1 October.

Types of Grants:

Junior level: applicants must hold a university degree and have direct access to post-graduate doctoral studies. Monthly allowance of 1500 ECU minimum;

Senior level: applicants must have recognized scientific experience, hold a doctorate or have at least four years of professional experience after completion of their university studies. Monthly allowance 1800 ECU minimum.

In both the above cases the Commission will allocate to the **hosting institutions** an allowance covering the corresponding operational and mobility costs of the trainee (5000 ECU/year for junior trainees, 10000 ECU/year for senior trainees).

Contact: Mrs C. Mantegazzini, CEC, DG XII/F/3, SDME 02/16, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 236.33.33, Fax.: (32) 2 234.53.65.

PASSYS — NEW CEC NEWSLETTER ON THE BUILDING INDUSTRY

Passys News is a six-monthly newsletter about the **CEC research programme PASSYS**. It is edited by the PASSYS Coordinating Secretariat at the Belgian Building Research Institute (BBRI) in Brussels.

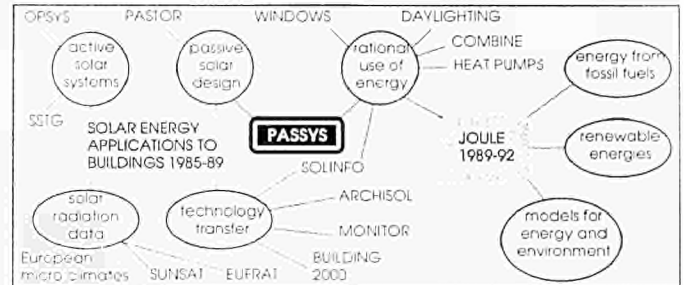
It can be obtained from: BBRI, (WTCB-CSTC), Aarlenstraat 53, Box 10, B-1040 Brussels, Tel.: (32) 2 653.88.01, Fax.: (32) 2 653.07.29.

PASSYS: THERMAL BUILDING RESEARCH IN THE EEC

A NETWORK OF RESEARCH PROGRAMMES

The EEC has been conducting research and development on solar energy applications to buildings since 1975. The work has been carried out in a series of four-year programmes under the responsibility of DG XII.

The PASSYS Project started in 1986 as part of the third programme on **Solar Energy Applications to Buildings**. Basic work on Passive Solar Design was also carried out in the sub-programme PASTOR: 'Passive Solar Topic Design'. These topics include heat transfer and air movement, thermal comfort, control of passive solar systems, daylighting, planning and urban design.



The fourth R&D programme is called **JOULE (Joint Opportunities for Unconventional or Long-Term Energy Supply)**. In its current phase (1990-91) the PASSYS project is part of the JOULE subprogramme on Rational Use of Energy in Buildings. The table lists the main projects within these R&D programmes.

Contact: Mr T. G. Steeners, CEC, DG XII/E/3, SDME 03/17, 200; rue de la Loi, B-1040 Brussels, Tel.: (32) 2 25.68.78, Fax.: (32) 2 26.30.24.

COUNCIL AGREES THE THERMIE PROGRAMME

At its meeting on May 21 the Council agreed the THERMIE programme for promotion of **European energy technology**. The programme, which covers the period 1990 - 1994, will support promotion of energy technologies in the areas of:

- rational use of energy
- solid fuels
- new and renewable sources of energy
- hydrocarbons

For the first three years 1990 - 1992 an amount of 350 million ECU was deemed necessary for the execution of the programme and, for the remaining period 1992 - 1994, the Council declared its consciousness of the need to maintain activities at the same level as the period 1990 - 1992. Projects can be supported subject to calls for proposals announced in the Official Journal. In addition, the programme will support dissemination of successfully demonstrated energy technology as an associated measure.

Further information can be obtained from Mr M. T. Gowen, Commission of the European Communities, DGXVII-D, 200, rue de la Loi, B-1049 Bruxelles, Tel: (32) 2 236 04 36, Fax: (32) 2 235 01 50.

FIRST JOINT RESEARCH PROGRAMME ON SAFETY IN THE EUROPEAN COAL AND STEEL COMMUNITY (ECSC) INDUSTRIES

The **protection of safety and health** is an important element of social policy, which the Commission is pursuing by means of a series of legislative measures, including directives. This research programme complements the work underway, by encouraging **improvements in the safety aspects of the coal and steel industries**.

It addresses the following issues:

1. **general safety** requirements
2. **specific requirements of the steel industry**, such as blast-furnaces and upstream installations, melting shops, rolling mills, finishing shops, maintenance,
3. **specific requirements of mines**, such as mine fires and spontaneous combustion, explosions, rescue arrangements, monitoring, telemetry, data presentation, remote control, automation and communication, transport and handling, electricity and energy, materials technology, winning methods, rock burst, associated phenomena and gas outburst, surface activities.

Research applications must reach the Commission of the European Communities by 1 October of each year in order to be examined and considered for financing in the following year.

Further information is given in Official Journal C 325 of 24.12 1989, or contact: Mr B. LeGoff/Mr J.P. Rihoux, CEC, DG V, JMO C4/053, L-2920 Luxembourg, Tel.: (352) 4301-2788 or 4301-3036; Fax (352) 4301-4511; Telex: COMEUR LU 3423-3446.

PUBLIC FUNDING OF R&D 1980-89

The R&D Statistics subcommittee of the CEC Statistical Office has drawn up a **report on R&D statistics**. It gives you concise data on the budget appropriations for R&D, and the proportion of the total R&D resources represented by government funds in the EC, the USA and Japan. Below are some results:

1. Gross domestic expenditure on R&D

Total expenditure on R&D in the United States, EUR 12, and Japan together may be broken down as follows:

USA	52.6 %
EUR 12	30.0 %
JAP	17.4 %
Total	100.0 %

Community expenditure is broken down among the Member States as follows:

DE	31.4 %
FR	22.1 %
UK	21.9 %
IT	11.2 %
NL	5.6 %
BL	2.7 %
DK	1.3 %
IR	0.3 %
GR	0.3 %
ES	2.8 %
PO	0.4 %
EUR 12	100.0 %

The complete report will be published by end of August 1990 by the Office for Official Publications, 2, rue Mercier, L-1020 Luxembourg (DE/EN/FR).

For information on the work of the R&D Statistics subcommittee, contact: Mr D. Defays, CEC, EUROSTAT, JMO C5/34, Tel.: (352) 4301-2854, Fax.: (352) 4301-3015.

2. Ratio of gross domestic expenditure on R&D to GDP

The amount of total R&D resources may be put into perspective by calculating the ratio of gross domestic expenditure to gross domestic product so as to take account of the economic context in which the research is done:

USA	2.91 %
EUR 12	1.96 %
JAP	2.67 %

3. Total number of researchers

It is interesting to compare the gross domestic expenditure on R&D (at 1980 prices and purchasing power parities) and the numbers of researchers (full-time work equivalent), which break down as follows:

ALL SECTORS	GDE on R&D	Total number of researchers
USA	52.6 %	45.3 %
EUR 12	30.0 %	31.3 %
JAP	17.4 %	23.4 %
Total	100 %	100 %

EUROPEAN PRIZES FOR LITERATURE AND TRANSLATION

NOMINATIONS UNDER WAY

At its meeting of 18 May 90 the Council of Ministers for Cultural Affairs took note of a list of the works submitted by all the Member States for the **European prize for literature**, and a list of the works selected for the **European prize for translation** (three per country for each of these two prizes). These prizes would be awarded for the first time towards the end of this year as part of the 'Glasgow, European City of Culture' event. The Jury is composed of nine members proposed by the Member States and selected by the CEC.

Contact: Booktrust, Bookhouse 45, East Hill, London SW 18 20Z, Tel.: (44) 71 870.90.55, Fax.: (44) 1 874.47.90 (see also OJ C 35, 1990)



WOMEN OF EUROPE NEWSLETTER: 1000 DAYS TO 1993

The **WOMEN OF EUROPE NEWSLETTER** reports on all events of interest to women in the context of the creation of the Single Market: Social Action Programme; Third Action Programme for equal opportunities; Childcare; Employment; New Anti-Poverty Programme; Europe for the elderly. **WOMEN OF EUROPE NEWSLETTER** also reports on the activities of the **European Parliament**: Women and the Job Market in the 90s (Committee on women's rights); Prospects for 1992; The role of associations in the lobby; Careers and family life; Women from non-EC countries; Education; Training and retraining.

The **WOMEN OF EUROPE NEWSLETTER** can be obtained from: The **WOMEN'S INFORMATION SERVICE**, CEC, DG X, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.28.60.

BRITE/EURAM DAYS SAW MORE THAN 1000 PARTICIPANTS

More than 1000 scientists, engineers and industrialists gathered in the Palais des Congrès in Brussels for the **BRITE/EURAM days 1990**. This meeting was designed to offer interested firms and institutes project partners for the **1990 BRITE/EURAM call for R&D projects on industrial technologies and advanced materials** (see I&TT, 2/90, page 15). The BRITE/EURAM days were accompanied by an **exhibition of successful projects** under this programme, e. g.:

- Artificial Blood Vessels from Synthetic Polymers,
- An Engine made in Fibre Reinforced Plastic Composites,
- A Micro-encapsulation Technique for Aeroplane Paint,
- New Method for the Design and Operation of Metal Off-shore Structures,
- Ecopave: A Multi-purpose Composite Pavement System,
- A Sheet Metal Welding Laser,
- A Hybrid Optical Electronic Multi-channel System for Industrial Inspection,
- Methods for the Surface Engineering of Titanium Components,
- A Flexible Unit for the Manipulation of Textile Workpieces,
- A Technique for Vacuum Plasma Spraying.

I&TT reminds its readership that the deadline for the current **call for proposals** is 14. 9. 1990 (see order form for information package below).



The **PROTEAS** stand (see page 35) at the **BRITE /EURAM days**

For further information on **BRITE / EURAM**, please fill in the form below and return it to: **BRITE / EURAM, CEC, DG XII-C, MO-75 2/44, B-1040 Brussels, Fax: (32) 2 235.80.46**

✕
 Name of Organization: _____ Address: _____

Country: _____ Postal Code: _____ City: _____

Please send me (mark the appropriate box)

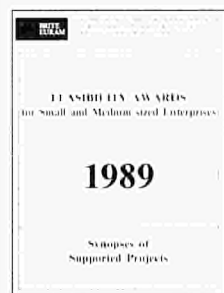
A free copy of the book **BRITE/EURAM, Synopses of Current Projects 1989-1990**

The **BRITE/EURAM Information Package** in (Call for Proposals)

DE	DA	EN	ES	FR	IT	GR	NL	PT
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BRITE/EURAM PROGRAMME — FEASIBILITY AWARDS FOR SMEs



The Feasibility Awards were included as a pilot action within the **BRITE/EURAM Programme** (1989-1992) as a means of assisting SMEs in the difficult process of establishing their merits as potential partners in a subsequent **BRITE/EURAM** proposal (see I&TT, 1/90, page 5). The Feasibility Awards are grants of up to 75% of the costs, not exceeding 25 000 ECU, of research undertaken within a six-month period to establish the feasibility of an innovative device, concept or process. The results of the research are expected to become the basis for an SME to participate in a partnership seeking support for a **BRITE/EURAM** industrial applied research proposal (see page above).

The list of proposals selected and further information can be obtained from: Mr A. d'Atri, CEC, DG XII-C-1, MO 75 4/48, Fax.: (32) 3 236.33.07.

RPI GRADUATE PROGRAMME ON SCIENCE AND TECHNOLOGY POLICY

The objective of the **RPI Graduate Programme** is to meet the rapidly growing need for a **training programme** in the field that would combine the needs and interests of students and practitioners from **both the industrialized countries and the Third World**. Contact: RPI, Research Policy Institute, University of Lund, Box 2017, S-220 02 Lund, Tel.: (46) 46.107616, Tlx.: Luniver S 33533, Fax.: (46) 46.146986.

INNOVATIONSVERBUND DURCH REGIONALE NETZWERKE

Hrsg. v. J. Allesch/D. Schröder — Diese Publikation beinhaltet Beiträge, die im Rahmen der Tagung „Innovationsverbund durch regionale Netzwerke“ anlässlich der BREMTEC 1989 vorgetragen wurden. TÜV Verlag Rheinland, Köln, ISBN 3-88585-759-6

ANNOUNCEMENT OF OPPORTUNITIES TO PROMOTE THE RESULTS OF COMMUNITY R&D UNDER THE VALUE PROGRAMME — PROPOSALS INVITED

The main objectives of the **VALUE programme** are to disseminate the results of **Community R&D** activities and to improve their level of utilization (see I&TT, 1/90, page 18).

The Commission invites **proposals for participation in the VALUE programme** which must relate to a result of a project from a **Community R&D programme** laid down in the **framework programme**. This announcement is consequently addressed only to research contractors who are or have been participants in Community projects and to their licencees and/or exploitation partners. This announcement is **open-ended**. A first selection of proposals will be made in early September 1990 for proposals submitted **before 20 July 1990**, and a second one at the end of the year. A separate information file is available for each of the following type of aid or assistance proposed: services of consultants and experts, prototypes and tests, promotional activities and knowledge transfer.

Contact: CEC, DG XIII/C/2, JMO, L-2920 Luxembourg, Tel.: (352) 4301-3610 or 4301-3453, Fax.: (352) 4301-4129 (see also OJ, C 134 of 1.6.1990).

CEC EXHIBITED AT EUROTECH BRUSSELS, 24-28 APRIL 1990

This multi-sector fair played host to DG XIII/C.2, and ten products developed under the R&D and demonstration activities of the CEC (DG XI, DG XII, DG XVII) were shown, ranging from robotics to metallurgy and the recycling of various waste etc. The CEC stand gave the initial **presentation of the NETT databases** (supported by DG XI, see page...), an information tool for environmental matters.

During the exhibition the stand was visited by the management of DG XIII (from left to right): Mr F. Engels (Head of the Exploitation Section), Mr A. Strub (Director of XIII/C), Mr M. Carpentier (Director-General DG XIII), two members of the management of the Brussels Fair, Mr V. Parajon-Collada (Deputy Director General DG XIII), Mr M. Leipold (Exhibition Section) and Mr J.N. Durvy (Head of the Exploitation Unit).



Information on the participation of the CEC at Eurotech can be obtained from: Mr Engels, CEC, DG XIII/C/2, C4/O17, Jean Monnet Building, L-2920 Luxembourg, Tel.: (352) 4301-2356, Tlx.: 3423/3446 COMEUR LU, Fax.: (352) 4301-4129.

HARMONISATION OF TESTING PRACTICE FOR HIGH-TEMPERATURE MATERIALS REFERENCE MATERIALS — CODES OF PRACTICE — STANDARDS

JOINT RESEARCH CENTRE, ISPRA, ITALY
18-19 October 1990

Organized by the High-Temperature Mechanical Testing Committee in collaboration with the Community Bureau of Reference (BCR) and the Institute of Advanced Materials of the JRC.

The principal objective of the meeting will be a review of recent progress in **improving testing practice for high-temperature materials** through the provision of reference materials and the development of standards and codes of practice.

For further information, please contact: B. E. Larcombe, Conference Coordinator, HTMTC Building 1, National Physical Laboratory, Teddington, Middlesex TW11 OLW UK, Tel.: (44) 1 977.32.22, Fax: (44) 1 943.21.55.

CALL FOR TENDERS CONCERNING LARGE ACOUSTIC UNDERWATER CALIBRATION FACILITIES

The CEC, DG XII/E, intends to commission a feasibility study and market analysis for large underwater acoustic calibration facilities. Tenders must be submitted not later than 20.7.1990.

Contact: MAST programme, DG XII/E, SDME 3/48, 75, rue Montoyer, B-1040 Brussels, Fax.: (32) 2 236.30.24.

IFAT 90, THE WORLD'S LARGEST WASTE DISPOSAL FAIR

PROMINENT VISITORS TO DG XIII-C STAND

IFAT 90 offered a wide range of products from the waste disposal industry. Almost 1 000 organizations from 23 countries presented their full range of products in a space of over 100 000 m. DG XIII-C exhibited a series of highly interesting processes aimed at ensuring environment friendly production. The products exhibited from stem Community-funded R&D (see also page 34). The increasing interest in the CEC's role in the field of environmental protection was shown by the high ranking visitors it received.

Mr P. Flynn, President of the EC Council on Environmental Affairs, Mr C. Ripa di Meana, CEC Commissioner for the Environment, an IFAT exhibitor, Mr K.H. Steinberg, Minister of the Environment, GDR, Mr K. Töpfer, Minister of the Environment, FRG, G. vom Hövel, Managing Director of the Munich Fair, and Mr M. Leipold, DG XIII-C



IFAT 1990 — ENVIRONMENTAL TECHNOLOGIES CEC CATALOGUE



Marschen 22. — 28. Mai 1990



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Name: _____ Address: _____

Date: _____ Signature: _____

Please return to: Mr M. Leipold, CEC CAZALOGUE DG XIII/C/2, B4/086, Jean Monnet Building, L-2920 Luxembourg, Tel.: (352) 4301-2936, Tlx: 3446 CO-MEUR LU, Fax: (352) 4301-4129.



WORKSHOP ON THE INTERFACE BETWEEN TECHNICAL STANDARDISATION AND RTD

This workshop is organised by the **MONITOR-SAST Activity** (see I&TT, 5/89, page 15), which has the general objective of **highlighting new priorities for Community R&D**. Those interested in participating in the above-mentioned workshop are expected to participate on both days, i.e. at the briefing and the in-depth discussion.

- 1st option: Brussels, 13th Sept. (briefing) and 18th Oct. (in-depth discussion)
- 2nd option: Brussels or Ispra, 20th Sept. (briefing) and 25th Oct. 1990 (in-depth discussion)

The purpose is to bring together people from different backgrounds — legislators, standardisers, industrialists, researchers, consumer representatives, etc. — to **provide input into an on-going Commission study on 'pre-normative research'**, this being understood in a broad sense, i.e. research to supply the scientific and technological basis for the setting, improvement and observance of technical regulations, norms and standards. Participation will be on a first-come-first-served basis and limited to 15-20 people per workshop (participation only in one of the two options possible).

Contact: Mr Schmitz or Mr Wengel, DG XII-H2 (MONITOR/SAST), 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.80.89, Fax.: (32) 2 235.06.56.



CONFERENCE ON RADIOACTIVE WASTE, 17-21 SEPTEMBER

The Conference aims to present the main achievements of the third Community research programme in the field of radioactive waste management (1985-89) and to promote a thorough discussion of these results in order to take advantage of the widest international experience in this field.

Further information can be obtained from Mr L. Cecille, Commission of the European Communities, DG XII/D/2, ARTS-LUX 2/16, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.75.88, Tlx: 21877 COMEUR B, Fax: (32) 2 236.20.06.

CEC WANTS TO INCREASE SME PARTICIPATION IN PUBLIC PROCUREMENT

The CEC has adopted a communication which, presented by Vice-President Bangemann and Commissioner Cardoso e Cunha, aims at **promoting SME participation in public procurement in the Community**. The Commission considers that SMEs do not participate in this very important sector to an extent commensurate with their share in the overall economy. Moreover, greater participation by SMEs would also bring to public markets a new competitive element. In its communication, the Commission reviews **four categories of measures** to promote SME participation in public procurement:

- a) those which **facilitate access** of SMEs to award procedures;
- b) those which **reduce costs** incurred by SMEs in public procurement;
- c) those which **prepare SMEs for effective participation** in award procedures;
- d) those which **discriminate in favour of SMEs**.

The Commission will study and evaluate the results of existing measures promoting SME participation in public procurement, encourage appropriate experiments and pilot projects and facilitate the exchange of information and ideas within the Community.

Contact: Mr J. Jordan, ARLN 05/13, DG XXIII, B-1049 Brussels, Tel.: (32) 2 235.59.02/606.90, Fax.: (32) 2 236.02.41 (see also the Council recommendation of 28.5.1990, published in OJ L 141 of 2.6.1990)

BC-NET: TRANSNATIONAL COOPERATION BETWEEN COMPANIES

The completion of the internal markets is leading a growing number of Community firms to **seek partners beyond their own borders**. To help SMEs to achieve this step, the CEC has set up a computerized **European network of business consultants called Business Cooperation Network (BC-NET)**. At the moment, BC-NET comprises more than 400 business consultants in various Member States. To enhance the cooperation between the services of BC-NET and the EURO-INFO-CENTRES, all EURO-INFO-CENTRES have been integrated into BC-NET. Since its start, more than 14 000 'cooperation profiles' (standard documents summarizing the SME's cooperation requirements) have been processed. An evaluation of the system by the CEC shows a clear **preference for trade cooperation**, followed by cooperation in technology and finance respectively.

Third countries are showing a growing interest in BC-NET. Access to it was expanded in November 1989 to Mexico and Brasil. BC-NET could later be **extended to the EFTA countries and those of Eastern Europe**. It is envisaged in the future:

- to set up a data communication system between BC-NET users;
- to develop application programmes corresponding to the most evolved BC-NET needs;
- to improve access to nomenclature (key words) and,
- to give the possibility of establishing closer correlation between BC-NET offers in the context of the Business Cooperation Centre („Marriage Bureau“).

Contact: Mr T. Kallianos, CEC, DG XXIII-BC-NET, ARLN O6/26, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.85.91, Fax.: (32) 2 235.62.904.

SUBCONTRACTING: CREATION OF INTERNATIONAL 'INSICPO' ASSOCIATION

On the occasion of the EUROTECH subcontracting fair (see page 24), some 12 European bodies well known in the subcontracting sector decided to establish the **INSICPO — International Network of Subcontracting, Industrial Cooperation and Partnership Organizations**. Its objective is to promote the development of the subcontracting sector thanks to the competence of its member bodies and companies. INSICPO intends to bring together bodies and companies involved in subcontracting and to inform them through the publication of directories, catalogues, a periodical and the organization of databanks and colloquia.

For further information please contact: Mr Malosse, ACFCI, 1, avenue des Arts, B-1040 Brussels, Tel.: (32) 2 218.53.56, Fax.: (32) 2 217.69.87.

CRAFT INDUSTRIES AND VERY SMALL ENTERPRISES IN THE COMMUNITY

CONFERENCE IN OCTOBER 1990 IN AVIGNON

With the prospect of the completion of the Single Market, DG XXIII of the CEC will host a **European Conference on Crafts** on October 12 and 13, 1990 in Avignon, France. It will specifically address the following issues: basic and continuous **training** of the craftsmen and (including exchange programmes and exchanges of apprentices; the right of establishment; access to and use of new technologies; access to new markets... and more generally the **prospects for the crafts** against the background of the Single Market.

From October 11 to 14, 1990, in tandem with the conference, an **exhibition of craft products** and works in the arts sector will be organized: textiles, glass, ceramics, woodwork, iron work and precious metals. The selection of craftsmen and their work will be organized by the appropriate ministry in each Member State.

Contact: Mr R. Wipperfürth, CEC, DG XXIII, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.55.73, Fax.: (32) 2 236.73.35.



OPTIMISTIC FORECASTS FOR EEC ECONOMIC EVOLUTION

The CEC has submitted to the Council the Community's revised **economic forecast for 1990 and 1991**. The prospects remain positive. The essential elements of the forecast are as follows:

- **Economic growth** in the Community continues at a rate of about 3% in 1990 and 1991
- **Investment**, which is expected to expand by 4.5% in 1990 and 4% in 1991, remains the fastest growing component of domestic demand, but the contribution of consumption — in 1990 — and exports — in 1991 — become relatively more important
- **Employment** is expected to increase by 1.4% this year and by 0.9% in 1991, and unemployment should decline to 8.3% next year
- **Inflation** remains high in 1990 (4.8%), but could decline somewhat next year
- **Budgetary consolidation** marks time as general government borrowing as a percentage of GDP increases in 1990
- The Community's **external balance** improves marginally

Copies can be obtained from: Ms I. Hodes, CEC, DG XII, BERL 7/23, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.60.91, Fax.: (32) 2 235.89.81/565.04.

NEWS FROM DG XV:

FINANCIAL INSTITUTIONS: 1992 IS APPROACHING

The Newsletter 'News from DG XV' reports on the Commission's policy in the fields of **financial institutions and company law**. The latest issue, published in April 1990, deals with the following topics;

- Council directive on **prevention of use of the financial system for money laundering** (illicit traffic in drugs)
- Opening **World Bank Meetings**
- Financial Services and **EFTA**
- Second directive on **life insurance**
- Third directive on **insurance against civil liability** in respect of the use of motor vehicles
- Directive in respect of **mutual recognition of public offer prospectives** as stock exchange listing particulars
- Directive on the **adjustment of capital for investment service**
- **Fiscality of enterprises**
- **Indirect taxation of capital gains.**

The Newsletter NEWS FROM DG XIV can be obtained from: Mrs G. Halberstadt, CEC, DG XV, C 100/086, 200, rue de la Loi, B-1049 Brussels, Tel.: (32) 2 235.18.55, Tlx.: 21877 COMEUR B, Fax.: (32) 2 235.65.00.

AUDIOVISUAL POLICY: COMMISSIONER DONDELINGER OUTLINES THE NEW ELEMENTS OF THE CEC AUDIOVISUAL POLICY

CEC Commissioner Dondelinger outlined to the Council the **two CEC communications on audiovisual policy**. The first communication deals with **audiovisual policy in general**, covering all aspects of the Community's policy in this area. The second includes two proposals on the action programme aimed at promoting the development of the **European audiovisual industry** from 1991 to 1995 (MEDIA Programme). The first proposal contains the strategic initiatives the Commission intends to take to **aid the European audiovisual sector** and for which it has requested a budget of 250 million ECU. The second proposal concerns the implementation of a Community **vocational training measure in the audiovisual sector**.

The above-mentioned proposals were published in OJ C 127 of 23.5.1990 (see also document COM 90 132 final of 4.5.1990).

Contact: Mrs H. Lhoest, CEC, DG X, BERL 02/23, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 23 59.957, Fax.: (32) 2 23 60.752.

CEC OPENS UP ENERGY MARKET

The CEC took its first steps towards creating a **single market in energy** by agreeing measures which will **encourage cross-border trade in electricity**. The so-called 'electricity transit' directive will allow grid companies in one Member State fair access to the networks in another. It should make it easier for example for France, which has cheap surplus electricity, to sell its power to Portugal via the Spanish grid. At present, less than 5 per cent of Community electricity is traded across borders, and the CEC has estimated that, if the market were made free of all restrictions, the EC would save about ECU 70bn (\$68bn) by the year 2010. The scope of the directive agreed by energy ministers in Brussels is limited, applying only to the grid companies, rather than to other third parties.

Contact: Mr H.V. Beelitz, CEC, DG XVII/1, TERV 3/2, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.57.325, Fax.: (32) 2 235.50.150.

CEC BUSINESS POLICY IN 1989: ACTIVITY REPORT PUBLISHED

The CEC has published its XXIII General Report on the business policy of the European Communities in 1989. It gives an overview of the various CEC initiatives with regard to the improvement of the environment and the promotion of SMEs.

It can be obtained from: The Office for Official Publications, 2, rue Mercier, L-2985 Luxembourg, Fax.: (352) 2 49.00.03.

SCIENCE AND TECHNOLOGY IN EUROPE

New presentation brochure of the Joint Research Centre

The Joint Research Centre of the European Communities is a **European scientific and technical research centre**. Its four sites in Belgium, Germany, Italy and the Netherlands house nine different institutes, each with its own focus of expertise. The JRC performs scientific research and technology development for the Commission of the European Communities, national agencies, universities and corporate clients from Community Member States and other countries. The brochure 'Science and Technology in Europe' provides potential clients with an **overview of the services, facilities and expertise** at their disposal at Europe's Joint Research Centre.

✂

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Please return to: Mrs Alma Manara, Joint Research Centre, Ispra Establishment, I-21020 Ispra (Varese), Tel.: (39) 332 78.9889, Tlx: 380042 / 380058 EUR I, Fax: (34) 332/789 502



EURO COURSES PUBLICATIONS

This series is devoted to the publication of courses and educational seminars organized by the Joint Research Centre, Ispra, as part of its education and training program. The first publication concerns:

**PRACTICAL APPLICATIONS OF QUANTITATIVE STRUCTURE-ACTIVITY
RELATIONSHIPS (QSAR) IN ENVIRONMENTAL CHEMISTRY AND TECHNOLOGY**

EDITED BY W. KARCHER AND J. DEVILLERS

Based on the lectures given during the Eurocourse on 'Practical Applications of Quantitative Structure-Activity Relationships (QSAR) in Environment Chemistry and Toxicology' held at the Joint Research Centre, Ispra (VA), Italy, 11-15 June 1990.

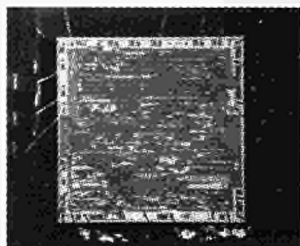
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NUEVAS REVISTAS TECNICAS SOBRE LOS PROGRAMAS DE I+D EN LA CE

Quaderns de Tecnologia



La Diputación Foral de Vizcaya, ha consolidado la publicación de la revista '**ACTUALIDAD I+D**'. El objetivo fundamental de esta revista, redactada en castellano, es recoger las noticias que se van generando en el seno de la Comunidad Europea en relación con los programas de I+D. Está previsto destacar los temas desde un enfoque eminentemente práctico.

El Instituto Catalán de Tecnología (ICT) ha publicado el primer número de '**QUADERNS DE TECNOLOGIA**'. Las reflexiones actuales sobre la problemática de la innovación tecnológica serán presentadas. El primer número ofrece una síntesis de los debates culturales, sociales y técnicos existentes en Europa en el campo de la tecnología. La revista está redactada en catalán, castellano e inglés.

Todas aquellas empresas y organismos que deseen recibir información sobre estas nuevas revistas, pueden dirigirse a: 1. **ACTUALIDAD I+D**, Sr. D. Jesús Quintana, Obispo Orueta, 6, E-48009 Bilbao, Tel.: (34) 4 423.39.89/-43.18, 4 424 33.66, Fax.: (34) 4 423.06.35, Tlx./ 33241 PRYDE E. 2. '**Quaderns de tecnologia**', Sr. D. Miguel Barcelo, I.C.T, Pl. Ramón Berenguer, 1. pral., E-08002 Barcelona, Tel.: (34) 3 317.33.82.

THE JOINT RESEARCH CENTRE: SCIENCE AND TECHNOLOGY FOR EUROPE

The Joint Research Centre is the EC's scientific and technical research centre. Its four sites in Belgium, Germany, Italy and the Netherlands house eight different institutes, each with its own focus of expertise. The JRC performs scientific research and technology development for the CEC, national agencies, universities and corporate clients from Community Member States and other countries.

The year 1989 was marked by a continuing reform and dynamic implementation of the profound and penetrating restructuring of the Joint Research Centre (JRC). The JRC is now engaged in four main types of activity:

- **specific research programmes** — the mainstream of the JRC activities in the past, which will be reduced to 74 % of total JRC activities over the coming 4 years. These are part of the EC Framework Programme;
- **exploratory research** — a new feature to ensure future scientific vitality, which will represent 5 % of the JRC's specific research programmes;
- **scientific and technical support to other Commission services** — a task already carried out in the past, and which will be significantly increased to represent 12 % of JRC activities;
- **work for external third parties** — again a new task which should represent 14 % of global JRC activities.

In this and the forthcoming issues, I&TT will give information on the various activities of the JRC. In this issue we start with the Institute for Systems Engineering and Informatics:



R.W. Witty, Director of the Institute for Systems Engineering and Informatics

INSTITUTE FOR SYSTEMS ENGINEERING AND INFORMATICS

The Institute for Systems Engineering and Informatics at Ispra executes the programmes on **Industrial Hazards Reference Methods for Non-Nuclear Energies** and is leading and partly executing the programme on **Safeguards and Fissile Materials Management** on Fusion Technology and Safety and advanced computing including parallel and neural computing and AI2CSW1. The ISEI also runs the JRC's computer centre and telecommunication network for the entire JRC. It also works on the risk and reliability of structures, plants, and sociotechnical systems for the programmes Reactor Safety, Industrial Hazards and Reference Methods of Reliability of Structures led by the Institute of Safety Technology and researches on Artificial Intelligence applied to advanced diagnostics for the programme Advanced Materials led by the Institute for Advanced Materials.

Research is carried out on the following issues:

1. Systems Engineering and Reliability

- Risk Management and Regional Planning
- Plant Safety and Reliability
- Man-Machine Interface
- Risk and Reliability Benchmark Exercises
- Robotics
- Structural Diagnostics
- Safety in the Working Environment

2. Reference Methods and Non-Nuclear Energy Sources

- Energy Saving
- ESTI (European Solar Test Installation)
- Hydrogen as an Energy Store

3. Nuclear Materials Safeguards

- Systems Analysis

- Sealing Techniques
- Training of Nuclear Safety Inspectors

4. Informatics Centre

- Computer Center
- Telecommunications
- Applications Software Development

5. Advanced Computer and Knowledge Based Applications

- Image Processing
- Electronics
- Knowledge-based Systems



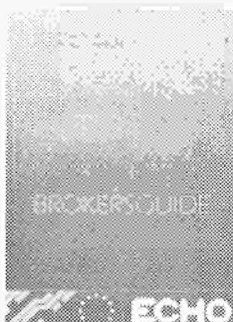
Laser scanning under development as a new diagnostic tool for photovoltaic cells

For further information, contact the marketing officer: Ms J. Gerbaulet, JRC — ISPRA, I-21020 ISPRA (VA), Tel.: (39) 332 78.91.11 ext. 5116, Fax.: (39) 332 78.99.23.

MAX INFORMS YOU ON ECHO NEW HUMAN VOICE COMPUTER DEVELOPED

AEG, under contract with the CEC (Impact Programme), has developed a system whereby users can obtain certain information by entering into a simple dialogue with the system. The user simply dials up the system, listens to what Max has to say and then follows his instructions. At the moment Max is used to inform on latest ECHO news, exchange rates, exhibitions, EC institutions etc.

Further information: ECHO, B.P. 2373, L-1023 Luxembourg, Tel.: (352) 48.80.41, Fax.: (352) 48.80.40. From this address you can also obtain the ECHO Directory of European Information Brokers and the new ECHO Guide.



COUNCIL ADOPTS PROGRAMME FOR EXCHANGES OF YOUNG WORKERS

The Council has adopted a programme of **exchanges for young workers** offering experience of living and working conditions in other Member States, fostering practical skills as well as the skills of interpersonal communication from other Member States. The programme will be open to young people between 15 and 28 years of age. The exchanges range from the short term, lasting three weeks to three months including study, visits, work placements and a brief experience of the working environment, to the longer term, lasting four to sixteen months.

Contact: EURODYCE, Le Réseau d'Information sur L'Education dans la CEE, 17, rue Archimède, Bte 17, B-1049 Brussels, Fax.: (32) 2 230.65.62 (see also OJ L 156 of 21.6.1990).

FORCE PROGRAMME: DEVELOPMENT OF CONTINUING VOCATIONAL TRAINING

The Council of 24.5.1990 adopted a Decision establishing an action programme for the development of **continuing vocational training** in the European Community (FORCE). The aim of the programme, which is to run for four years (1991-1994), is to support and complement the policies and activities developed by the Member States. The programme has been given two complementary parts:

- a common framework of guidelines designed to support and complement the policies adopted by the Member States;
- a number of transnational measures implemented at Community level designed to complement national activities.

For further information on the above schemes, please contact: EURYDICE, 17, rue Archimède, Bte 17, B-1040 Brussels, Fax.: (32) 2 230.65.62. (see also OJ L 156 of 21. 6. 1990)

WORK PROGRAMME OF THE EUROPEAN FOUNDATION FOR THE IMPROVEMENT OF LIVING AND WORKING CONDITIONS

The European Foundation for the Improvement of Living and Working Conditions is an autonomous Community body whose aim is to contribute to the **planning and establishment of better living and working conditions** through action designed to increase and disseminate knowledge likely to assist this development. The work programme for 1990 comprises new studies on the following themes:

- Developing social dialogue and industrial relations
- Restructuring working life
- Promoting health and safety
- Protecting the environment, the worker and the public
- Raising the standard and quality of life for all
- Assessing the technologies of the future
- Information projects

Enquiries should be addressed to: Mr B. Nolan, EFILWC, Loughlinstone House, Shankill, County Dublin, Ireland, Tel.: (353) 82.68.88, Tlx.: 30726 EURF EI, Fax.: (353) 82.64.56, (see also OJ, C 146 of 15.6.90)

UNIVERSITY STUDIES ON EUROPEAN INTEGRATION: 220 GRANTS UNDER THE 1990 JEAN MONNET ACTION

Under the 1990 pilot year of the Jean Monnet action for 'university teaching on European Integration', the CEC has made 220 grants selected from 1200 applicants and aimed at supporting the creation of **new teaching activities on European Integration** in university curricula (see I&TT, 5/89, page 12). The proposals selected will lead to the creation in the academic year 1990-91 of

	Law	Eco	Pol.Sc.	History	Pluridisc.
46 'European Chairs'	14	11	11	8	2
96 Permanent Courses	32	26	12	10	16
52 'European Modules'	10	18	8	1	15
26 Research Aids	9	5	35	2	6
220 subsidies	65	60	35	21	39

It is interesting to note that:

- the German universities are setting up three of the eight new 'European Chairs' in the **History of European Integration**;
- the French and Spanish universities are setting up seven of the 14 new 'Chairs' in **Community Law**;
- the British universities are setting up seven of the eleven 'Chairs' in **European Politics**;
- thirty or so Italian universities, which are not yet in a position to have co-financed chairs, will organise **new compulsory courses in European subjects**;
- the first '**European Chair**' in **journalism** will be created at the School of Journalism in Aarhus (DK).

Contact: Mrs A. van Miert, CEC, DG X, University Information, BERL 2/110, 200, rue de la Loi, B-1040 Brussels, Tel.: (32) 2 235.20.77, Tlx.: 21877 COMEUR B, Fax.: (32) 2 236.07.52/235/01.42

**ERASMUS: MOBILITY OF UNIVERSITIES STUDENTS
LINGUA: OVERCOMING OF LANGUAGE BARRIERS**

1748 INTERUNIVERSITY COOPERATION PROGRAMMES APPROVED

The CEC has decided, on a proposal by Mrs Papandreou, to finance, in the context of the ERASMUS and LINGUA programmes, **1748 interuniversity cooperation projects** for the year 1990/91 involving about 1100 advanced education establishments and 44000 students. **The breakdown** of the 1748 ICPs accepted is as follow:

- student mobility: 1592 projects
- teacher mobility: 277 projects
- development of joint teaching: 99 projects
- intensive programmes: 114 projects.

Out of this total, 79 ICPs have been selected under action II of the **LINGUA Programme**, in accordance with a procedure common to both Programmes. These are concerned above all with future language teachers and those who study the least taught languages of the Community (Portuguese, Greek, Dutch and Danish). (Because the budget available for LINGUA for its initial year of operation is very limited, a large proportion of the ICPs in the field of modern European languages will be supported under ERASMUS.)

I&TT would remind you that **applications** under ERASMUS are invited (see page 8).

Contact: ERASMUS Bureau, 15, rue d'Arlon, B-1040 Brussels, Tel.: (32) 2 233.01.11, Tlx.: 63528 COMEUR B, Fax./ (32) 2 233.01.50 (from this address you can obtain the ERASMUS NEWSLETTER; 9 ECU per year); LINGUA Technical Support Team, 2/3, place du Luxembourg, B-1040 Brussels, Tel.: (32) 2 514.33.97.



COMETT BECOMMES AVAILABLE TO EFTA COUNTRIES

COMETT, the cooperation programme between universities and industry on training in technology, entered its second stage on January 1 1990 for a five-year period with a budget of 200 million ECU. It will **be open to participation by universities from the countries of the European Free Trade Association (EFTA)**. Each of the EFTA countries will contribute to the budget of COMETT II. To safeguard the Community interest of the programme, transnational projects submitted by a promoter in an EFTA country will only be eligible if at least two Member States take part in it. Similarly, exchanges of students and company managers can only be financed if they involve projects between an EFTA country and a Community Member State. This decision is published in OJ L102 of 21.4.1990.

For further information contact: COMETT Technical Assistance Office, Avenue de Cortenberg 71, B-1040 Brussels, Tel.: (32) 2 733.97.55, Fax./ (32) 2 734.56.41.

NEW COMETT PUBLICATIONS NOW AVAILABLE

✂

Order form: Please send me the

- COMETT GUIDELINES ON EFTA PARTICIPATION
- COMETT VADEMECUM

- COMETT BACKGROUND DOCUMENT
- CATALOGUE OF COMETT OUTPUTS
- COMETT BULLETIN

COMETT REPORT 1989 in:

DE	DA	EN	ES	FR	IT	GR	NL	PT
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Name: _____

Adress: _____

Postal Code: _____ Town: _____ Country: _____

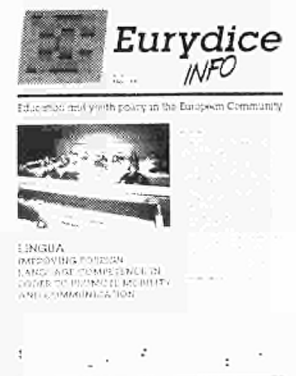
To be returned to COMETT, Technical Assistance Office,
B-1040 Brussels, 71, av. de Cortenberg, Tel.: (32) 2 733.97.55,
Fax: (32) 2 734.56.41

✂

**EURYDICE INFO: REGULAR INFORMATION ON THE CEC
EDUCATION POLICY**

EURYDICE INFO reports regularly on education and youth policy in the European Community, i. e. the following programmes and initiatives: **ERASMUS, LINGUA, YOUTH EXCHANGES, EURYDICE, PETRA, EUROTECNET, IRIS, CEDEFOP, FREEDOM OF MOVEMENT.**

EURYDICE INFO can be obtained from: EURYDICE — Le Réseau d'Information sur l'Education dans la Communauté Européenne, 17 rue Archimede, Bte 17, B-1040 Brussels, Fax.: (32) 2 230.65.62.



NEW SERVICE OF THE EUROPEAN PATENT OFFICE:

ESPACE: EUROPEAN PATENT APPLICATIONS NOW AVAILABLE ON CD-ROM

Having a **complete collection of European patent applications** is a fantastic tool that enables you to follow the evolution of all branches of technology, keep an eye on the activities of your competitors, identify potential partners in industry, etc.

Within the last few weeks, **the European Patent Office has launched two new CD-ROM products**. These new products, **ESPACE** and **FIRST**, represent a step forward in the publication of documentation material. They will allow subscribers to build up and maintain a **complete collection of European patent applications**. The ESPACE CD-ROMs contain facsimile images of the entire documents, while FIRST will hold the first pages of them. Both CD-ROMs contain the complete bibliographic data, and the search and retrieval software provided with a subscription enables

searches to be performed among all the different bibliographic data elements. An ESPACE CD-ROM contains as many as 10 000 DIN A 4 pages in electronic format. A complete paper collection of European patent application documents would cost you in excess of DM 300 000, and takes up over 50 metres of shelf-space. It weighs about half a ton. You can avoid all this simply by subscribing to the ESPACE CD-ROM collection, fitting the entire collection of some 65 CD-ROMs into about 50 cm of shelfspace.

Further information can be obtained from Mr N. Campling, Patent Information Directorate, European Patent Office, Erhardstraße 27, D-8000 München 2, Tel.: (49) 89 239.925.50, Fax: (49) 89 239.951.43.

**PATENT APPLICATION RECENTLY PUBLISHED (CEC R&D)****A COOLING DEVICE FOR PROTECTING AN ELONGATED APPARATUS AGAINST A HOT ENVIRONMENT**

Inventors: T. RAIMONDI, T.V. BUSINARO, R. CUSACK

Ref.: EUR PAT 2251

The invention has been conceived in particular for protecting a TV camera supervising the interior of a vessel exposed to vacuum, radiation and/or high temperature. In fusion experiments, for example, the camera is housed in the lower part of a metal tube (at least 4m long) terminating in a glass cylinder which penetrates into the vacuum of the torus-shaped vessel. Due to the tube's length, classical heat shielding cannot be applied and, as the camera only tolerates temperatures up to 40 °C, it has been impossible until now to inspect the vessel's interior immediately after a fusion experiment where the temperature equals 350 °C. By circulating a coolant fluid such as water around the tube, the new device is able to keep the camera below 35 °C despite a 350 °C environment temperature.

Two concentric tubular sheaths (11, 12) are arranged coaxially around the inner side of the vertical stainless steel tube (1) containing the camera (5) and the other components of the viewing system (6, 7, 8, 9, 10). The sheaths extend from a first end (15) corresponding to the level of transition between the glass cylinder (2) and the tube to a second end (16) situated above the bellows (3) which seals the tube against the vacuum (4). At the first end, the interspace between the sheaths is tightly closed, and at the second end there is a collector and distributor head (18) with a coolant inlet (19) and a coolant outlet (20).

A number of regularly arranged coolant fluid tubes (13), closely fitted into the interspace and parallel to its axis (14), transport the water from the inlet downwards to the first end. At a short distance from there, the tubes abut against the outer sheath's shoulder (17) so that the water leaves them and returns through the interspace outside the tubes upwards to the outlet, thereby removing heat. The device can also be applied to other forms of elongated constructions in other environments.

Further information on the invention above can be obtained from: Commission of the European Communities, Directorate-General XIII/C/1, Ms L. Gerlach (JMO B4/068), L-2990 Luxembourg — Tel.: (352) 4301-2922, Telex: 3423/3446

KNOWLEDGE TRANSFER OF ECHO PROJECTS

ADVANCED ACCESS TO INFORMATION

European hosts and others can learn how to make their data bases more easy to use at a **knowledge transfer meeting** organized by the CEC, DG XIII-B. Two innovative projects, developed under the IMPACT programme and which have been successfully implemented on ECHO, will be explained at the meeting in Luxembourg on 29 October 1990:

- Access to information **using natural languages**,
- Access to information **by human voice interrogation**.

Participants will receive documentation describing the two projects and the difficulties encountered.

Contact: Mr J. Goederich, CEC, DG XIII-B, L-2920 Luxembourg, Tel.: (352) 4301-4858, Fax: (352) 4301-3909.

**PATINNOVA '90: STRATEGIES FOR THE PROTECTION OF INNOVATION
DISCUSSED BY MORE THAN 500 PARTICIPANTS**

At PATINNOVA '90 more than 500 participants discussed the links between national and supranational patent systems and international innovation activities. PATINNOVA '90 was the first European conference on patents and innovation organised by the CEC and the IFO Institute for Economic Research, Munich. The following conclusions can be drawn from the various presentations and discussions during the conference:

- **Supranational patent systems are increasingly becoming crucial for important innovations.** The European Patent system and the CT system of WIPO offer innovative enterprises the necessary basis for rapid acquisition of patent protection on foreign markets. Alongside this, the national patent systems will focus increasingly on providing industry with patent information and assisting companies in obtaining initial access to patent protection.
- In the next few years, and in the context of the creation of the Single Market, **patent protection will play a major role for all companies wishing to place emphasis on R&D-intensive innovation**, and these firms are expected to increase patent filing activities.



Mr V. Parajon-Collada, Deputy Director General of DG XIII, Mr F. Panizo, Deputy Minister of Industry (ES), Mr K.H. Oppenländer, President IFO-Institute, during the opening session.



The first row of the auditorium during the opening session: Mr H. Bank, Head of the CEC Patent Section, Mr J. Delicado-Rios, President of the Spanish Patent Office, Prof.A. Cadenas, University of Madrid, Mr P. Braendli, President of the European Patent Office, Mr A. Strub, Director DG XIII-C

experts for such proceedings, since processing and assessing the often highly complex subject matter called for a high degree of expertise, and courts dealing with patent litigation were frequently out of their depth in such matters.

All in all, PATINNOVA '90 made a considerable contribution to the exchange of experience and knowledge between **users and 'producers' of the patent systems**. Because of the strong interest PATINNOVA has aroused, the CEC intends to hold a **second European Conference on Patents and Innovation (PATINNOVA '92) in 1992**.

The PATINNOVA '90 proceedings will be published by the end of 1990 (30 — 40 ECU). They can be **obtained by returning the order form below to: Ms L. Eisen, CEC, DG XIII-C, JMO B4/087b, L-2920 Luxembourg, Tel.: (352) 4301-3164, Fax.: (352) 4301-4544.**

<.....

Name:

Address:

Postal Code: Town: Country:

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Further information can also be obtained from: Mr U. Täger, IFO, Poschinger Strasse 5, D-8000 München 86, Tel.: (49) 89 922.43.45, Fax.: (49) 89 98.53.69. The list of PATINNOVA participants can be obtained from Mrs L. Eisen (see address above)

- Patents form an important basis for **transnational technology transfer** via licence contracts which lay down the rights and duties of the companies and persons involved. The EC block exemption directives for certain cross-border patent licences, know-how licences and R&D cooperation projects have given companies a high degree of **legal security** when initiating contractually-based technology transfer with a foreign partner.
- **Patent attorneys and consultants** offer important services not only to SMEs but also to all applicants for technological inventions. Firms without a patents division should contact a patent attorney at an early stage in the R&D process to make sure that results will be checked for possible protection. Via searches in the relevant patent documentation, a patent attorney can provide essential assistance in recognising R&D results which need protection.
- PATINNOVA participants complained about the **duration of patent litigation before the courts**. It was also very difficult to find experienced



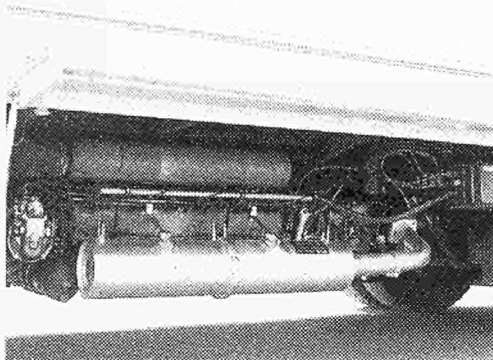
The conference venue

INNOVATIONS FROM COMMUNITY R&D

Under this section 'Innovation and Technology Transfer' reports regularly on recent innovations stemming from Community-funded research.

DIESEL PARTICULATE TRAP

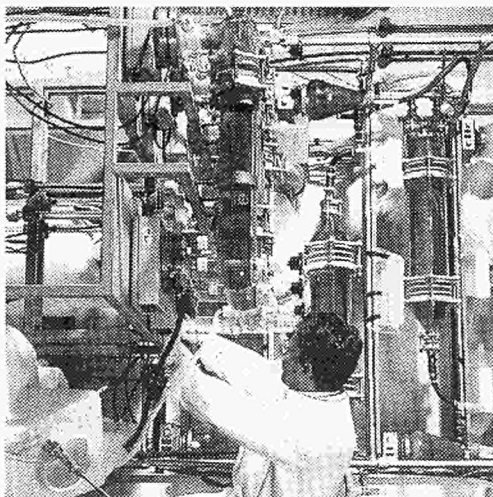
The ELBO diesel particulate trap is one of the **most effective exhaust after-treatment devices to reduce the soot emissions of diesel engines**. The main filter consists of four ceramic monoliths of high filtration efficiency. The regeneration technique is the result of many years' research in the laboratory of applied thermodynamics of the Aristotle University of Thessaloniki. It is based on the idea of burning the accumulated soot with the use of the oxygen-rich exhaust gas and the high temperatures developed by the exhaust-gas throttling. The operation of the trap is fully automatic. The overall filtration efficiency is more than 95% with regard to black smoke emissions, with the same fuel consumption. Over the past five years more than 100 ELBO diesel particulate traps have been installed on urban buses in Athens. Due to the very satisfactory results, plans are under way to fit all the public transport buses in Athens.



For further information contact: Prof. K. N. Pattos, Laboratory of Applied Thermodynamics, Aristotle University Thessaloniki, GR-54006 Thessaloniki, Invention/development: Hellenic Vehicle Industry SA, PO Box 10239, GR-54110 Thessaloniki, Tel.: 031 798 502, Cofinancing: DG XI

PROCESSING OF NICKEL CADMIUM BATTERIES

MT-TNO, in collaboration with Leto Recycling BV, Stichting Geavanceerde Metaalkunde and the Warren Spring Laboratory, embarked upon a comprehensive study in 1988 on the development of a method for reprocessing used batteries. A major part of the research was funded by DG XII of the Commission of the European Communities and the Nederlandse Maatschappij voor Energie en Milieu BV, with the research partners putting up about 25%.



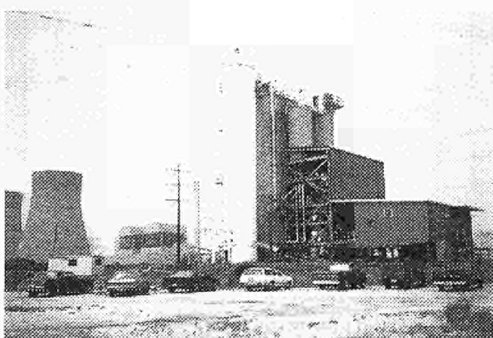
The scope of the research includes such aspects as sorting out specific types of batteries, breaking them down and recovering the various metals from them. To recover the metals, process routes were developed and tested at laboratory scale for both primary batteries containing mercury and rechargeable nickel cadmium batteries. During the course of the research, the emphasis has shifted more and more towards the nickel cadmium batteries.

The process developed for reprocessing nickel cadmium batteries is based on hydrometallurgical principles. This approach differs to that of the plants currently in operation in France and Sweden, which employ a thermal process. The advantage of the hydrometallurgical process is that it is less energy-intensive than the thermal process, a greater degree of purity can be obtained in the metals recovered, and the plant need not be so large to become economically viable. On the basis of the results of the semi-technical research, a technical and economic assessment of the process developed will be carried out in mid-1990. Should this prove to be positive, then it is possible that a commercial plant for the reprocessing of nickel cadmium batteries could be constructed at Leto Recycling BV in 1991/92.

For further information contact: TNO Division of technology for society, Department of Industrial Safety, Laan van Westenenk 501, PO Box 342, 7300 AH Apeldoorn, Nederlanden, Tel.: (31) 55 49 34 93, Invention/development: TNO, Cofinancing: DG XII

TURNING COAL RESIDUES INTO A RESOURCE

The Aardelite process was developed by Aardelite Holding BV, a Dutch privately owned company founded in 1985.



In Aardelite installations fly-ash from coal-fired power stations is converted into lightweight gravel in an economically attractive as well as environmentally sound process. At present, fly-ash, a pulverized residue produced in huge quantities in coal-firing power stations, is dumped in disposal sites on a large scale. Aardelite Holding's business objectives are twofold: licensing of the Aardelite process and turnkey supply of Aardelite installations. After successful development of the process, the first commercial installation in the USA has been in operation since early 1988, with a capacity of 33 tonnes per hour. The Aardelite gravel produced from fly-ash is used in the building industry as a replacement for natural gravel.

For further information contact: Mr R. van Graaf, IMC, Achter Emer, NL-4824ZA Breda, Tel.: 76 41 19 64, Aardelite Holding BV, Mr A. Kodde, Managing Director, Meesterstraat 5, NL-3861RE Nijkerk, Tel.: 349 46 11 11, Invention/development: Aardelite Holding BV, Cofinancing: DG XVII

PROTEAS



PROMOTING THE COMMERCIAL EXPLOITATION OF COMMUNITY R&D RESULTS: EXTRACTS FROM THE PROTEAS DATABASE

PARAMETRISATION OF SURFACE FLUXES FOR CLIMATE MODELLING

ORGANISATION
Freie Universitaet Berlin
ORGANISATION TYPE
University/Educational Institution
NUMBER OF EMPLOYEES
> 500

RESULT TYPE
Methodology/skill/know-how

ORIGINAL TITLE
Parametrisierung von Landoberflaechen-fluessen fuer
Klimamodellierung

ABSTRACT

In field experiments datasets have been obtained of boundary layer, soil and radiometric data which can be used to test 1-dimensional models of energy and radiation fluxes and to validate measurements made from satellites. In conjunction with partners, methods have been improved to derive area averaged quantities from which fluxes can be computed.

SUBJECT CLASS
environment; IT, telecomms

SUBJECT DESCRIPTORS
atmospheric science; climatology; desertification; ecosystems; remote sensing

MARKET APPLICATIONS

ecosystems modelling, simulation; irrigation; environmental systems analysis; impact assessment

SUPPORT DETAILS

Thorough investigations of the sampling and the scaling problems now become necessary to meet IGBP goals. Research has also to be extended into larger scales such as envisaged in EFEDA.

CEC PROGRAMME

Environment

COUNTRY

Federal Republic of Germany

REDUCTION OF NITROGEN OXIDES AND SULPHUR DIOXIDE EMISSIONS IN A BUBBLING FLUIDISED BED TO 200 MG/NM³ BY STAGED COMBUSTION OF COAL

ORGANISATION
Stork Ketels BV [Stork Boilers]

ORGANISATION TYPE

Manufacturer

NUMBER OF EMPLOYEES

> 500

RESULT TYPE

Process/prototype

ABSTRACT

Research undertaken on 2 pilot plants has demonstrated that: Reduction of nitrogen oxides and sulphur dioxide emissions to 200 mg/nm³ by staged combustion of coal in a stationary fluidised bed combustor (SFBC) is possible, while maintaining excellent combustion efficiency. The particle size of the bed material has a great impact of the emission of nitrogen oxides. The design of an optimal secondary air injection system is necessary to obtain the results mentioned above.

SUBJECT CLASS

energy; environment

SUBJECT DESCRIPTORS

combustion, flames; energy conversion; fossil fuels; heat transfer; protection technologies

MARKET APPLICATIONS

boilers, furnaces; combined heat, power; district heating; fluidised bed combustion; pollution abatement, control

CEC PROGRAMME

Energy

COUNTRY

Netherlands

CHEMICAL SPECIATION MODEL OF ALUMINIUM IN ACID SURFACE WATERS

ORGANISATION
Institute of Freshwater Ecology, Windermere (NERC)

ORGANISATION TYPE

Government Research Establishment

NUMBER OF EMPLOYEES

50 - 500

RESULT TYPE

Methodology/skill/know-how

ABSTRACT

The model describes: ion binding by humic substances; the precipitation of aluminium in surface waters; the adsorption of aluminium by streamwater particulates. A computer code in BASIC is available, for IBM compatible personal computers (PC).

SUBJECT CLASS

biology, medicine; environment

SUBJECT DESCRIPTORS

freshwater science; biogeochemical cycles; ecotoxicology; ecosystems; pollution

MARKET APPLICATIONS

fishing industry, fish farming; ecosystems modelling, simulation; pollution abatement, control; environmental systems analysis

SUPPORT REQUIRED

further research/development support; financial resources

CEC PROGRAMME

Environment

COUNTRY

United Kingdom

A COMPUTER CODE FOR THE DESIGN AND OPERATION OF LIGNITE BURNERS AND BOILERS

ORGANISATION

National Technical University of Athens

ORGANISATION TYPE

University/Educational Institution

NUMBER OF EMPLOYEES

> 500

RESULT TYPE

Process/prototype

ABSTRACT

A user friendly computer code has been developed to aid the prediction of the performance of furnaces burning lignite. It makes use of advanced numerical procedures and models for the essential physical processes. The computer code runs on an engineering workstation and is useful in the European industry for designing lignite burners efficiently or optimising the performance of existing ones.

SUBJECT CLASS

energy

SUBJECT DESCRIPTORS

combustion, flames; electricity generation; heat transfer

MARKET APPLICATIONS

boilers, furnaces; combined heat, power; pulverised fuel ash;

Industrial chemicals; powders

PROTOTYPE AVAILABLE

901201

SUPPORT REQUIRED

further research/development support

SUPPORT DETAILS

Assistance of 3000 ECU is required for producing a professional user's manual for the developed computer code for general circulation to the industry.

CEC PROGRAMME

Energy

COUNTRY

Greece

PROTEAS is a database of research results arising from both EC and EFTA countries, whether funded by national, international or independent sources. An important function of PROTEAS is to facilitate the establishment of partnerships to exploit R&D results, both within and across national borders. Examples of support required by contributors include research collaboration, financial support, or a manufacturing or licence agreement.

The above extracts are from the Energy and Environment Programmes and were submitted to PROTEAS through the CEC VALUE programme for the dissemination and utilisation of results from scientific and technological research. In addition to records on the environment and energy, PROTEAS covers all areas of science and technology including IT and telecomms, biology and medicine and materials and industrial manufacturing technologies.

1990 EUROPEAN COMMUNITY WIND ENERGY CONFERENCE AND EXHIBITION

10-14 September 1990
MADRID SPAIN



Sponsored by
Commission of the European Communities

DECLARATION OF INTEREST

Please type or print clearly and mail to

H.S. Stephens & Associates, Agriculture House, 55
Goldington Road, Bedford MK40 3LS, England

Name: _____ Initials: _____

Organisation: _____

Postal address: _____

Please send further details when available

ECART

EUROPEAN CONFERENCE
ON THE
ADVANCEMENT OF
REHABILITATION
TECHNOLOGY

November 5 - 8, 1990
Maastricht
The Netherlands

First announcement and call for papers

CONFERENCE EUROPEENE
SUR LE PROGRES DE LA
TECHNOLOGIE EN
READAPTATION
FONCTIONNELLE

Du 5 au 8 Novembre 1990
Maastricht
Pays-Bas

Première annonce et premier appel aux
communications

Organized in cooperation with ISPO
(International Society for Prosthetics and
Orthotics),
ISAAC (International Society for
Augmentative and Alternative
Communication) and
ISEK (International Society for
Electrophysiological Kinesiology) in the
MECC, the Maastricht
Exhibition and Congress Centre

Organisée en coopération avec ISPO
(International Society for Prosthetics and
Orthotics),
ISAAC (International Society for
Augmentative and Alternative
Communication) et
ISEK (International Society for
Electrophysiological Kinesiology) au MECC,
le Centre d'Exposition et de Congrès à
Maastricht aux Pays-Bas



isaac



Conference secretariat, Scientific programme inquiries, Dr T.
Gerritsen, Dr M. Soede, Institute for Rehabilitation Research,
Zandbergsweg 111, NL-6432 CC Hoensbroek, Tel.: (31) 45
22.43.00, Fax: (31) 45 22.63.70.



IRISH MANAGEMENT INSTITUTE

INDUSTRIAL DEVELOPMENT
AUTHORITY OF IRELAND
IDA IRELAND

Growing Small Firms — the Role of Technology

20th Anniversary European Small Business Seminar
Dublin, Ireland, 11-14 September 1990

efmd EUROPEAN FINANCIAL MANAGEMENT

Information: The Secretariat, 20th European Small Business
Seminar, c/o Irish Management Institute, Sandyford Road,
IRL-Dublin 16

INTERNATIONAL CONFERENCE
HIGH-TEMPERATURE STRUCTURAL DESIGN

Venice 24/25/26 October 1990

Organized by the CEC in cooperation with ENEL/ENEA

Cosponsored by: CEA, CTI, SNECMA, EDF, CISE, VDEI, IMECHE, UKAEA

The conference will focus on the structural design and assessment of metallic components operating at high temperature. The aim of the conference is to bring together, through invited papers, experience gained in different industrial fields in order to identify areas where current design methods could be improved. Consideration will be given to the design of structures which are subjected to significant thermal stressing, due either to steady temperature gradients or to transient thermal shocks. Here, existing design methods require further development, particularly where time-dependent effects also have to be taken into account. Feed-back from plant operating experience will also be an important topic.

✂

For more information, please complete and return the following to:

Mr F. CORSI - ENEA - Centro Ricerche Energia della Casaccia - Via Anguillarese, 301 - Roma - ITALY Tel. N°. (06) 3048.3422
 - Telefax (06) 3048.6308

Name Organization

Address for Correspondence

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1ST WORLD CONGRESS ON SAFETY SCIENCE
**THE SEARCH FOR AN OVERRIDING BASIS FOR ACTION WITH RESPECT TO SAFETY
 SCIENCE AND ENVIRONMENTAL PROTECTION**

24-26 September 1990 — Cologne

Safety science, which is receiving increasing attention, will be presented at this 'FIRST WORLD CONGRESS ON SAFETY SCIENCE', organized by the TÜV Rheinland Group. **Topics to be covered:** the conversion and utilization of conventional, nuclear and regenerative energy; hazards inherent in handling substances and/or caused by substances in the environment; hazards in road, rail and air transport; hazards in production plants.

Further details can be obtained from: Kongress-Organisation, 1. Weltkongress für Sicherheitswissenschaft, Am Grauen Stein, D-5000 Köln 91 (Poll), Tel.: (49) 221.83.93.21 48/49, Tlx.: 8873659, Fax.: (49) 221.8393114.

EUREKA INDUSTRIAL FORUM 'LASER SAFETY'

HANNOVER, 30-31 OCTOBER 1990

In cooperation with the VDI-Technology Centre, the Laser Zentrum Hannover e.V. is offering a European-level conference on the topic of **laser safety**. The goal of this conference is to evaluate each country's level of knowledge in the area of laser safety, and to give impetus to intra-European R&D work relating to laser safety problems and the potential dangers of laser systems and their applications. Another aim is to **draw up a EUREKA project** within the framework of the **EUROLASER technology programme**. In the planned EUROLASER project, the development of international **safety standards** and **future norms** in laser safety will be of major importance.

Further information and/or application forms may be obtained from: Mr Michael Botts, Laser Zentrum Hannover e.V., Vahrenwalder Str. 7, D-3000 Hannover 1, Tel.: (49) 511 3563-293, Fax.: (49) 511 3563-299.

**TRAINING COURSE ON THE OPTIMISATION OF RADIOLOGICAL PROTECTION IN 15
 THE DESIGN AND OPERATION OF NUCLEAR AND INDUSTRIAL FACILITIES**

19 — 23 NOVEMBER 1990, SACLAY, FRANCE

The aim of this new course organised by the Commission of the European Communities is to present tools and structures that can help in implementing the concept of optimisation in radiological protection at the practical level. The course is directed at all those associated directly or indirectly with designing and implementing radiological protection programmes in nuclear and industrial facilities, e.g. plant designers, system planners, maintenance operation planners, operation managers, engineers and health physicists.

Further information may be obtained from: CEC, DG XI/A/1, Plateau du Kirchberg, L-2920 Luxembourg, Tel.: (35) 2 4301-6380, Fax.: (35) 2 4301-6280.

ORBIS 90: ONLINE RESEARCH FOR BUSINESS INFORMATION SOLUTIONS

MILAN, 4-5 OCTOBER 1990

ORBIS 90 will provide participants with an in-depth review of the **European business and economic information enterprise**; a study of the **key players** and the impact of their services, a report on developments in the **EC standardisation debate** and **solutions for the European information user and producer**; plus a detailed look at **private versus public initiatives** and the role of **Stock Exchanges, Chambers of Commerce** and **other regulatory bodies**.

Contact: ORBIS 90, Learned Information 90, Woodside, Hinksey Hill, UK Oxford OX1 5AU, Tel.: (44) 865 73.02.75, Fax.: (44) 865 73.63.54, Tlx.: 837704 INFORM.

DECISION SUPPORT SYSTEMS & QUALITATIVE REASONING

Related to generic research aspects within the ESPRIT project IPCES (Intelligent Process by means of Expert Systems), we announce an:

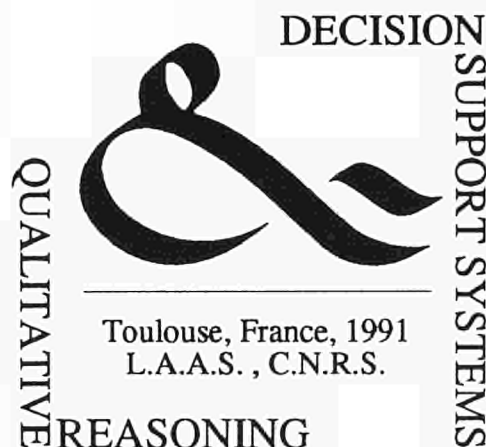
IMACS/IFORS International Workshop on 'Decision Support Systems and Qualitative Reasoning'

to be held at LAAS-CNRS, Toulouse, France, March 13-15, 1991.

Decision Aids and Qualitative Reasoning are both important areas in their own right with very little overlapping so far. This workshop emphasizes the cross-fertilization between these areas as its major innovative concern. Intended audience is middle and senior managers in Industry and Commerce and Academics working on Decision Technologies and Qualitative Reasoning and their applications to real-world problems. The colloquium is aimed at promoting the exchange of ideas, experience and results and how Qualitative Reasoning techniques provide a tool for Decision Support Systems.

CALL FOR PAPERS: Authors are invited to submit articles on any aspect of Qualitative Reasoning and Decision Making. Papers relating to both areas will be greatly appreciated. Four copies of an **extended abstract in English** should be mailed **before September 30 1990** to:

Dr. Louise Travé-Massuyès, LAAS-CNRS, 7 Av. du Colonel Roche, 31077 Toulouse, FRANCE, Tel. (33) 61 33 63 02 or 61 33 62 74, Fax. (33) 61 55 35 77, Telex. LAATSE 520930F



FORUM '90 'SCIENCE AND TECHNOLOGY'

THE STATE OF THE ART OF MODERN COMPUTER TECHNOLOGIES AND THEIR NEW APPLICATIONS

8-9 OCTOBER 1990 IN TRIER

During the two — day event topics of common scientific interest are dealt with and special basic principles, technologies and application areas in four different scientific fields are introduced: the Arts, Economics, Engineering and the Natural Sciences. The main topics concern: Mathematics and Models, Interconnected and Interdisciplinary Research, Chances and Challenges (the computer industry as partner). Dr. J.M. Cadiou, Director of Information Technologies and ESPRIT (CEC), will hold the keynote speech on **'The European Approach to R&D in the Field of Information Technologies'**. The congress is accompanied by the exhibition **'Prix Ars Electronica 90'**.

Contact: Mr Schütt, Siemens, DI V 384, Otto-Hahn-Ring 6, D-8000 MÜNCHEN 83, Tel.: (49) 89 636.440.83, Fax.: (49) 89 636.452.70.

CONCURRENT ENGINEERING & ELECTRONIC DESIGN AUTOMATION-CEEDA '91

CALL FOR PAPERS

Dorset Institute will be holding an International 3 Day Conference, at the Bournemouth International Centre, UK, encompassing the concept of Concurrent Engineering and Electronic Design Automation. The Conference will cover the following **topics**: Concurrent Engineering & VLSI Techniques, Testability, Description Languages & Synthesis, and Concurrent Engineering & Education. The Conference is supported by the SPRINT Programme. Contributors are invited to submit 2 copies of abstracts and summaries before 15 July 1990. The conference will take place 26-28. 3. 1991.

For further information contact: Sa'ad Medhat, Conference Chairman, Department of Electronic Engineering, Dorset Institute, Wallisdown, Poole, BH12 5BB, UK, Tel.: (44) 202 59.54.94, Fax.: (44) 202 51.32.93.

EXHIBITION AND CONFERENCE ON COGENERATION
2nd INTERNATIONAL ENERGY COGENERATION TRADE SHOW,
 MADRID, OCTOBER 16 - 18

The Commission of the European Communities, in cooperation with The Madrid Trade Fair Organization, IFEMA, the Institute for the Diversification and Saving of Energy, IDAE, and the utilities associated in UNESA and ENAGAS, is organizing the **Cogeneration '90 Trade Show** from the 16th to the 18th October 1990 at the Exhibition Center at Paseo de Castellana, 257, Madrid, Spain.

The objective is to promote the use of this important energy alternative and to present the latest technology and recent applications in the field. Simultaneously, a series of Technical Meetings are programmed with the aim of discussing the following aspects of cogeneration:

- legislation and planning
- technology
- financing
- organization
- markets
- significant cogeneration installations

Further information can be obtained from Mr G. Molina, Commission of the European Communities, DG XVII-D, TERV 5/4, 200, rue de la Loi, B-1049 Brussels, Tel: (32) 2 235.1524, Tlx: 21877 COMEUR B, Fax: (32) 2 235.0150.

FAIR OF PRACTICAL UTOPIAS
RENEWABLE, DECENTRALIZED ENERGY, WASTE SAVING ETC.
 CITTÀ DI CASTELLO — 24. 9. - 7. 10. 1990

Fire will be the theme of this year's **Fair of Practical Utopias**, being the third of the four classical elements, after water and air, to be presented. Fire means above all **energy**. Attention will be centred above all **on the climate**. Global warming threatens the natural base of numerous forms of life on the planet, the human one included. **THE FAIR OF PRACTICAL UTOPIAS** will therefore focus on **ENERGY SAVING** strategies. It will comprise a fair, an exhibition, conferences and seminars (at week-ends), theatrical activities, excursions, as well as films, spectacles and other presentations.

For further information, please contact: Fair of Practical Utopias, Fiera delle Utopie Concrete, I-06012 Città di Castello, Tel.: (39) 75 85.29.268/8355055, Fax.: (39) 75 85.20.447.

THE EUROPEAN OIL AND GAS CONFERENCE

The European Oil and Gas Conference, which is organized by the Commission of the European Communities in collaboration with AGIP, will be held in Altavilla Milicia, Palermo, Sicily, from 9th to 12th October 1990. The main objective of the conference will be to present progress on petroleum-related subjects in the following fields

- information and processing
- geosciences
- mechanics and new materials
- conversion of natural gas to liquids
- operations

The interdisciplinary aspect allows for maximum interaction between professionals of different specializations and is recognized as an important condition for significant further advance in the science of petroleum exploration and production.

Further information can be obtained from Mr M. Frias, CEC, DG XII-E, SDME 3/9, 200, rue de la Loi, B-1049 Bruxelles, Tel: (32) 2 236 15 97, Fax: (32) 2 236 30 24 or Mr. P. Argyris, CEC, DG XVII-D, TERV 5/11, 200 rue de la Loi, Tel: (32) 2 236 15 51, Fax: (32) 2 235 01 50.

TRAINING FOR PRACTICE IN THE ENERGY-RELATED INDUSTRIES

LONDON, SEPTEMBER 13, 1990

CALENER is a joint project funded through the COMETT programme of the CEC. Its aim is to **make technical expertise on energy and its use available to practitioners** in industry. It lays particular stress on the use of **computer-aided techniques** both for disseminating new technology and for better teaching of and training in existing technology. The **next CALENER SYMPOSIUM** will discuss relevant issues: 1. **Experience** in practice with marketing on-the-job training tools, 2. **vocational studies** as a means of adapting to change in European business, 3. **existing software packages** in the field of training, and 4. **new teaching and training software packages**.

For further information contact: Mr A. Newton, Institute of Environmental Engineering, South Bank Polytechnic, Borough Road, UK-SE1 0AA London, Fax.: (44) 71. 928.23.06.

HIGH-TECHNOLOGY EUROPE
STRATEGIC ISSUES FOR GLOBAL COMPETITIVENESS

Philippe de Woot, EUR 11691 EN, ISBN 0-631-17104-5, English

This book, winner of the 1988 Afplane prize for the best work on enterprise strategy, looks at the key issues for European high-tech firms trying to compete in an international market.

Published for the CEC by: Basil Blackwell Ltd., 108 Cowley Road, Oxford OX 41JF, UK. Also available in Italian and French.



Philippe de Woot



NEW TECHNOLOGY AND MANUFACTURING MANAGEMENT
STRATEGIC CHOICES FOR FLEXIBLE PRODUCTION SYSTEMS

M. Warner, W. Wobbe, P. Brödner, EUR 11938 EN, ISBN 0-471-92454-7

The volume sets out to present a variety of human-centred approaches available in the manufacturing area - specifically in relation to flexible manufacturing systems.

Published for the CEC by: John Wiley & Sons Ltd., Baffins Lane, Chichester, West Sussex PO19 1UD, UK.

REFRACTORIES FOR THE STEEL INDUSTRY

R. Amavis, EUR 12541, ISBN 1-85166-491-2

This book presents the results of ECSC research to a wider audience of ceramicists, metallurgists and materials scientists, and explores the latest R&D activities of the refractory producers themselves. Published for the CEC by: Elsevier Science Publishers Ltd., Crown House, Linton Road, Barking, Essex IG11 8JU, UK.



NEUTRON RADIOGRAPHY AT THE HFR PETTEN
J. F. W. MARKGRAF

Compilation of HFR Petten contributions to the Third World Conference on Neutron Radiography and to the SITEF NDT Symposium 1989. ISBN 92-826-1262-7, EUR 12727 EN

PHOTOVOLTAIC POWER GENERATION — EUROPEAN RESEARCH AND DEVELOPMENT
G. CARATII, R. A. W. SHOCK, M. REIS

This booklet contains general information on the CEC photovoltaic power generation R&D programme, such as procedures, topics, participating contractors, available publications, etc. It is the third edition of a basic reference document covering this programme. EUR 12359, ISBN 92-826-1225-2

ADA-RELATED ACTIVITIES UNDER THE MULTIANNUAL PROGRAMME
IN THE FIELD OF DATA PROCESSING

This volume contains two documents related to the MAP/Ada programme: A report on the Ada-related activities and the final report of a study on the European Ada market.

EUR 12873, Office for Official Publications, Luxembourg

INTERNATIONAL CHEMICAL SAFETY CARDS
First series

Commission of the European Communities & International Programme on Chemical Safety
Luxembourg: Office for Official Publications of the European Communities, 1990, EUR 1 2561/2 EN



MONITORING AIR POLLUTION AND FOREST ECOSYSTEM RESEARCH

A. H. M. Bresser, P. Mathy, EUR 12451 EN, ECU 33.75, English

This book deals principally with the available methods and techniques for monitoring above-ground pollution as it affects forest ecosystems. An extended appendix describes 13 monitoring and research stations in Europe.

THE GREENHOUSE EFFECT AND ITS IMPLICATIONS FOR THE EC

R. A. Warrick, E. M. Barrow, T. M. L. Wigley

EUR 12707 EN, ECU 5, English, ISBN 92-826-1330-5

This booklet reviews, in a clear and non-technical way, our current scientific understanding of the greenhouse effect, with particular reference to Europe.

The main part of the booklet is devoted to assessing possible future changes, for the world as a whole and for Europe in particular. It suggests likely climatic changes, and the effect on sea levels, agriculture, ecosystems and society.

The report concludes by looking at what we can do about global warming in terms of adapting to changes and reducing gas emissions. It suggests various international policy options.



A COSTED EVALUATION OF OPTIONS FOR THE REDUCTION OF PHOTOCHEMICAL OXIDANT PRECURSORS

N. Allemand et al. Volume 1: Results of Three Possible Scenarios for the Abatement of Photochemical Oxidant Precursors, EUR 12537/I EN, ECU 40

Volume 2: Abatement Technology and Associated Costs, EUR 12537/II EN, ECU 28.75

Volume 2 of this report describes and analyses the technologies available for reducing precursor emissions (particularly of Volatile Organic Compounds). Volume I examines the reduction of emissions that might be achieved if these technologies were applied.

PHYSICO-CHEMICAL BEHAVIOUR OF ATMOSPHERIC POLLUTANTS

Edited by G. Restelli and G. Angeletti

The volume presents a collection of research papers and posters related to the physico-chemical behaviour of atmospheric pollutants. The work is organized in three sessions: development of analytical methods to measure trace components of the atmosphere; atmospheric chemical and phototechnical processes; and field measurements and their interpretation.

EUR 12542 EN-FR, ISBN — 7923-0700-3, published by Kluwer Academic Publishers, P.O. Box 17, NL-3300 AA Dordrecht.

DIRECTORY OF EUROPEAN COMMUNITY TRADE AND PROFESSIONAL ASSOCIATIONS

4th Edition EUR 12606, English, French, German, ISBN 92-826-0998-7

This completely updated and expanded edition lists more than 500 trade and professional federations with a European or predominantly European membership. In most cases members are national or European associations and not individual firms.

REPÉRTOIRE
des organisations professionnelles
européennes dans la CE

DIRECTORY
of European Community
Trade and Professional Associations

VERZEICHNIS
der europäischen Verbände in der EG

FISCAL ENVIRONMENT OF, AND CORPORATE VEHICLES FOR, VENTURE CAPITAL IN THE EUROPEAN COMMUNITIES

EUR 11527 EN, ECU 22.50, ISBN 92-826-1359-3

Updating an earlier report published in 1985, this study looks at the overall position of venture capital in the EC, and the effectiveness of recent measures designed to support venture capital investment. Prepared by Deloitte Haskins & Sells, the study draws on comparative information from countries (notably Japan and the USA) outside the EC.

CALLS FOR PROPOSALS UNDER THE SPRINT PROGRAMME

The CEC intends to launch under its SPRINT Programme a series of calls for proposals (tenders, which will be published in the course of the summer). They will concern the following fields:

1. Transnational Transfer of Know-How For Suppliers of Innovation Support Services (see page 43)
2. Definition phase of Specific Projects for Intra-Community Innovation Transfer (see page 44)
3. Science Park Consultancy Scheme (Call for expressions of interest to take part in this scheme).

The aim of this new SPRINT scheme is to provide expert advice to organisations in the Community (especially in the Community's Objective 1 or Objective 2 regions, see map on page 11) planning the establishment or further development of a science park or similar investment. The call for Proposals will be in two parts. One part will invite applications from qualified organisations and individuals wishing to be included on the list of experts (Advisers on key features of the Science Park development). The other part will invite applications from science park promoters wishing to establish a consultancy panel. Closing Date for Applications: around mid-September

4. Development of European Innovation Monitoring System

This call concerns work related to the structure and interrelationship of the following research topics:

- Innovative Performance of Firms, organizations and regions,
- Public Policies Towards Technological Innovation,
- Environmental Conditions for Technological Innovation,
- Innovation Strategies and Innovation Management of Firms, Organizations and Regions,
- Technological capabilities of firms, Organizations and Regions,
- Information and Innovation Behaviour of Firms,
- Acquisition of External Technological Resources,
- Interfirm Innovation Linkages,
- Innovation Supporting Services,
- Networks and Clusters of Firms.

Closing Date for Applications: probably early October.

The relevant services are currently drafting the **application packages**. They should be available by the end of August 1990 at the latest. You can order these packages by returning the order form below to: Mr R. Miège, CEC, SPRINT Programme, DG XIII/C/4, B4/100, L-2920 Luxembourg, Fax.: (352) 4301-4544.

>

Name:

Firm:

Address:

Postal Code: Town: Country:

Please send me the following application packages:

- | | |
|--|---|
| <input type="checkbox"/> Transnational Transfer of Know-How For Suppliers of Innovation Support (see also next page) | <input type="checkbox"/> Science Park Consultancy Scheme |
| <input type="checkbox"/> Specific Projects for Intra-Community Innovation Transfer | <input type="checkbox"/> Development of European Innovation Monitoring System |

Language preferred: If not available, second choice: third choice:

>

NEW CATALOGUE ON SPRINT TECHNOLOGY TRANSFER NETWORKS AVAILABLE

Under the SPRINT Programme a transnational network of specialized intermediaries has been built up (working within chambers of commerce and industry, consultancy bureaux, industrial liaison offices at universities, regional development agencies, etc.). These intermediaries help enterprises to find partners in other European countries with whom they can come to satisfactory technology-based agreements.

This new guide lists all institutions funded under this SPRINT scheme. It can be obtained by returning the order form below to the SPRINT secretariat, CEC, DG XIII/C/4, JMO, B4/100, L-2920 Luxembourg, Fax.: (352) 4301-4544.

>

Order form: Please send me a copy of the new SPRINT catalogue

Name:

Address:

Postal Code: Town: Country:

>

CALLS FOR PROPOSALS CONCERNING THE IMPLEMENTATION OF A FIRST SERIES OF NETWORK SUPPORT MEASURES UNDER THE SPRINT PROGRAMME

The CEC intends to launch the following calls for proposals in the near future:

A. Call for proposals for the organization of guided group visits of innovation support services

The purpose of these group visits is to introduce groups of intermediaries providing innovation support services from other parts of the Community to the innovation infrastructure of a given region. The call for proposals concerns the organization and management of two-year programmes or series of such group visits.

B. Call for proposals for the organization of professional exchanges for intermediary organizations providing innovation support services

The call for proposals concerns the organization and management of a two-year programme or series of professional exchanges.

C. Call for proposals for the organization of transnational investment fora

The call for proposals concerns the organization and management of two-year programmes of such fora.

The deadline for applications will be 12 October 1990. Application packages can be obtain from: Mr D. Janssens, CEC, DG XIII/C/4, IMO B4/101, L-2920 Luxembourg, Tel.: (352) 4301-4372, Fax. A: (352) 4301-4544.

»<

ORDER FORM:

.....
(name of the person and organisation requesting the application form(s))

.....
(address)

.....
(telephone)

.....
(fax)

.....
(telex)

1. Please send to the above address an application form for the:

- call for proposals for the organization of guided group visits of innovation support services (see A)
- call for proposals for the organization of professional exchanges for intermediary organizations providing innovation support services (see B)
- call for proposals for the organization of transnational investment fora (see C)

2. Please send me the application form in the following language:

	1st choice		1st choice
DANISH	<input type="checkbox"/>	GREEK	<input type="checkbox"/>
DUTCH	<input type="checkbox"/>	ITALIAN	<input type="checkbox"/>
ENGLISH	<input type="checkbox"/>	PORTUGUESE	<input type="checkbox"/>
FRENCH	<input type="checkbox"/>	SPANISH	<input type="checkbox"/>
GERMAN	<input type="checkbox"/>		

2nd choice (in case first choice not yet available): _____

»<

11-15 SEPTEMBER 1990, HERNING (DK)

TECHTRANS CENTRE '90: '1992 AND A EUROPE OF TECHNOLOGY'

At TechTrans Centre '90 the EEC Commission will be running the largest campaign so far at a Danish exhibition. The participation will concentrate on the Single Market of 1992, particularly from the point of view of research and technology. **The following Directorates-General will be at TechTrans Centre '90:** DG V (education and employment) DG X (communication and culture), DG XI (environment), DG XIII (telecommunications and innovation) and DG XXIII (small and medium-sized companies), the European Investment Bank, the Secretariat-General, the Joint Research Centre and the Office for Official Publications.

TechTrans Centre '90 will be an **international forum for exchanges of ideas** between suppliers of high-technology products, new technologies and techniques, advanced processes, systems and know-how on the one hand, and industrialists and technicians, producers looking for new results, licences and patents, investors, product developers and scientists, and technology and patent brokers on the other.

Further information: Project Manager Hanne Marklund, Exhibition Centre Herning, Vardevej 1, DK-7400 Herning, phone +45 97 12 60 00, fax +45 97 22 30 60.

CALL FOR PROPOSALS PENDING: SPECIFIC PROJECTS UNDER SPRINT

Further to a call for proposals the CEC has definitively selected 15 specific projects for support under its **specific projects scheme**. Another 11 projects have been placed on a reserve list. They are concerned with transferring new technologies already applied in one sector or region of the Community to another sector or region where these technologies are not yet used, so that this new application represents an innovation in itself. **A new call for proposals** for this scheme will be launched in the near future (see page 42). The table shows the 15 projects selected:

Contact: Mr R. Kremer, CEC, DG XIII-C, JMO B4-105, L-2920 Luxembourg, Tel.: (352) 4301-3136, Fax.: (352) 4301-4544

JUST PUBLISHED:

— LIST OF CONFERENCES ON TECHNOLOGY SUPPORTED BY SPRINT PROGRAMME — TERMS OF REFERENCE AND MEMBERS OF THE SPRINT COMMITTEES

Under the SPRINT Programme the CEC supports the 'Europeanization' of technological conferences. This new brochure gives an overview of the nature of the conferences which have received support from the Commission under the SPRINT Programme including the provisional dates, the titles of the conferences and the names and addresses of the organizers. A new **call for proposals** for the Europeanization of conferences will be launched before the end of 1990. The CEC has also published a booklet containing **the names and addresses of the members of the CIT** (Committee on Innovation and Technology Transfer) which counsels the CEC in implementing the SPRINT Programme. This book contains also names and addresses of the members of the CIT-Subgroups.

Order form: Please send me a copy of the **SPRINT List of Conferences**.
 a copy of the **terms of reference and members of the SPRINT committees**

Name:

Address:

Postal Code: Town: Country:

To be returned to SPRINT Secreteriat, CEC, DG XIII/C/4, JMO B4/100, L-2920 Luxembourg, Fax.: (352) 4301-4544.

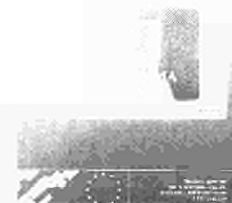
IMPACT PROGRAMME: THE IMPACT OF THE INFORMATION REVOLUTION

The IMPACT PROGRAMME runs initially for two years with a budget of ECU 36 million. An Impact 2 programme is expected to be set up for the years 1991-96. It aims at setting up a **common information services market** and has seven lines of action:

1. European Information Market Observatory (IMO),
2. Removal of technical and legal barriers,
3. Improvement of the conditions for transmitting and accessing information,
4. Improvement of synergy between public and private sectors,
5. Launching of pilot/demonstration services,
6. Promotion of the use of European information services,
7. Action in favour of libraries.

The **IMPACT** brochure and further information can be obtained from: Mr A. Szauer, CEC, DG XIII-B, JMO B4-018a, L-2920 Luxembourg, Tel.: (352) 4301-3526, Fax.: (352) 4301-3909/-2847.

COMMUNITY LIFE
COMUNITA EUROPEA



Order form: Please send me the IMPACT brochure in

DE	FR	IT	NL	EN	DA	GR	PT	ES
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Name:

Address:

City: Country:

To be returned to Mr Szauer (see address above).

INTERNATIONAL CONFERENCE
ON THE ROLE AND IMPACT
OF INFORMATION TECHNOLOGY IN
THE ASSESSMENT & REHABILITATION
OF INDIVIDUALS WITH
COMMUNICATION DISORDERS



Supported by
THE COMMISSION OF THE
EUROPEAN COMMUNITIES
Directorate General XIII
(Telecommunications, Information Industries
and Innovation)
under the SPRINT programme
(support to European
Conferences and Workshops on
TECHNOLOGY and INNOVATION)

and
THE GREEK MINISTRY OF ENERGY,
INDUSTRY AND TECHNOLOGY

Conference Language: English

Thessaloniki, GREECE
September 5-9, 1990

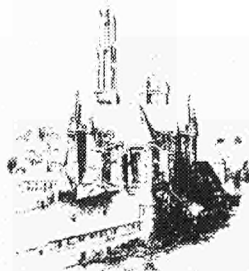
Contact: Dr. G. Anogianakis, Str. Kallari 3,G-546 22
Thessaloniki, Tel: (30) 31.22.58.15/23.56.10./27.15.39
Fax: (30) 31.26.71.39.

Europe 90
PROGRAMME PROVISOIRE
1-11 PROVISIONAL PROGRAM

**Intensité vibratoire
dans les structures**

3^e congrès international
sur l'intensimétrie

*Structural intensity and
vibrational energy flow*
3rd international congress
on intensity techniques



Senlis - France
27-29 août 1990 / August 27-29, 1990

Organisation
Organisation
CEETIM
CENTRE TECHNIQUE
DES INDUSTRIES
MECANIQUES

Contact: B.P. 67, F-60304 Senlis Cedex, Tel: (33)
44.58.34.15, Fax: (33) 44.58.34.00.

FIRST ANNOUNCEMENT - CALL FOR PAPERS
PREMIERE ANNONCE - APPEL A PARTICIPATION



FIRST
EUROPEAN CONFERENCE
BIOMEDICAL ENGINEERING
17-20 FEBRUARY
1991

PREMIER
CONGRES EUROPEEN
GENIE BIOMEDICAL
17-20 FEVRIER
1991

NICE ACROPOLIS

Contact: Prof. Dr. P. Rabischong, 395 avenue des
Moulins, F-34080 Montpellier, Tel: (33) 67.632.748, Fax:
(33) 67.542.729.

**Announcement
and Call for Papers**



**6th European
Conference on
Biomass for Energy,
Industry and
Environment**

Astir Complex
Nafsika Congress Hall
Vouliagmeni Athens
Greece
21-27 April 1991

**Deadline for Abstracts
1 Sept. 1990**

Sponsored by the
Commission of the European Communities

Contact: Dr. G. Mondelli, Fertec — via A. Fauser,
8, I-28100 Novara, Tel: (39) 321/69.19.01, Fax: (39)
321/44.75.23.

Deutscher Verband für Schweißtechnik

Thermische Spritzkonferenz

TSP

Thermal Spraying Conference
1990

Einladung
invitation

Essen
Bundesrepublik Deutschland
29. - 31. 8. 1990

Contact: German Welding Society, Aachener Str. 172,
Postfach 27 25, D-4000 Düsseldorf 1. Tel: (49)
211.1.57.59-48, Fax: (49) 211.1.57.59.50.

CALL FOR PAPERS

ESREF 90

Tecnopolis
Valenzano (Bari), Italy
2-5 October 1990

**FIRST EUROPEAN SYMPOSIUM
ON RELIABILITY
OF ELECTRON DEVICES,
FAILURE PHYSICS AND ANALYSIS**

sponsored by
PROGETTO FINALIZZATO MADISS
CONSOBAC REGIONALE DI RICERCA

SPERIMENTAL ONE PROGRAMMA TECNOPOLIS
PROGETTO PER LA PROMOZIONE DELLA
EVOLUZIONE DELL'INDUSTRIA

organised by
TECNOLOGIA
TECNOLOGIA S.p.A.
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TECNOLOGIA S.p.A.

Contact: Dr. B. Bonati, ESREF 90 Organising Committee,
Tecnopolis casata novus ortus, I-70010 Valenzano (Bari),
Tel: (39) 80 877.01.11/346, Fax: (39) 80.651.868.

SPRINT PUTS WORLD CUP FANS IN THE PICTURE

Football fans in Genoa for the World Cup did not miss any of the action taking place on the pitch. Instant replays of all goals and incidents were flashed back on two giant video screens erected in the stadium. The action playbacks came courtesy of a joint venture involving a Scottish and an Italian video company. It is one of the **latest deals to be forged through the CEC Strategic Programme for Innovation and Technology Transfer — SPRINT**. Italian-based Vidigraph have exclusive rights to the screens in the Genoa stadium, and have joined forces with In-Video Production, of Edinburgh. Roy Lauder, Project Executive of the Scottish Development Agency's Technology Transfer Division confirmed that more than 150 Scottish companies now take part in the SPRINT programme.

Contact: Mr R. Lauder, Scottish Dev. Agency, 120 Bothwell Street, Glasgow G2 7JP UK, Tel.: (44) 41 248.27.00, Fax.: (44) 41 221.37.12.

SPRINTLINK: NEW ELECTRONIC MAIL SYSTEM FOR SPRINT NETWORKS

Electronic mail and electronic conferencing offer a very attractive means of improving and simplifying communications between partners. In order to evaluate the advantages of such a system, about 12 SPRINT transnational innovation advisory networks encompassing at least 50 partners will soon be able to use a **pilot system** which will be set up over the summer and which will be run as a full test between September and December. The new system will be set up with the assistance of **EUROKOM NEWS**, the CEC sponsored electronic mail and computer conferencing service.

Contact: Professor J.T. McMullan, Centre for Energy Research, University of Ulster, Coleraine, Co. Londonderry, UK-BT52 1SA, Tel.: (44) 265 44.141, Fax.: (44) 265 40.900. **For further information about EUROKOM NEWS, please contact: EUROKOM Brussels, rue Guimard 15, B-1040 Brussels, Tel.: (32) 2. 513.19.15, Fax.: (32) 2.513.28.53.**

VALENCIA TECHNOLOGY PARK

The new Valencia Technology Park has just published its presentation brochure. It can be obtained from: Mr L. Sanz, Parc Tecnològic S/N, Paterna Valencia, Apartat de Correus 191, E-46980 Valencia, Tel.: (34) 1 32.12.78, Fax: (34) 1 32.39.33

TII SEMINAR: PLANNING AND FINANCING OF INNOVATIVE PROJECTS

BRUSSELS, 10-11 JULY 1990

AIMS: To introduce innovation and technology transfer consultants to principles and methods for: evaluating innovative business projects, preparing sound business plans, and negotiating with potential investors. Organised with the support of the SPRINT Programme of the CEC. Contact: TII, 3 rue des Capucins, L-1313 Luxembourg, Fax.: (35) 2 46.21.85.

**ADT ANNUAL MEETING
BERLIN (EAST AND WEST), 4-6 November**

TECHNOLOGY AND INNOVATION — COOPERATION BETWEEN EASTERN AND WESTERN EUROPE

This year the **annual Meeting of the Association of German Technology Centres (ADT)** will be held in both parts of Berlin. The Conference offers an excellent opportunity for contacts and cooperation between Western and Eastern Europe in the field of innovation and technology trade. Among the speakers are directors of technology transfer centres in the USSR, Bulgaria, Poland, Hungary and Eastern Germany. The foundation of new technology centres in these countries will be an important topic of discussion. EC Commissioner Schmidhuber will set out the Community policy towards the countries of Central and Eastern Europe. Some of the sessions will be in English.

For further information please contact: Mr H. Fiedler, ADT, Gustav-Meyer-Allee 25, D-1000 Berlin 65, Tel.: (49) 30 469.41.57, Fax.: (49) 30 463.30.95.

INNOVATIONS FROM MADRID IN PARIS

On 6 and 7 November 1990, an **exhibition on innovative companies from Madrid** will take place in Paris (CNIT, La Défense). The companies exhibiting in Paris are seeking partners for **cooperation agreements** in different fields such as: R&D projects, integration in company associations, agreements with local companies and formation of company networks within the EC.

Contact: IMADE, C/García de Paredes, 92, E-28020 Madrid, Tel.: (34) 1 410.20.63, Fax.: (34) 1 319.42.90, Tlx.: 44594,

TECHNOSHOP '90: GATEWAY INTO HI-TECH

THE WORLDS LARGEST LICENSING FAIR: THE NEXT 5000 NEW PRODUCTS

HEATHROW AIRPORT, LONDON, 2. - 4. 10. 1990

A new International Fair which is being run by **The Technology Exchange** and partners in the **SPRINT Programme** will help manufactures buy and sell technology for new products and processes is already the **world's largest** - with four months still to run. The organisers say that this event, planned for Heathrow from 2 - 4 October, **beats similar fairs in the USA, Japan and Europe** by over two to one in the number of licences on offer, the number of organisations offering licences and the number of countries involved. 'The catalogue listing new developments has already overflowed into two volumes and the **aim of 5.000 licence offers should be comfortably exceeded** by the time volume 2 goes to print in July' declares Mr Brian Padgett, The Technology Exchange Managing Director. 'Our success is largely due to the close personal relationship built up over a period of years between ourselves and the world's major sources of research and product development both governmental and private.'

The **first volume** contains most of the offers from the more distant countries like Japan, Russia, the USA, Israel and Australia. The **second volume** which will be published in early September and will concentrate on European offers and The Exchange has extended its offer of free promotion to all European organisations with licence offers to promote. The price, £220 for the pair, including admission to the Fair, allows interested organisations to select up to 12 offers from each volume and receive a personal introduction by letter to the licensor. The Technology Exchange has virtually taken over the Post House and Excelsior Hotels at Heathrow. Companies and individuals planning to do licensing business together will meet in private rooms booked by the organisers. The Technology Exchange, based at Wrest Park, Silsoe, Bedford, was founded in 1985 as a voluntary organisation to act as an international intermediary in the licensing field operating under the SPRINT and BC-Net Programmes.

For further information write: Brian Padgett, Managing Director, The Technology Exchange Ltd, Wrest Park, Silsoe, Bedford MK45 HS. Telephone: 44 525 60333, Telefax: 44 525 60664.

FIRST TRANSBORDER INFORMATION SYSTEM ON INNOVATION AND TECHNOLOGY TRANSFER IN THE BORDER REGION B, D, NL,

The Provincial Government of the Province of Limburg (Netherlands) has developed a **Euregio Information System, DEP**, which stands for '**Databank Economic Projects**'. DEP offers information on **over 500 projects** in the field of telematics, business accommodation, training, innovation, contract work and knowledge transfer, together with economic supporting projects for the Province of Limburg. It is accessible to training institutes and enterprises.

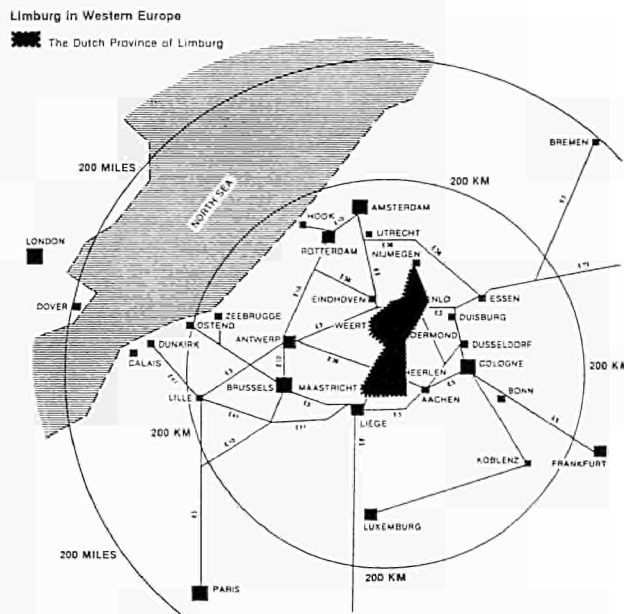
The first phase of the system for the Netherlands Limburg market area works perfectly. Phase two, euregional extension of the area to include the adjacent industrial region of Aachen and Heinzberg (Germany), in cooperation with the 'Aachen Centre for European Studies', is being initiated. In a third stage it is planned to link the industrial areas in The Netherlands, Belgian Limburg and Nordrhein-Westfalen, with a view to creating an '**information-oriented area**' for knowledge transfer and economic supporting projects before the end of 1992. Marketing High Tech Projects will



Mr I. M. I. Severijns

start DEP as a pilot project for the **new SPRINT network NORMED** in order to effect the rapid and efficient provision of information for SPRINT projects.

Contact: Mr J.M.J. Severijns, Postbus 5700, NL-6202 MA Maastricht, Tel.: (31) 43-89.72.63, Fax.: (31) 43-61.80.99.



CASA EUROPEA: ACTION TO PROMOTE DESIGN IN THE HOME

As part of a design project entrusted by the **SPRINT Programme to the Rat für Formgebung**, there was a meeting in Munich, on 22 and 23 June, of representatives of the world of design on the subject of the '**Casa Europea**'. This project is the preparatory phase of a major exhibition on this subject, with a view to the Single Market of 1992, and is aimed at establishing a framework for **promoting European design** in fields concerning the **home, interior decoration and the home environment**. This subject was regarded by the experts as a meaningful reflection of the efforts already undertaken, since it took greater account of national differences and identities in industrial sectors in which objects and products were nevertheless highly standardized.

A report on this meeting will be published, and a proposal regarding the planned exhibition will be submitted to the Commission before the end of the year.

Further information can be obtained from: Mr E. Faroult, CEC, DG XIII/C/1, B4/075, JMO, L-2920 Luxembourg, Tel.: (352) 4301-4371, Tlx.: 3423/3446 COMEUR LU, Fax.: (352) 4301-4129.

FIRST VENTURE CAPITAL FUND IN EASTERN EUROPE: CREATION OF EUROVENTURES HUNGARY AND EUROVENTURES GREATER EUROPE

The **EUROVENTURE** network of venture capital, created in December 1984 under the aegis of the European Round Table of Industrialists, has announced the creation of the first East-West venture capital fund: **EUROVENTURES HUNGARY**. The fund is aimed at investing in Hungarian companies being created or already in existence, foreign subsidiaries operating in Hungary, and joint ventures.

EUROVENTURES is also creating **EUROVENTURES GREATER EUROPE**, which is aimed at establishing a presence for Euroventures in other Eastern European regions, including the Soviet Union, and to prepare the ground for the launch of Euroventures funds in these countries.

The Dutch law firm **EUROVENTURES BV** is the key shareholder in the network, with an average of 33% in the series of 14 regional venture capital funds operating in 16 countries. **EUROVENTURES** currently includes 117 corporate and financial shareholders. This includes the major European groups, as can be seen from the composition of its 6-member supervisory board: Mr Dekker (Netherlands) — Chairman, with Mr U. Agnelli and Mr C. de Benedetti (Italy), Mr C. Boada (Spain), Mr P. de Tilless (Belgium) and Mr G. Worms (France) as members.

Further information and the **EUROVENTURES NEWS** can be obtained from: Mr A. Kloezen, **EUROVENTURES BV**, Julianaplein 10, NL-5211 BC's-Hertogenbosch, Tel.: (31) 73. 13.78.00, Fax.: (31) 73.12.23.95.



EVCA YEARBOOK 1989: BOOM FOR VENTURE CAPITAL



Money raised by venture capitalists in Western Europe surged 67% last year to 5.8 billion ECU. The European Venture Capital Association notes increased outside interest — nearly a quarter of the funds came from the US and Japan, compared with 9.1% the year before. Behind the boom is the growing awareness of investment opportunities stemming from the CEC's single market programme, as well as pent-up demand for venture capital in Europe. European venture capital firms, many of them British, are investing increasingly outside their domestic markets. While growth in the US venture capital market is slowing, total funds available in Western Europe surged 34% to 22.93 billion ECU in 1989.

Contact: EVCA, Minervastraat 6, Box 6, B-1930 Zaventem, Tel.: (32) 2 720.60.10, Fax.: (32) 2 725.30.36. From this address you can also obtain the new EVCA YEARBOOK 1989.

EVCA EVENTS

- Sept. 12/13: EVCA COOP, Brussels (Info: Experteam +49.89.500.750).
- Oct. 12: EVCA BUSINESS SEMINAR, London (Info: EVCA +32.2.720.60.10)
- Sept. 20/21: THE EUROPEAN SCIENCE PARKS AND THEIR ENTREPRENEURS, Groningen (NL) (Info: +31.50.745745).

NEW BUDGET FOR VENTURE CONSORT

The **Venture Consort Scheme** has been allocated a budget for 1990 of ECU 2 million by the CEC. Under the Scheme, which EVCA manages, the CEC will contribute up to ECU 200 000 (in the form of a grant) to a **transnational venture capital** syndicate involving two or more venture capitalists from different Member States. Contact: EVCA Secretariat (see address above)

STIMULATION OF HIGH-TECHNOLOGY PROJECTS: EUROTECH CAPITAL

The EC offers financial entities joining the pilot project a Community label: Eurotech Capital. Its first aim is to encourage private capital to **finance transborder high-technology projects**; the second is to facilitate the launching of **new transborder initiatives** which have been partly developed by small and medium-sized enterprises (SMEs). In this context, the CEC awards the Eurotech Capital label to European financial entities that meet the following criteria: (1) an investment capability of at least ECU 50 million; and (2) agreement to set aside at least 20% for equity participation in companies — preferably SMEs — which implement high-technology transborder projects. In addition to the prestige attaching to it, the Eurotech Capital label provides a **number of advantages**.

The **Eurotech database** informs about technical and financial information on projects arising out of Community research and development programmes (ESPRIT, BRITE, etc.) and high-technology transborder projects which have been recognized as technically valuable.

Contact: EUROTECH DAT, 2, rue A. Borschette, B.P. 262, L-2012 Luxembourg, Tel.: (352) 43.84.05, Fax.: (352) 43.31.59.

THE LÜBECK ENVIRONMENTAL SYMPOSIUM 'VISUAL'

CONTAMINANT MEASUREMENT IN ENVIRONMENTAL PROTECTION AND OCCUPATIONAL HYGIENE

SEPT. 19 — 21, 1990, LÜBECK-TRAVEMÜNDE

Contaminant measurements of the air at the workplace, in the ambient atmosphere, in the exhaust gas of technical installations, in rooms, in and at automobiles and in hospitals are the essential prerequisite for effective environment and health protection; the same holds true for the measurement of volatile contaminants in the soil and in water. VISUAL will inform about the state and prospects of gas measuring technology. Users, manufacturers and scientists will have the opportunity to exchange experience and to present ideas about the **further development of environmental monitoring**. Transfer of technology, innovation and the spectrum of international relations will be important topics.

Sponsored by the CEC under the Sprint programme.

Contact: TECHNIKZENTRUM Lübeck, Seelandstrasse 15, D-2400 Lübeck 14, Tel.: (49) 451 39.090, Fax.: (49) 451 3909/110, Tlx.: 26508 TZLD.



CONFERENCE ON FUTURE PROSPECTS FOR THE LEATHER GOODS INDUSTRY

16-18 October 1990, Offenbach

New Technologies — future prospects and transfer opportunities for the leather goods industry. Sponsored by the SPRINT programme. Contact: Berufsbildungsstätte des IBSJ, Rohrstrasse 41-43, D-6050 Offenbach-Rumpenheim, Tel.: (49) 69 86.00.040, Fax.: (49) 86.00.04.44.

CONFERENCE PROCEEDINGS: OPEN INDUSTRIALISATION — A SOLUTION FOR BUILDING MODERNISATION

The conference: **OPEN INDUSTRIALIZATION — A SOLUTION FOR BUILDING MODERNIZATION** was organised with the support of the CEC in the framework of the 'SPRINT' programme. The proceedings of this conference can be obtained from: CERIB, BP 59, F-28232 Epernon Cedex, Tel.: (33) 37 83.52.72, Tlx.: 782048, Fax.: (32) 37 83.67.39.



CONFERENCE 'THE EUROPEAN SCIENCE PARKS AND THEIR ENTREPRENEURS'

GRONINGEN, NETHERLANDS, SEPTEMBER 20 AND 21, 1990

Information: Mr L. de Lange or Ms Stöver, Zernike Science Park 2, NL-9747 AN Groningen, Tel.: (31) 50 74.57.45, Fax.: (31) 50 63.45.56.

PROGRAMME OF TII EVENTS

			please tick
10-11	July	Seminar: Planning and Financing of Innovative Projects, Brussels	<input type="checkbox"/>
17-18	September	Group Visit to Dortmund, in association with Technologie Zentrum Dortmund	<input type="checkbox"/>
1-2	October	Group Visit to London, in association with British Technology Group	<input type="checkbox"/>
11-12	October	Seminar: Technology Auditing, in association with CIDECE, Lisbon	<input type="checkbox"/>
23-24	October	Conference: Interregional Technological Co-operation in Europe: Current Trends and Industrial Perspectives for the 1990s, Madrid — organised by the Spanish Ministry of Energy and Industry, General Secretariat for Industrial Promotion and Technology, in association with TII.	<input type="checkbox"/>

Please send me further information on the events indicated — Return to TII, 3 rue des Capucins, L-1313 Luxembourg Tel. (352) 46 30 35, Fax: (352) 46 21 85.

BITT SPRINTS INTO ACTION

Pictured at the one-day workshop on 5 June 1990 for linking European Partners organised by the **BITT Project (Business Opportunities and International Technology Transfer)** in the Northern Ireland Business Centre, London are:

Front row (left to right): Ms H. Lee, Scottish Development Agency, Glasgow, Prof. H. Stahl, Rector of the Fachhochschule Nürnberg, Mr J. Kobus BITT Project Leader, University of Twente, Netherlands, Prof. F. Monds, Northern Ireland Innovation Programme, Belfast, Mr F. Galbraith, head of the Northern Ireland Business Centre, London,.

Bach row (left to right): Mr I. Traill, SPRINT Programme, DG XIII, Luxembourg, Mrs J. Irwin, SPRINT Coordinator, LEDU Belfast, Mr H. Kirschner, Techno-Z, Salzburg, Mr K. Starrs, Regional Development Centre, Dundalk, Eire, Dr J.G. Doherty, SPRINT Committee Northern Ireland.



The conference examined results and developments in the SPRINT Programme and included a presentation on opportunities for technology transfer emerging in Eastern Europe from Prof. H. Stahl.

Further information from: Mr I. Traill, CEC, Jean Monnet Building, B4/105, L-2920 Luxembourg, Tel.: (352) 4301-4532, Fax.: (352) 4301-4544.

INNOVATION OPPORTUNITIES: CENTRAL AND EASTERN EUROPE

1. TII, the European Association of Technology Transfer Institutions, is planning to organise contact making events in particular in East Germany and Hungary to take place in 1990. TII Membership is now open to technology transfer and innovation support institutions in Central and East European Countries having concluded an industrial, scientific and technological cooperation agreement with the EC. **Contact:** Mr Chris Hull, TII, 3, rue des Capucins, L-1313 Luxembourg, Tel.: (32) 2 46.21.85, Tlx.: 6105111 GMA Lu, Fax.: (35) 2 46.21.85

2. Innovation Centres in the CSFR: In countries with no chamber for trade and commerce, credit institutions, venture capital etc., innovation centres will have to play a very important role in constructing a market economy, and in helping reawaken entrepreneurial activity. **Info:** J. Beneš, T.U. Prague, Tel. (42) 2-227 854

3. International Environmental Fair in Poland: Poland has considerable environmental problems; the **'Warta' foundation in Poznan,** is seeking international cooperation to cope with the tasks ahead. **Info:** Fundacja 'Warta', ul. Armij Czerwonej 80/82, Mr. A. Blochowiak, PL-61-809 Poznan.

4. The Association of German Technology Centres (ADT) offers its assistance in contact making with innovation institutions in East Germany. **Contact:** Mr H. Fiedler, ADT, Gustav-Meyer-Allee 25, D-1000 Berlin 65, Tel.: (49) 30 469.41.57, Fax: (49) 30 463.30.95.

5. Innovation and Technology Transfer institutions in East Germany (GDR): **Contact:** Tel.: (37) 2 5042988 (Coordination Office). Database for cooperation possibilities in the GDR (SME's): N. Enste, Tiergartenstraße 138, D-3000 Hannover 71, Fax: 0511/5179094; information on innovation centres in the GDR: 1. Prof. R. Reichel, Hochschule für Ökonomie, Hermann-Duncker-Straße 8, GDR-Berlin 1157, Tel. 5042431; Z. G. Rödel, Humboldt Univ., HU-Transfer, Unter den Linden 6, Berlin, GDR-1086, Tel.: 20932079, Telex 011/2823.

I&TT THANKS THE VARIOUS SERVICES ASSISTING IN ITS PRODUCTION



The 'Innovation and Technology Transfer' team has received several inquiries as to how the CEC arranges the quick production and distribution of I&TT. The answer is that 'I&TT' receives unbureaucratic support from various persons. Simultaneously with the production of the articles — often based on texts not written by people of English mother tongue — they are checked and corrected by the Commission's **English Translation service** in Luxembourg. The printing is carried out within 3 working days by the **Merziger Druckerei und Verlag GmbH** in Merzig (FRG). Finally, the 48000 copies of 'I&TT' are packed and sent out by the CEC's **dispatching service** under its head, Mr P. Bartolucci. His crew needs only two days for this major task, which has to be undertaken in addition to various other mass mailings, as well as 2 million individual mailings per year. The photo shows the CEC dispatching crew (from left to right): P. Bartolucci, H. Hermann, M.J. Pezzan, G. Schollmeyer, P. Agne.

15 - 19 October 1990

TNM/90

Institute for Advanced Materials - Ispra Cyclotron Administration Directorate - Radioprotection

COURSE PROGRAMME

The course will treat the most relevant applications of nuclear techniques to medicine in the diagnostic and therapeutic fields.

Diagnosis

The most advanced instrumentation, for example :
- SPET (Single Photon Emission Tomography)
- PET (Positron Emission Tomography)

will be treated in detail in addition to its use in different fields.

Major problems concerning the production of gamma- and beta-emitting radioisotopes and radiopharmaceuticals will also be presented.

Therapy

More traditional therapies using gamma-rays and electrons, as well as metabolic therapies will be treated in various lectures.

The course will also deal with new therapies using neutrons and charged particles, such as protons at high energy and pions, as well as the Boron Neutron Capture Therapy (BNCT) method.

The course concerns the application of nuclear techniques to medicine and to future trends in diagnostics and therapy. An up-to-date overview of modern nuclear methods for diagnosis, such as Single Photon Emission Tomography (SPET) and Positron Emission Tomography (PET), will be given. The instrumentation will be presented in detail; the results obtained in various fields will be critically analysed. Problems related to production, separation and quality control of the radioisotopes actually used or tested in these techniques and problems related to radiopharmaceuticals will be treated in some lectures.

More currently used radiotherapies using γ -rays, electrons and metabolic therapy will also be reviewed. Several lectures will be dedicated to new trends in radiotherapy. Among these, the therapy with neutrons, medium- and high-energy protons and heavy ions will be described and principal results will be presented.

Boron Neutron Capture Therapy (BNCT), problems related to this method and first results obtained will also be described. Lectures on therapy with protons and pions will be oriented in particular towards physics, technical innovations and medical results.

The course is intended for physicians already involved in this field, in particular for oncologists, and for scientific and industrial operators involved in related fields, such as particle accelerators, radioisotopes and radiopharmaceutical production, etc.

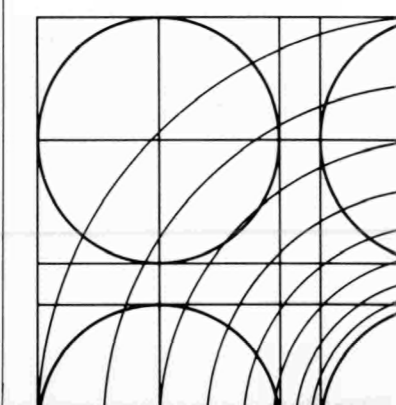
LECTURING STAFF

Invited Lecturers

H. BLATTMANN, PSI, Dept. Rad. Med., Villigen (CH)
L. CONTE, Ospedale del Circolo, Varese (I)
F. FAZIO, Ospedale S. Raffaele, Milano (I)
P. GABEL, Univ. Bremen (FRG)
T. JONES, Hammersmith Hospital, London (UK)
P. MANDRILLON, Centre Antoine Lacassagne, Nice (F)
G. PEDROLI, Ospedali di Monza (I)
P. SALVADORI, CNR, Ist. Fisiol. Chim., Pisa (I)
G. STÖKLIN, KFA, Jülich (FRG)
M. TAROLO, Ospedale S. Paolo alla Barona, Milano (I)
G. TOSI, Ospedale di Niguarda, Milano (I)

Course Coordinators

A. BENCO, CEC, JRC-Ispra, Radioprotection
M. CASTIGLIONI, CEC, JRC-Ispra, IAM



6 - 9 November 1990

ECC/90

Institute for Systems Engineering

COURSE PROGRAMME

State of the Art in Electromagnetic Analysis

- Analysis methods and numerical foundations based on both integral and differential approaches
- Formulations of magnetostatic and eddy-current problems
- Recent modelling techniques for 3D electromagnetic problems

Electromagnetic Software Tools

- Classification of software available (both specific and general purpose codes) and criteria of approach
- Guidelines for the definition of the environment and for a correct usage of the codes
- Procedures for validation and activities of the series of TEAM workshops

Electromagnetic Analysis and Design in Various Industrial Disciplines

Applications of electromagnetic analysis and design:

- induction heating
- non-destructive testing (NDT)
- fusion technology and reactor design
- magnetic recording heads
- electrical machines and actuators
- electrical insulating systems
- electric arc modelling
- accelerators for industrial/medical applications
- special devices involving electromagnetic phenomena

Round Table Discussions

During the last decade a new generation of software tools has evolved in computational electromagnetics. Analytical methods, particularly numerical techniques have improved considerably, leading to an extended range of capabilities and an increased applicability of both dedicated and general purpose computer codes.

This course is intended to review the state of the art in electromagnetic analysis and design, and to describe the fundamentals and the advances in theoretical/numerical approaches coupled with practical solutions for static and time-dependent fields.

In order to show the effectiveness of numerical techniques and associated computer codes in solving real electromagnetic field problems, their usefulness to the study and analysis of many industrial problems will be demonstrated. In particular, applications in magnetostatics and magnetodynamics will be proposed for the following topics: electrical machines, induction heating, non-destructive testing, fusion reactor technology and other industrial devices involving electromagnetic phenomena.

The course will be presented by international experts recognized in this new engineering speciality. It should guide the participants from the basic elements in computational electromagnetics up to large scale industrial applications and give them an insight into some current efforts and recent achievements. As a consequence, industrial participation from relevant design and production areas is encouraged. In addition, the course will provide a forum for the exchange of information and will stimulate further communication among specialists from industry and the scientific community involved in the activities of the international TEAM (Testing Electromagnetic Analysis Methods) series of workshops.

LECTURING STAFF

Invited Lecturers

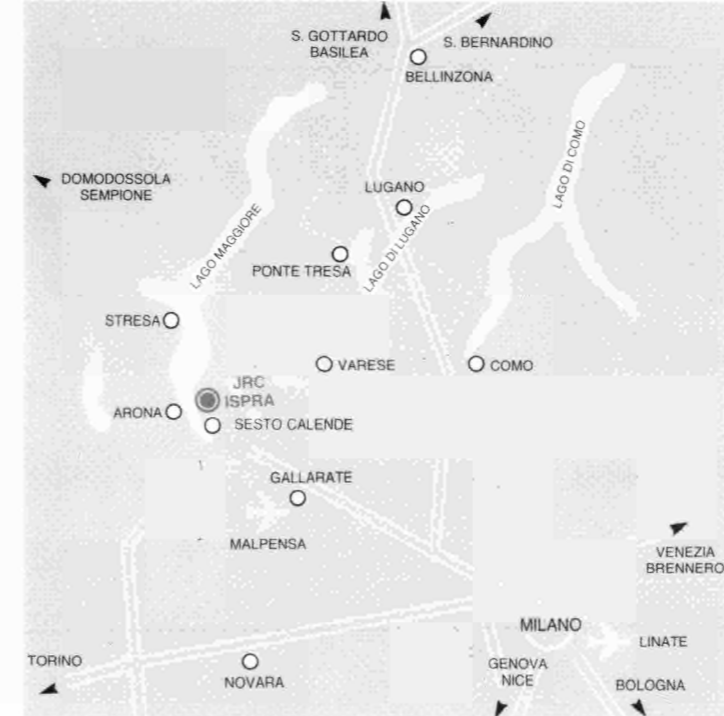
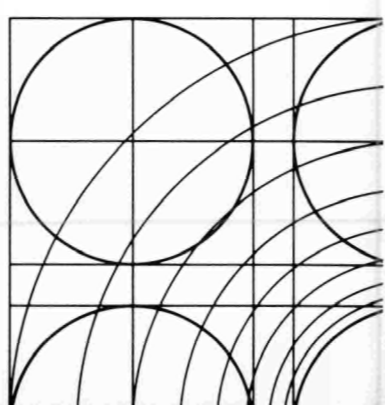
K.H. BETZOLD, Univ. Saarbrücken (FRG)
J.F. EASTHAM, Univ. Bath (UK)
G. MOLINARI, Univ. Genova (I)
K.R. RICHTER, Techn. Univ. Graz (A)
F. ROSATELLI, Ansaldo Ricerche SpA, Genova (I)
G. RUBINACCI, Univ. Napoli (I)
J.C. SABONNADIÈRE, Lab. Electrotechnique de Grenoble (F)
C.W. TROWBRIDGE, Vector Fields Ltd, Oxford (UK)
L. TURNER, Argonne Nat. Lab., Argonne, Ill. (USA)
J.C. VERITE, Electricité de France, Clamart (F)

Lecturers from the CEC, JRC Ispra Site

Y. CRUTZEN, Institute for Systems Engineering
J. SCHNEIDER, Institute for Systems Engineering
S. PAPADOPOULOS, Institute for Systems Engineering

Course Coordinators

Y. CRUTZEN, CEC, JRC-Ispra, ISE
G. MOLINARI, Univ. Genova (I)
G. RUBINACCI, Univ. Napoli (I)



GENERAL INFORMATION

Travel

The courses are given in the Joint Research Centre of the Commission of the European Communities, at Ispra, Italy. Ispra is located on Lake Maggiore about 70 km north of Milan and about 30 km south of the Italian/Swiss border. The Centre can be reached by train to Como or Arona or by plane to Milan-Linate Airport. A bus service is provided between Milan - Central Station, Piazza IV Novembre, outside the Hotel Gallia - and the Hotel «Tre Re» in Sesto Calende at the beginning and the end of each course.

Hotel Accommodation

At the request of the participants, the EURO COURSES secretariat will book rooms in a local hotel at a rate of about Lit. 70.000 per night for a single room with private bath, and breakfast included. Accommodation expenses are the responsibility of the participants. Bus services are provided for daily commuting between the hotel and the Centre.

Fees

The participation fee of each course amounts to about 160 ECUs per day. It includes the cost of the lecture notes and the price of lunch for each day of the course. Participants from universities and institutes of higher education in the EC countries (professors, lecturers, post-graduate students, etc.) may be eligible for a special discount upon an official request from their university.

Further information on the Courses

For each course a brochure giving detailed information on the programme and including a registration form will be made available some months before the date of the course. These specific brochures can be requested by filling out the enclosed "Request for information".

EURO COURSES

Secretariat EURO COURSES
Joint Research Centre
I - 21020 ISPRRA (Varese) Italy
Phone : +39-332-789819 / 789308
Telex : 380042 - 380058 EUR I
Telefax : +39-332-789839

REQUEST FOR INFORMATION

Please send me the programme for the following EURO COURSES - 1990.

RSA/90 Remote Sensing
Application of Remote Sensing to Agricultural Statistics. Crop Inventories and Area Frame Sampling (24 - 28 Sept.)

IWG/90 Chemical and Environmental Science
Sulphur Dioxide and Nitrogen Oxides in Industrial Waste Gases: Emission, Legislation and Abatement (3 - 7 Sept.)

CAM/90 Information Science
Cellular Automata: Methods and Applications (10 - 14 Sept.)
ECC/90 Industrial Application of Electromagnetic Computer Codes (6 - 9 Nov.)

APE/90 Architecture and Programming Environment of the Transputers (12 - 16 Nov.)

BRS/90 Reliability & Risk Analysis
Safety of Chemical Batch Reactors and Storage Tanks (17 - 21 Sept.)
RDA/90 Reliability Data Collection and Analysis (8 - 12 Oct.)

TNM/90 Advanced Techniques for Nuclear Medicine (15 - 19 Oct.)

FTI/90 Technological Innovation
Forecasting Technological Innovation (22 - 26 Oct.)

Surname

First name

Business address

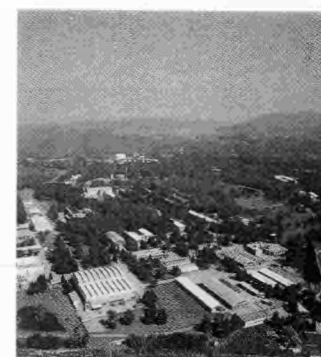
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Secretariat: Eurocourses - Joint Research Centre - I 21020 Ispra (Varese) Italy
Phone+39-332-789819 / 789308 - Telex 380042 - 380058 EUR I - Telefax +39-332-789839

The Joint Research Centre of the Commission of the European Communities (JRC) is organizing EURO COURSES for the training of scientific and technical staff in advanced sectors of science. The training courses are linked with the Commission research and development programmes, especially those being carried out by the Institutes of the Joint Research Centre itself.



The JRC Ispra Site

Lecturers. The lectures are given by professors and experts of international reputation from European and non-European universities and research institutes and by members of the JRC institutes.

Publications. The courses are published in English by scientific editors assuring a worldwide distribution.

Language. Seminars and courses are generally given in English. In special cases, Italian or another community language is used.

Duration. The courses are usually given in spring and autumn and last from one to two weeks.

Site. Normally, the courses are given at the Ispra Site of the JRC but, on request from governments or local administrations, the courses can also be organized elsewhere.



Secretariat



Data bank. Address list with more than 15,000 entries

One of the main objectives of the Commission of the European Communities is to establish an increasingly integrated scientific community throughout the Member States. The Commission is committed to achieving this objective through research and development programmes on a European scale, organizing the exchange of researchers between the Member Countries and promoting the dissemination of knowledge through seminars, conferences and advanced training courses.

EURO COURSES Programme

The programme includes seminars and training courses in key areas characterized by rapid development and where national and international public or private organizations are required to ensure harmonious development and a high standard of living for Community citizens.

Sectors of Competence

The courses are based on the specific competences of the individual Institutes of the Joint Research Centre, such as :

- measurements for nuclear safety
- reference methods and materials
- advanced materials
- structural integrity analysis
- techniques for the control of environmental pollution
- observation of the earth from satellites
- fluid dynamics
- computer technologies
- energy conservation
- technological forecasting.

Who are they intended for ?

The courses are intended for researchers, scientific and technical staff from universities, private industries, public administrations, graduate professionals and students studying for doctorates, especially those who

- want to be in the forefront of scientific and technical development in Europe,
- must face international technological competition and the large single European market,
- perform public functions of management and control to safeguard our environmental heritage,
- are involved in international cooperation projects.



The EURO COURSES building at Ispra



Course on Radioprotection

Statistical Data

EURO COURSES was set up in 1974 as «ISPRRA Courses». Up to now 207 courses have been given, involving :

2572 lecturers, 65% of whom came from Member or non-Member Countries (including U.S.A. and Japan), and the others from Commission services.

5855 participants, 76% were from public and private Member Country organizations, 13% were Commission staff, and the remaining 11% came from non-Member Countries (European and others).

18% of the courses were organized in collaboration with universities, research centres, associations of Member Countries and Community services, and 6% with public and private Italian organizations. The remaining courses (76%) were organized solely by the JRC.



EURO COURSES

**SULPHUR DIOXIDE AND NITROGEN OXIDES
IN INDUSTRIAL WASTE GASES : EMISSION, LEGISLATION AND ABATEMENT**

3 - 7 September 1990

IWG/90

Institute for the Environment

Worldwide, there is ever-increasing interest and concern about the effects of air pollution on man's ecosystem. The growing awareness of the destructive effects has revealed the need to take adequate measures to minimize the emission of air pollutants.

The two contaminants occurring in the largest concentrations and quantities are sulphur dioxide and nitrogen oxides. Both pollutants are formed during the combustion of fossil fuels, mostly during power generation and in traffic.

The continuous studies on the effects of those pollutants and the development of new methods of abatement, including integrated technologies which try to minimize the emission as part of the process, lead to a continuous adaptation of the various national and international legislations.

The course gives an overview of the present situation of the knowledge about the emission sources and rates of sulphur dioxide and nitrogen oxides, including the state of the art in atmospheric modelling to predict the transboundary transport of air pollution. A survey of modern abatement techniques will also be given, comprising current industrial experience as well as the prospects of newly developed, promising techniques. The recent developments in legislation in various European countries as well as in Japan and the U.S.A., will be discussed.

The course is intended for higher and middle management of the power, chemical and similar industries, who will have to be familiar with air pollution techniques in the near future.

COURSE PROGRAMME

General

- Emission sources and quantities
- Chemistry of the atmosphere
- Transport of pollutants in the atmosphere
- Legislation in the European Communities

Desulphurisation Processes

- Limellimestone scrubbing processes
- Wellmann Lord processes
- Ispra Mark 13A process
- Bergbauforschung/Uhde process
- Walther process
- EBDS process

Denoxing Process

- Primary measures for NO-reduction
- High and low dust SCR processes

Costs of Desulphurisation and Denoxing

Situation in the United States and Japan

Concluding Remarks

LECTURING STAFF

Invited Lecturers

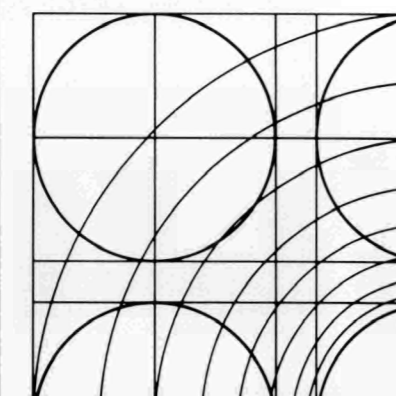
H.G. BOS, Stork Ketels, Hengelo (NL)
G. CAPRIGLIO, FGD, San Diego (USA)
G. MITTELBACH, Babcock A.G., Krefeld (D)
M. NEUMANN, Davy-McKee, Frankfurt (D)
H. PAUR, KFZ Karlsruhe (D)
E. RICHTER, Deutsche Montan Techn. für Forschung und Prüfung mbH, Essen (D)
W. SCHULTE, Krupp-Koppers, Essen (D)
G.W. SPITZNAGEL, Siemens A.G., Erlangen (D)
E. WEBER, Univ. Essen (D)

Lecturers from the CEC

H. LANGENKAMP, JRC-Ispra (I)
G. RESTELLI, JRC-Ispra (I)
S. SANDRONI, JRC-Ispra (I)
H.W. STANGL, JRC-Ispra (I)
P. STIEF TAUCH, DG XI, Brussels (B)
D. VAN VELZEN, JRC-Ispra (I)

Course Coordinators

H. LANGENKAMP, CEC, JRC-Ispra (I)
D. VAN VELZEN, CEC, JRC-Ispra (I)



The purpose of the course is to review the safety issues relating to batch reactors and storage tanks with emphasis on the prevention and mitigation of dangerous situations which could produce thermal and pressure excursions. Many severe accidents of this nature have occurred in the past throughout the world making the problem one of growing concern. As a consequence, increasing research efforts are devoted to this area by process industries and public organisations.

The course will analyse the relevant case histories and will illustrate the current safety criteria and guidelines. The emphasis will be on the prevention and protection/mitigation measures against runaway reactions. Methods for chemical system characterisation which include chemical kinetics and material physical properties will be examined. An exhaustive review of experimental techniques to investigate the runaway reaction initiation will be presented. Attention will be focused on instrumentation and control techniques.

The problem of pressure relief under runaway reaction or external fire and the most recently developed methodologies in this area will be illustrated and discussed.

In addition, analytical methods to simulate chemical system behaviour under normal and off-normal operation conditions including two-phase fluid dynamic effects, will be considered. The course will conclude with a presentation of the Ispra JRC's experimental facilities (FIRES, MPMC and Calorimetry Lab.) for investigations related to process safety and process optimisation.

The course is of particular interest for chemical engineers, management of industries, research organisations and regulatory bodies directly involved in plant safety technology assessment.

COURSE PROGRAMME

Introduction

The safety problem in the process industry. Case histories and analysis of relevant accidents. Fundamentals of runaway reactions. Thermal explosion theory. Regulations in the European Community countries relating to batch reactor and storage tank safety.

Prevention measures

Laboratory testing procedures to characterize potentially dangerous chemical systems. Reaction calorimetry. Equipment characterization. Risk Assessment methodologies. On-line detection of runaway initiation. Modelling and simulation.

Protection measures

Methods to stop the runaway reaction after initiation. Emergency pressure relief system design and verification; in-vessel and vent line two-phase flows. Flow regime characterization. Adiabatic calorimetry. DIERS methodology. Treatment of vented fluids.

Conclusions

Overview of reaction hazard investigations

Visits to the JRC experimental facilities and calorimetry laboratory will be organized.

LECTURING STAFF

Invited Lecturers

J.A. BARTON, Health and Safety Executive, Buxton (UK)
P. CARDILLO, Stazione Sperimentale Combustibili, San Donato Milanese (I)
J.L. GUSTIN, Rhône Poulenc Industrialisation, Décines (F)
N. LABATH, C.A.T., Varese (I)
P.E. NOLAN, South Bank Polytechnic, London (UK)
J. SINGH, Hazard Evaluation Lab., London (UK)
F. THYRION, UCL, Louvain-la-Neuve (B)

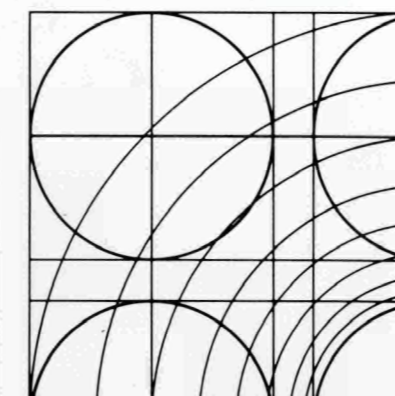
Lecturers from the JRC-Ispra

A. AMENDOLA**
A. BENUZZI*
C. BARCONI*
J. DUFFIELD*
H. HERNANDEZ*
C. MOUSSAS*
T. SNEE*
J.M. ZALDIVAR*

Course Coordinators

A. BENUZZI*
J.M. ZALDIVAR*

* Institute for Safety Technology
** Institute for Systems Engineering and Informatics



EURO COURSES

SAFETY OF CHEMICAL BATCH REACTORS AND STORAGE TANKS

17 - 21 September 1990

BRS/90

Institute for Safety Technology

EURO COURSES

**APPLICATION OF REMOTE SENSING TO AGRICULTURAL STATISTICS.
CROP INVENTORIES AND AREA FRAME SAMPLING**

24 - 28 September 1990

RSA/90

Institute for Remote Sensing Applications

The implementation of the Common Agricultural Policy is one of the most important tasks of the Commission of the European Communities. To discharge its duties, the Commission requires an effective system of inventory and monitoring which provides it with the facts necessary for guiding its agricultural policy. Remote Sensing seems to be the most promising technique for upgrading the agriculture statistical system. In order to achieve rapid improvements and avoid duplications of work as well as methods which differ too greatly, the Commission has set up a Pilot Project of Remote Sensing Applied to Agricultural Statistics. The Joint Research Centre is responsible for this plan, the guidelines being defined according to the priorities of DG VI and Eurostat.

The course will concentrate on crop inventories and area frame sampling which are carried out in the framework of the Agriculture Project (Action 1. Regional Inventories). It will cover all the steps of an inventory project: sampling surveys, ground observations, image acquisition, data processing and statistical evaluation of the results.

Note that the course will not deal with crop monitoring with low resolution satellites or yield forecasting with agrometeorological models. The course will be given partly by the staff of the Agriculture Project and partly by international experts in order to compare slightly different methods. The course is intended for personnel directly involved in agricultural statistics who want to have an overview of an operational application of remote sensing. It can also be followed by people with a general background in remote sensing or statistics who need precise information about this application.

The course is based on about 15 lessons, practical exercises and a ground survey on one of the test sites of the Project.

COURSE PROGRAMME

Introduction: Remote Sensing and Agricultural Statistics

The student will be introduced to various systems of agricultural statistics. The contributions of remote sensing, including speed, objectivity and uniformity will be discussed together with techniques used to interpret the data. The accent will be on high-resolution satellite data and production inventories.

Inventories: Methodology Developed by the JRC

Action 1 of the Agriculture Project deals with the inventory of land cover on a regional or national scale. These inventories are carried out with the cooperation of the corresponding national service. The inventories include:

- area sampling by field workers for acreage estimates,
- satellite-derived data to improve the results of the field work
- a yield estimate based on farmers' replies to a questionnaire.

Field Work

Surveys are normally based on aerial photography and maps; the Agriculture Project bases its surveys on satellite imagery and maps. The participants will have the opportunity to encounter the problems of location, nomenclature and the description of a tract which are typically faced by workers in the field, and the use of satellite imagery to resolve them.

Practicals

Practical classes will give the participants the chance to learn the basis of the use of automatic image processing for agricultural statistics:

- digitizing segments using a Television Tracking System (TTS),
- analysis of ground satellite data using MARS software.

Evaluation of Results

The course will examine the following points:

- optimizing the size of the segment as a function of the size of the fields;
- optimizing sampling rates using stratification;
- the relation between the precision of the result and the area and distribution of the crop;
- problems in discrimination of crops arising from confusion between spectral classes;
- limits to the use of the regression estimator.

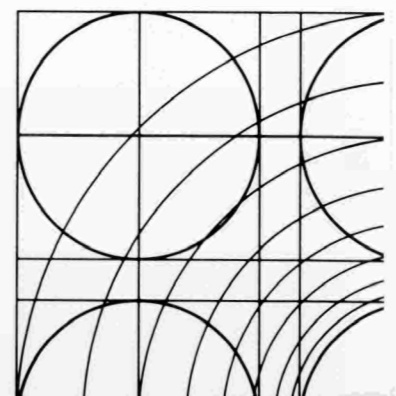
Integration of the Inventories in an Advanced Agricultural Information System

The course includes a discussion of the contribution of the inventories to a complete production monitoring system, although the methods involved are not treated in detail.

Other Programmes

The course will also include a presentation of similar programmes under way in other countries. These include:

- remote sensing and agricultural statistics programme of the Service Central des Enquêtes et Etudes Statistiques of the French Ministry of Agriculture
- US Department of Agriculture programme
- AGRIT programme of the Italian Ministry of Agriculture
- agricultural statistics programme for developing nations undertaken by FAO.



EURO COURSES

RELIABILITY DATA COLLECTION AND ANALYSIS

8 - 12 October 1990

RDA/90

Institute for Systems Engineering and Informatics

The course is organized in the framework of the EuReData programme.

The ever increasing public demand and the setting-up of national and international legislation on safety assessment of potentially dangerous plants require that a correspondingly increased effort be devoted by regulatory bodies and industrial organizations to collecting reliability data to produce safety analyses. Reliability data are also needed to assess availability of plants and services and to improve the quality of production processes.

The need for an educational effort in the field of data acquisition and processing has been stressed within the framework of EuReData, an association of organizations operating reliability data banks.

The association aims to promote data exchange and pooling of data between organizations and to encourage the adoption of compatible standards and definitions for a consistent exchange of reliability data.

The course covers issues directly linked to the area of reliability data banks such as collection, processing and analysis of such data. Specifically the course will include examples of data banks in the field of nuclear operating experience, industrial processes, electronics, offshore equipment and the car industry. Their use will be discussed and demonstrated. In addition, attention will be paid to the collection of human reliability data and dependent failure data.

The course is intended for scientists and engineers already involved in the field of collection and/or use of reliability data as well as for people planning to install reliability data banks.

Lecturers will be drawn mainly from EuReData member organizations and JRC permanent staff. Demonstration of data banks and data collection as well as case studies and analysis exercises including those in the areas of nuclear components, offshore equipment, electronic components, motor vehicles, etc., will be presented by organizations such as EDF, NUKEM, BP International, the Danish Engineering Academy, VTT and others.

COURSE PROGRAMME

General

- Introduction of the course
- Presentation of EuReData
- Needs and use of data collection and analysis

Basic definition of input and output data

- Inventory and failure event data
- Failure definitions, modes and distributions
- Accident and experience data
- Common cause and human error data
- Availability, reliability, maintainability data
- Feedback of operational and disturbance data

Data Collection and processing

- Data bank organization
- Collection procedure
- Quality assurance and testing
- Computer tools
- Expert judgement
- Failure mode and effect analysis
- Storage and retrieval of data
- Demonstrations of specific data banks

Data analysis

- Classical inference methods
- Bayesian inference methods
- Multivariate analysis methods
- Dependent failure analysis
- Combination of uncertainty data
- Fuzzy sets and possibility theory
- Practical applications

LECTURING STAFF

Invited Lecturers

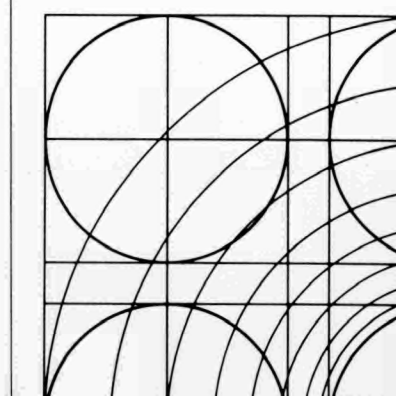
G.F. CAMMACK, B.P. Intern. Ltd., London (UK)
C. CLAROTTI, ENEA, Roma (I)
R. COOKE, Univ. Technol., Delft (NL)
N. GARNIER, CNET, Lannion (F)
J.A. HAYES, Univ. Technol., Loughborough (UK)
A.Z. KELLER, Univ. Bradford (UK)
L. KOEHRST, TNO, Apeldoorn (NL)
A. LANNON, EdF, Paris (F)
S. LYTTERSEN, SINTEF, Trondheim (N)
A. LYYTIKÄINEN, Techn. Res. Centre, Espoo (SF)
T.R. MOSS, RM Consultants, Abingdon (UK)
L. PIEPSZOWNIK, EdF, Saint Denis Cedex (F)
H. SANDTORV, SINTEF, Trondheim (N)
H.J. WINGENDER, NUKEM, Alzenau (FRG)

Lecturers from the JRC-Ispra Institute for Systems Engineering and Informatics (ISEI)

S. BALESTRERI
A. BESI
S. CARLESSE
H.W. KALFSBEEK
A. POUCEY

Course Coordinators

T. LUISI, CEC, JRC-Ispra, ISEI
J. AMESZ, CEC, JRC-Ispra, ISEI



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Under the **SPRINT Programme** the Commission is promoting the **Europeanisation of conferences on new technologies**. Here is an overview of some of the forthcoming conferences

Date	Title	Venue	Organizer	See page or contact
9-13.7.90	I.N.N.C 90 International Conference on Neural Networks	Paris	Société Nina Thellier Conseil	45
20-24.8.90	International Symposium on Remote Sensing and Water Resources	Enschede	International Association of Hydrogeologists	24
20-24.8.9	COMP'90 Symposium Composites in Emerging Technologies	Patras	University of Patras	Professor S.A. Paipetis P.O. Box 1134 GR-26110 Patras
26-29.8.90	World Congress on Health Technology Standards	Dublin	Electro-Technical Council Ireland	Mr Noel J.O' Riofáin Fitzwilliam Place, 1, IRL-2 Dublin
27-29.8.90	Intensité Vibratoire dans les Structures	Senlis	Centre Technique des Industries Mécaniques	45
29-31.8.90	TS 90 Thermal Spraying Conference	Essen	Deutscher Verband für Schweisstechnik	45
29-31.8.90	The changing nature of the Technological R&D Funding Environment	Aarhus	Danish Technological Institute on behalf of Waitro	Mr R.W. Short Teknologiparken DK-8000 Aarhus
11-12.9.90	Emergency Planning in the Nineties	Bradford	University of Bradford	Mr A.Z. Keller Richmond UK-BD7 1DP Bradford
11-14.9.90	Growing Small Firms - The Role of Technology	Dublin	Irish Management Institute	36
12-14.9.90	TechTrans Centre'90	Herning	Messecenter Herning	43
14-15.9.90	Les Transferts de Techniques dans l'Industrie Agro-Alimentaire	Bordeaux	L.E.S France Licences et Savoir-Faire	Mr B. de Passemar Av. Georges V 40 F-75008 Paris
18-29.9.90	2nd International symposium on fluid sealing of gasketed joints	La Baule	Centre Technique des Industries Mécaniques	Mr Y. Birembaut Rte. de la Jonelière 70 F-44076 Nantes
19.9.90	Umweltschutz durch die Nutzung von industrieller Abwärme	Köln	TÜV-Akademie Rheinland GmbH	Mr P. Wogenstein Am Grauen Stein D-5000 Köln 91

Further information on the above-mentioned conferences can be obtained **only** from the addresses indicated above. Information on the SPRINT scheme for the Europeanization of technology transfer conferences can be obtained on written request from: Mr J.R. Tiscar, CEC, DG XIII/C/4, B4/102, JMO, L-2920 Luxembourg, Fax.: (352) 4301-4129/4544.

INTERREGIONAL TECHNOLOGICAL COOPERATION IN EUROPE — CURRENT TRENDS AND INDUSTRIAL PERSPECTIVES FOR THE 1990s —



The **conference** is being organised by the Spanish Ministry of Industry and Energy's Secretariat-General for Industrial Promotion and Technology, with the assistance of TII. It has been designed for both **policy makers and technology transfer practitioners** wanting to understand better and benefit from the increasing opportunities offered by Europe's maturing technology transfer market. **Themes** include conceptual and empirical problems of measuring **technology flows**; the **impact of technology transfer** on regions, sectors and firms; and the challenge of activating **demand for external technology** among SMEs.

The programme and further information can be obtained from Mr Luis Crespo, Edificio Cuzco IV, P.^o de la Castellana, 141, 13^o, E-28046 Madrid, Tel.: (34) 1 581.55.00, Tlx: 23121 CDTI E, Fax: (34) 1 581.55.76/84.