

INNOVATION AND TECHNOLOGY TRANSFER



Scientific research across the whole European Continent

The transfer of the presidency of the Council of Ministers from the Netherlands to Portugal coincides with important developments having repercussions for research just as much as for other areas of EC activity.

Although the press concentrated on the importance of the Maastricht meeting of heads of state for monetary, foreign and social policy, the summit also had implications for the way EC research is organised. The "codecision" procedure agreed at Maastricht means that the future RTD Framework

Programmes will need the unanimous approval of all Member States (as at present) and of the European Parliament. The procedure for passing the individual "specific" programmes which go to make up each Framework Programme will be simplified, involving only a single consultation of the European Parliament instead of the present two rounds of consultation.

Following Maastricht, it is now full speed ahead in the various "research" directorates of the Commission for the preparation of the fourth Framework Programme. The aim is that even with the "codecision" procedure, the new programme should if at all possible overlap with the current third Framework Programme, to maintain momentum and avoid breaks in support in areas of long-term importance.

Another crucial event of importance for research is the announcement of agreement between the Community and the countries of EFTA - the European Free Trade Area - for the creation of a single domestic market of 374 million citizens which is being called the European Economic Area. This will mean that with few exceptions goods and services can be marketed over an enormous area extending from Helsinki to Lisbon and from Reykjavik to Athens.

This will bring new possibilities of cooperation for the R&D community, eased by the fact that there are already well-established research agreements with EFTA countries under the heading of the COST programmes (Cooperation on Science and Technology). Other research takes place under bilateral agreements between individual states and the Community or, within certain programmes, on a project-by-project basis.

At present the Community-EFTA agreement has still to be ratified by the governments involved, and the legal framework has to be clarified in the light of recent rulings of the EC Court of Justice. In the meantime the Commission is already preparing the way for much closer links with EFTA on research in the future.

As concerns work on technology transfer and the exploitation of the results of EC research programmes, we are looking forward to working with the Portuguese presidency on the preparation of the so-called "Centralised Action". As reported in previous issues of Innovation and Technology Transfer, this will continue, and amplify, the work of the present VALUE programme on the dissemination and exploitation of research results. In the near future it is expected that the Council of Ministers will agree a "common position" on the Centralised Action proposal, which will allow the second round of consultation with the European Parliament to begin.

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In this issue:

Second wave Framework programme	p.2
Calls for proposals.....	p.5
Euro Info Centre news	p.6
Energy for our environment.....	p.7
JRC looks for partners	p.8
Sprint research organisations network.....	p.14
Young scientists 91	p.16
New electronic guides to Community Science and Technology.....	p.20

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Four new research programmes begin

The Council of Ministers formally adopted on 9 September four new research programmes in the Community's Third Framework Programme. Fifteen specific research programmes are included in the Framework Programme which has a budgetary envelope of 5.7 billion Ecu. With the six programmes decided before summer, mentioned in previous issues of *Innovation and Technology Transfer*, ten programmes have now been adopted.



Photo: Mike St. Maar Sheel

Industrial and materials technologies

The new programme, much bigger than the previous programme, has several novel aspects. The content is more comprehensive as it includes both BRITE/EURAM and research activities in the field of raw materials and recycling. This aids the objective of the programme to strengthen European industry's scientific and technological research, integrating new technologies into production processes and creating conditions favourable to the transfer of technologies.

The entire life cycle of materials is taken account of in the programme using a systems approach and work carried out in the field of design and manufacturing will concentrate on the notion of integrating different disciplines and technologies into the production process. Environmental aspects are highlighted in all activities undertaken.

New implementation mechanisms have been introduced. The programme will be the basis for wide ranging integrated projects on themes such as the 'clean car'. Besides 50% shared cost grants, new mechanisms include 75% 'feasibility awards' to help small and medium sized enterprises (SMEs) prepare projects and cooperative research activities ('CRAFT' actions) in which SMEs which do not have research capabilities can get together to have research undertaken by a research centre on their behalf. Accompanying measures include conferences, seminars and training activities.

The three work areas involve:

1. Materials and raw materials

Developing new industrial materials and bettering the materials cycle (production, processing and recycling). In the raw materials sector, research will deal with improving prospecting techniques, studying the impact of the mining industry on the environment and the specific recycling problems related to waste from the electronics, automobile, aeronautics and petrochemical industries. In advanced materials emphasis is placed on high performance structured materials (metals, ceramics, polymers and composites) and certain functional materials (conducting polymers, superconductors, high performance magnetic materials, etc).

2. Design and manufacturing

Work will concentrate on the integration of a certain number of enabling technologies such as mechanics, optics, acoustics and fluid dynamics by making use of new technologies such as optamtronics (optics, mechanics and electronics) and mechatronics (engineering, mechanics and electronics). Work in the field of manufacturing will cover both small scale flexible production technologies and mass production technologies (assembling and cutting technologies, flexible production, etc). So far as chemical engineering is concerned research will deal with separation technologies, molecular engineering, catalysis, surface sciences, etc.

3. Aeronautics

Work will concentrate on technologies to reduce aircraft noise and jet engine emissions, all aspects of maintenance and surveillance technology as well as the interface between aircraft control systems and the cockpit. In the field of aerodynamics work will cover techniques of drag reduction by laminar flow. At the same time certain specific technologies for manufacturing aircraft structures will be investigated and in avionics, control techniques for inboard systems, man machine interfaces, etc.

The budget for the entire programme is 670 million Ecu of which 67 million Ecu is earmarked for the centralised scheme to disseminate and exploit results.

In the Third Framework Programme an additional sum of 78 million Ecu, subject to a separate decision, is intended for the research activities carried out by the Commission's Joint Research Centre.

Agriculture and agro-industry (including fisheries)

The importance of efficient food production, together with food processing and distribution has been highlighted by the problems in eastern and central European countries. In its agro-industrial research activities which started in 1987, the Community is seeking to bring about a better match between the use of its agricultural resources and both the requirements of the market and constraints imposed by respect for the environment. In many sectors the application of new technological procedures allows better quality products to be produced with less energy, fertiliser and pesticide inputs.

New features in this programme include the introduction of demonstration projects which are intended to illustrate the feasibility and explore the market potential of new products or technologies. Examples might include the industrial use, through innovative process engineering of agricultural raw materials (like vegetable oils for fuel, flax, hemp or fibre soghum) or aquatically derived materials (like fish oils, or fish shells).

A new feature shared with much of the Third Framework Programme is targeted projects which concentrate resources from a number of different disciplines and areas of the programme into one specific issue such as bioenergy, where a number of different methods and technologies must be harnessed.



photo: Mike St. Maur Sheil

The areas of activity are:

1. Primary Production

New aspects include new biotechnologies applied to energy crops, research on artificial reefs for increased productivity, complementary farm based activities, means for forest establishment under difficult conditions, remedies for deforestation, and remedies for desertification.

2. Inputs to Primary Production

Under this heading environmentally friendly and energy efficient inputs to crop production, stock farming, forestry, fisheries and aquaculture will be developed, including genetically improved strains of micro-organisms, plant, animals and fish, better nutrients, better pest and disease control systems, equipment and monitoring and control systems.

3. Processing of biological raw materials from agriculture, horticulture, forestry, fisheries and aquaculture.

This heading includes food safety, food quality, nutritional wholesomeness of food products; environmental impact of food processing; packaging, distribution and preservation; homogeneity and security of supply; separation, extraction and mechanical processing; biological and combined processing and bioenergy. New fields include non solvent extraction processes and recovery of edible proteins from fish and shellfish.

4. End use and products

New aspects include consumer requirements for nutrients, prenormative research on e.g. food quality and nutritional value,

and new materials, both biocompatible (for medical use) and biodegradable for slow release nutrients, lubricants and detergents.

Shared cost contracts with up to 50% Commission contribution, demonstration projects and targeted projects are foreseen within the total 329.67 million Ecu budget. Additionally, 3.33 million Ecu are earmarked for the centralised action on dissemination and exploitation of results.

Biomedical and health research

Even though some 150 billion Ecu is spent annually in the Community on health, only a small proportion is devoted to medical research. National research projects are often small scale and could benefit from coordinating across the Community to prevent waste and duplication and to broaden the scope of useful surveys. Epidemiological research in major public health problems such as cancer, Aids and cardiovascular disease can be facilitated and resources used more efficiently.

The programme contains several new aspects. The first activity is designed to improve Europe's capability in drugs and the administration of medicines, including precompetitive drug testing and strengthening research in drug addiction and drug dependence. A second major development is the study of risk factors and occupational medicine, which will look at the determinants of occupation related disease, the use of biological markers as measures of exposure to hazardous substances and the interaction of genetic and environmental factors. Thirdly, considerable emphasis is placed on cardiovascular disease, where the European Community is taking a greatly increased interest in its socio-economic impact. A fourth new factor is the incorporation of human genome research into the programme following its successful separate pilot phase. This activity sees a doubling of funding. Lastly there will be research conducted into questions of biomedical ethics relating to different areas of the programme as well as an evaluation of its social impact and of any risks which might be associated with it.

1. Development of coordinated research on prevention, care and health systems

Development of test networks for new medicinal products, establishment of epidemiological and clinical data, new coherent methods for diagnosis (such as medical imaging), new biomaterials for prostheses, methods of controlling the effects of treatment, etc.



photo: Mike St. Maur Sheil

2. Major health problems and diseases of great socio-economic impact

Aids (specific epidemiological studies, prevention strategies, basic research on the HIV virus, clinical research and tests, preparatory work for vaccine against Aids, etc); cancer (improved methodologies involving the combination of surgery, radiotherapy, chemotherapy and immunology); cardiovascular diseases (correlation between lifestyle, nutrition and the development of cardiovascular diseases); mental illnesses, neurological disorders and mental handicaps (multiple sclerosis, Parkinson's disease, etc); age-related diseases and health problems.

3. Human genome analysis

Completion and integration of the physical and genetic map of the human genome, improvement of understanding of the genetic component of multifactorial diseases, etc. The work is carried out in conjunction with the activities being pursued in the framework of the international organisation HUGO (Human Genome Organisation).

4. Research on biomedical ethics

Questions of biomedical ethics relating to all the above areas together with evaluation of the social impact of the programme and any risks which might be associated with it.

The total budget for the programme amounts to 131.67 million Ecu. Concerted action remains the principal mode of implementation, together with shared cost actions and accompanying measures. A further sum of 1.33 million Ecu will contribute to the centralised scheme for dissemination and exploitation of results.

Non-nuclear energies



The environment as an element in all the activities of the Framework Programme is especially at the heart of the new research programme in the field of non-nuclear energies. More even than in the preceding programmes, the objective is to develop new, economically viable energy options including energy saving technologies which have a low or zero impact on the environment, especially the climate.

Two types of activity are included in the programme: firstly, technology projects designed to explore, establish or test the possibility of technical implementation of innovative concepts

prior to industrial development; secondly basic research projects in new fields where improving knowledge could ultimately give rise to industrial research projects.

1. Analysis and modelling

Mathematical models will be developed and used to analyse and evaluate the energy policies pursued by the Community or by the Member States, the strategies for energy saving, etc. Two aspects will receive particular attention. On the environment, work will bear on modelling the effects of policies intended to reduce the impact on the environment of the production and use of energy - there will be special emphasis on the problem of CO₂ waste and the greenhouse effect. Other activities will seek to assess the impact of the large single market on the European energy system.

2. Better use of fossil fuels

Theoretical and experimental research will be done to establish the costs and technical feasibility of advanced technology intended to improve the efficiency of energy production from fossil sources. This would include methods of production in a combined cycle, fluidized bed combustion systems and ways of recovering hydrocarbons from chimneys. At the same time efforts will be made to develop both better ways of studying the CO₂ cycle (which is a major source of the greenhouse effect) and ways of reducing emissions of this gas together with techniques to separate and fix it. One of the solutions to be explored will be geological elimination, into exhausted oil or gas fields for example.

3. Renewable energy sources

RTD activities in renewable energy will be strengthened. In the field of solar energy they will centre on the problem of integrating and making use of technologies for thermal applications of solar energy and photovoltaic conversion in houses and office buildings - in other words 'the solar house'. Also to be studied are the possibilities of large scale application of tidal energy, wave energy and wind energy. In the latter, efforts will be concentrated on optimising high power turbines in the region of one megawatt. Projects in the field of exploitation of biomass energy and of geothermal energy will also be started as well as projects on the utilisation of renewable energy to provide water and electricity in rural areas.

4. Rational use and conservation of energy

One of the long term objectives of this part of the programme is the development of large fuel cells (for electricity production, cogeneration and ship engines) giving rise to economies of up to 30% or 40% and between 10 or 100 times lower pollution than traditional systems. Work in this field of energy economy technologies will concern both industry (high temperature heat pumps and heat exchangers) and buildings (new daylighting techniques, development of high insulation windows using 'smart transparent foam', passive exploitation of solar energy in the design of buildings, etc).

The budget for the programme is 157 million Ecu of which 1.57 million Ecu are earmarked for the centralised scheme for diffusion and exploitation of results. The programme will be implemented through shared cost research contracts, concerted actions and accompanying measures.

Eighty projects accepted for agriculture competitiveness and management programme

A Call for Proposals for the programme, Competitiveness of agriculture and management of agricultural resources, brought in 659 proposals for shared cost research. There were three deadlines in March and October 1990 and April 1991. Eighty projects were accepted by the Commission.

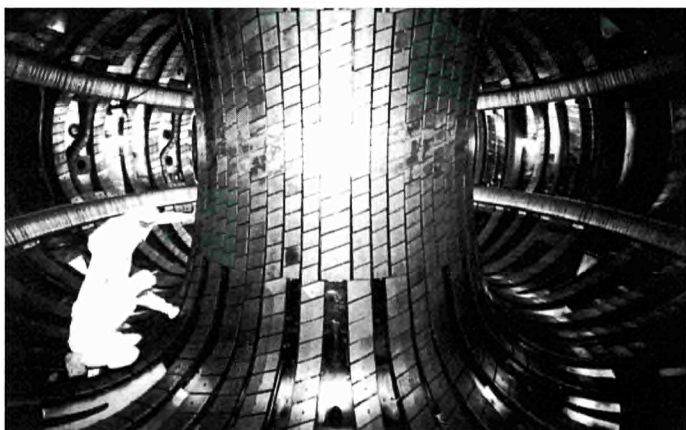
Under the programme 83 short term mobility grants have also been awarded, some 35 workshops have been organised and two training courses were co-financed. These activities continue until 25 February 1995.

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Calls for Proposals

Programme	Published in	Deadline
MAST II		
Marine Science and Technology		
North Atlantic Project	OJ C 284 31.10.91	14.02.92
RTD in biomedicine and health		
Declarations of intent to participate	OJ C 278 25.10.91	31.01.92
RTD in agriculture, agro-industry and fisheries	OJ C 264 10.10.91	31.01.92
Environment		
Training and pilot projects		
on accidental pollution at sea	OJ C 255 1.10.91	31.05.92 30.11.92
TELEMAN, remote handling in hazardous or nuclear disordered environments,		
Second Call for Proposals, Open Day	OJ C 255 1.10.91	14.02.92
Non-nuclear energy	OJ C 238 13.09.91	14.02.92

Sector	No of contracts	EC funding	MECU
1. Conversion, diversification, including extensification of production, reduction of cost and protection of the rural environment.	35	22	43%
2. Product quality, new uses for traditional products and aspects of plant and animal health.	22	14	27%
3. Socio-economic aspects and specific activities for regions lagging behind in development.	16	12	24%
4. Methods and services to disseminate agricultural research information, particularly from this programme.	7	3	6%



JET produces world's first fusion power

The European Community's experimental machine for controlled nuclear fusion reached an important first step towards the commercial exploitation of energy based on hydrogen isotopes. About 2 megawatts of power was produced for over 2 seconds at the Joint European Torus at Culham in UK on Saturday 9 November. The basic fuel for fusion is a hydrogen isotope, deuterium, found in water, and is virtually inexhaustible. The fuel must, however, be heated to 100 million degrees Celsius, ten times hotter than the centre of the sun.



Berlin conference hears about opening up in the East

Talks were under way about opening the Euro Info Centre network to eastern Europe from Estonia to Israel, European Commissioner Antonio Cardoso e Cunha told the second annual conference of Euro Info Centres held in Berlin on 20 September 1991. The concept of EICs was acquiring a continental dimension.

Eight EICs were opening in former territory of the DDR. Warsaw, Prague and Vienna now have their Correspondence Centres connected to the network. Hungary and the EFTA countries will soon follow. Centres operate as independent units as part of a host structure well established at local level, such as chambers of commerce. Since they are free to hold direct dialogues with each other without having to pass via Brussels, they can create a real network effect, Mr Cardoso e Cunha said. The number of centres could be doubled overnight, if quality and training was not considered.

Director-General Heinrich von Moltke said that the number of questions dealt with was increasing faster than the number of Centres. Some 150,000 questions were handled in 1990; this number could soon rise to a quarter of a million questions a year. Centres are increasingly offering 'tailor-made' consultancy to companies which need help in dealing with enormous flows of information.

Euro Info Centres go east

Euro Info Centres have now been opened in a number of eastern and central European countries, where they are known as Correspondence Centres.

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Pocket guide to Euro Info Centres

More than 200 Euro Info Centres have been set up in all the Member States of the Community - and Correspondence Centres in some other countries - to provide a decentralised means for small and medium sized firms to have access to European Community information. A small, pocket guide providing the identity, addresses and contact persons of these Euro Info Centres is available free of charge.

Annual Report 1990

The 13 million small and medium sized enterprises in the European Community represent 95% of European businesses and nearly two-thirds of the work force. 'In the context of the implementation of the single market, they deserve special attention,' says Mr Antonio Cardoso e Cunha in the introduction to the 1990 Annual Report on the Euro Info Centres. The report gives an overview of the EIC project in 1990, evaluates types of information and help given, and summarizes the 1990 annual conference.

Info Business

Info Business is a bimonthly newsletter for EICs and BC-Net with articles on key events and news in the European Community programmes and policies. French and English editions are available.

To Ms Diane Eyben, DG XXIII ARLN 3/25, CEC,
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Please send me the following information:

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| EIC pocket guide | <input type="checkbox"/> | No of copies if more than one |
| EIC Annual Report | <input type="checkbox"/> | No of copies if more than one |
| Info Business | <input type="checkbox"/> | No of copies if more than one |

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Eric for rapid info exchange

EICs have a new computerised information system called ERIC 4.0 which enables EICs to register new files (questions/answers) and search for existing files with speed. Eric also provides an easy-to-use interface with external databases of the Commission and to the Eurokom electronic conferencing service.

Information from every EIC will be available on the Commission's ECHO host in Luxembourg. The whole EIC network can therefore have a common memory accessible to each other.

Euro Information Centre Calendar

A special Business week introducing EICs and other EC instruments to new customers will be held by all EICs from 23 to 27 March 1992.

Euro Info Centres Third Annual Conference to be held on 12-13 June 1992 in Funchal, Madeira.

EICs host structures meeting in Brussels 16 December 1992.

Special Euro Info Centre at Brussels Airport

Businessmen arriving at Brussels International Airport at Zaventem will be greeted by a Euro Info Centre to provide them with answers to their questions on the European Community. The Centre will be situated in the Transit Hall in front of the tax free shop and be opened from 6 January to 28 February 1992.

Who will train the trainers?

Training and retraining are considered to be major factors in industrial success. The European Centre for the Development of Vocational Training, CEDEFOP, has published a special issue of its journal, *Vocational Training*, on this topic: Tomorrow's training - a challenge for training. Articles deal with training of trainers, the trainers' labour market, development of key skills, and holistic in-company and management training methods.

Contact: **CEDEFOP**
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A European energy tax is coming!

Contact THERMIE for environment friendly energy!

The European Council of Environment Ministers on 12 October agreed in principle to the imposition of a tax to combat polluting sources of global warming. Where such encouragement for consumers to change their habits was not sufficient, the ministers warned, additional regulatory measures may be necessary. The Finance Ministers have also given provisional approval provided such a tax is fiscally neutral, offset by tax cuts in other areas. On 29 October Energy Ministers discussed this proposal from their own perspectives.

The aim of the tax is to hit large emitters of carbon dioxide, a gas largely responsible for the Greenhouse Effect. The tax should also encourage energy efficiency. The best way to help the environment in general is to save energy and secondly to limit a whole range of polluting side effects from energy production and consumption.

THERMIE, a Community programme for environment friendly energy, responds to public anxiety about conserving both nature and energy. Launched in June 1990, THERMIE is a key part of the Community's energy strategy with the principal aims of:

- promoting efficient, innovative energy technologies,
- encouraging greater use of new and renewable energy sources,
- improving environmental protection,
- extensive dissemination and encouragement of such technologies.

The Commission has developed a network of organisations promoting energy technologies (OPETs) in all Member States to encourage industry and the public to gain the economic and social benefits of these innovations.

For more information on the THERMIE programme, contact

Mr. Michael Gowen, CEC, DG XVII, 200 rue de la Loi,
B-1049 Brussels, Belgium, tel.: +32 2 236 0436, fax: +32 2 235 0150.

Name

Organisation

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Call on the Commission's own research institutes to solve your R&TD problems!

The Commission's own Joint Research Centre has been solving tricky research and development problems for the European Community since its creation under the Euratom Treaty. Now it can work for you!

With eight specialised, highly qualified institutes housed on four sites in Belgium, Germany, the Netherlands and Italy, the JRC was created and developed in order to provide impartial research solutions that would satisfy the requirements of all European Community Member States.

For example, when disputes arise between companies in Member States as to exact measurements or references, the Joint Research Centre has often proposed solutions. The JRC has helped the EC prepare the technical basis for European legislation. It has been the scientific right hand of the Commission for nuclear and non nuclear energy, environmental problems, sophisticated informatics applications and expert systems, and a host of other problems that require large scientific installations.

A major in-depth examination of the JRC was carried out in 1988 by a panel of senior industrialists and the Commission has since restructured the JRC making it a more open research facility to both public and private organisations. The JRC now has four modes of operation:

- research under the specific programmes of the Framework Programme;
- scientific and technical work for other services of the Commission;
- exploratory research
- contractual work to outside bodies.

Public sector bodies, universities and firms including small and medium sized enterprises (SMEs) that have no research department can now ask the JRC to perform their research for them. The JRC also has its own training programme for researchers.

Potential customers with requirements in any aspect of science and technology are free, without any obligation, to discuss their needs with JRC staff. Proposed solutions to research or training problems can take a number of forms: direct contracts to the JRC; JRC support for research groups on research, analysis or information activities; or multi-client collaborative joint research projects.

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or directly to the institutes of the JRC

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The eight institutes of the Joint Research Centre



The Central Bureau for Nuclear Measurements Geel, Belgium

Speciality: promotion of European standards and the determination of reference data and materials in the nuclear and non nuclear sectors.

Facilities: Linear particle accelerator (LINAC) for the study of neutron-nucleus interactions. Van der Graaff particle accelerators for nuclear measurements and the assay of trace elements.

Advanced analytical laboratories for the characterisation of reference materials being prepared and certified.

Institute for Transuranium Elements Karlsruhe, Germany

Speciality: nuclear safety studies for nuclear industry, including fuel behaviour under irradiation, waste management, and safeguards management; investigation of chemical and physical properties of actinides; new ways of handling materials including managing aerosols using acoustic energy.

Facilities: nuclear laboratories equipped with hot cells and glove boxes for the study of fuel behaviour and the physico-chemical properties of actinides.



Institute of Advanced Materials Petten, the Netherlands and Ispra, Italy.

Speciality: Analysis of materials behaviour under neutron irradiation; the effects of corrosive environments, temperature and complex stresses on materials and components and development of processing technologies.

Facilities: High flux reactor for testing the effect of fast and thermal neutrons on materials;
Environmental testing laboratory for metals and ceramics testing at high temperature and under simulated complex industrial conditions;
Surface engineering laboratory for surface engineering using ions, lasers and electrons; advanced analysis equipment;
Cyclotron for radiation studies and isotope production, increasingly used to support surface studies.

Institute of the Environment Ispra, Italy

Speciality: indoor and outdoor pollution; environmental databases; air and water pollution, food analysis, toxicology of trace substances, impact of chemical, toxic and radioactive wastes on human health and natural environment.

Facilities: environmental analysis laboratories;
Mobile laboratories for air and water analysis in the field;
Indoortron for studies of indoor air pollution;
Pollution abatement technology for flue gas desulfurisation and denoxing.

Institute for Safety Technology Ispra, Italy

Speciality: non nuclear and nuclear industrial risk, with emphasis on thermodynamics chemistry, radiation physics and structural reliability.

Facilities: LDTF - Large dynamic testing facility for study of materials and structures under static and dynamic stresses;
Reaction wall for quasi-dynamic testing of large structures (to be built);
ETHEL, European tritium handling experimental laboratory (under construction);
LOBI and FARO - large experimental facilities for studying safety and process dynamics of nuclear plants;
PETRA, batch installation for nuclear waste treatment;
PERLA, laboratory for testing equipment and training staff for management and safeguards of fissile material.

Institute for Systems Engineering and Informatics Ispra, Italy

Speciality: reliability and performance of complex systems, major technological hazards and risk management; non nuclear energies, fusion, fissile materials, safeguards, and high risk industries. In informatics, databases, expert systems, parallel computing, mathematical modelling and telecommunications.

Facilities: ESTI- European solar testing installation for testing and calibrating photovoltaic and thermal solar components;
DLL-Diagnostics and life-time laboratory for assessment of damage and lifetime of materials using image processing, prediction models, non destructive inspection techniques and applied knowledge engineering.



Institute of Remote Sensing Applications Ispra, Italy

Speciality: application of remote sensing to land monitoring and management, marine environment and resources and agricultural statistics; testing new techniques in remote sensing.

Facilities: Remote sensing application laboratories, including image treatment using satellite data, laser fluorescence remote sensing and microwave remote sensing.

Institute for Prospective Technological Studies Ispra, Italy

Speciality: monitors state of science and technology and evaluates the potential effects of the technological choices facing Europe to enable industrialists and policy makers to assess the future impact of their decisions.

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Please send me information on R&TD activities at the JRC:

Name

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CORDIS: easy access to European Community research and funding information

Over the next four years, the European Commission will provide 5.7 billion Ecu to support European research and development projects. This funding forms part of the Third Framework Programme 1990-94 and covers areas of research as diverse as information technology and telecommunications, health research, marine science and aeronautics.

The Commission also provides other funding and support for industrial, agricultural, regional and other projects.

How can you and your firm, research centre or university begin to benefit from this help? How can you get early warning of new programmes, calls for proposals and tenders? Where can you find partners to mount European research and maximise your chances in the single European market?

The short answer is CORDIS.

CORDIS stands for Community Research and Development Information Service. It provides a single easy and instant access to a mountain of Community documents on research projects and funding. If you had it all on paper you would find yourself in a large library surrounded by shelves and shelves of volumes of the EC Official Journal, COM documents, research reports, and long listings of prototypes waiting for industrial exploitation. That would present additional problems of knowing where to look.

CORDIS makes that easier for you. CORDIS is entirely electronic and has a menu driven interface that makes it possible to find the proverbial needle in a haystack in a matter of minutes. It relies on a powerful computer's memory to find what you need, not your own!

The CORDIS service is presently offered free of charge on the Commission's ECHO host in Luxembourg. Most types of computers can be easily connected to the service via public networks. Six separate services out of a projected nine are already up and running in 1991. These are:

- *RTD-Programmes*: more than 200 records with details of all Community sponsored programmes;
- *RTD-Projects* which provides about 13,000 records on individual activities within the programmes;
- *RTD-Publications* to help you find printed sources by providing summaries and other bibliographic details of publications and documents arising out of Community RTD activities;
- *RTD-Results* giving valuable leads or hot tips on prototypes ready for industrial exploitation or areas of research which require further collaborative efforts.

Two other files will help you find your way around the European Community procedures:

- *RTD-Comdocuments* provides the text of Commission research communications, proposals and recommendations to the Council of Ministers and the European Parliament ;
- *RTD-Acronyms* explains abbreviations and acronyms such as ESPRIT, BRITE and CORDIS in the research area.

Before the end of 1991 two new services will be offered:

- *RTD-Partners* can help you find collaboration in other research centres, universities or firms for working together on European projects. Many research programmes encourage multinational research teams and this service can help in making known your requirements and finding suitable partners throughout the EC and EFTA countries.
- *RTD-News* is an online magazine with short articles ranging from early news of calls for proposals to publications and conferences.

How do you begin to read all this information? Simply fill out the coupon below and the European Commission will send instructions about how to connect your computer. When you register for the CORDIS service, you will receive full documentation about how to ask questions and retrieve information. You do not have to be an expert in computer systems.

There are two possibilities. If you have never accessed an online database before, CORDIS provides an easy-to-use menu driven system. This gives you several choices, such as listing the services offered, and you simply type in the number which seems to respond to your requirements. Then you simply type in a few key words and CORDIS will search out the document or record for you.

The ECHO host also provides access using the Command Command Language, which uses ten or more special commands. For example, when you type FIND RACE/ACR it will find what the acronym RACE stands for. ECHO provides a full range of training and seminars for those who wish to use this more expert mode. A freephone Help Desk can help with specific questions you pose in any official Community language.



To ECHO CORDIS, P O Box 2373, L-1023 Luxembourg,
Tel: +352 349811, Fax: +352 34981234

Please send me: an information pack on CORDIS
 an entry form for RTD-Partners
 an entry form for RTD-Results

Name

Organisation.....

Address

Tel Fax.....

Ted , Diane Promise Proofs, Annie Must Profit; Practitioner Monica Wins.

The significance of the above sentence can be found in the new Cordis publication *RTD acronyms*. All the words contained in the sentence are in fact names of projects or associated activities in the field of research and development. To decrypt the meaning, you can obtain your own copy of *RTD acronyms* from the Cordis office free of charge.

The 300 page publication contains true acronyms such as ESPRIT where each letter stands for a specific word (in this case European Strategic Programme for Research and Development in Information Technology) and acronyms such as SESAME, STRETCH, EURYDICE where not all the letters stand for separate words. It also contains some unpronounceable abbreviations such as ACPM, UDSCI.

Specialists in information technology and other areas of research realise that brevity in our age of information explosion has its advantages. The non specialists must take care: words like Oops or Hades may have meanings other than those that first come to mind.

Seeking partners

The European Commission's Dissemination of scientific and technical knowledge unit is asking European firms to assist in creating a new database aimed at encouraging collaborative research projects on a wide variety of subjects. All they have to do is fill out a questionnaire about their areas of competence and details of their requirements in seeking partners. The details can then be entered in the Cordis RTD-Partners database to enable match-making to be made. The more complete the information the easier a partner can be found!

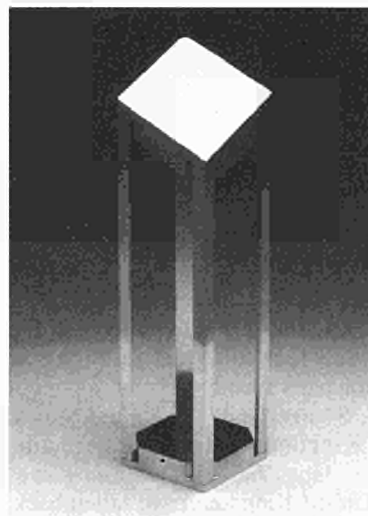
If your firm or research centre has not yet received a form in the post, please write or fax the following address.

Contact: *RTD-Partners Team*
Longman Cartmill Ltd
Technology Centre
St Andrews, Fife KY16 9EA
Tel: +44 334 77660
Fax: +44 334 77180

News on Cordis

A new Cordis file will shortly be launched to give customers the latest information about European Community research programmes and policies. RTD-News is available via the menu system and a number of help files have also been prepared.

European Community Design Prize 1992



The European Community Design Prize for 1992 will be held in Seville during Expo 1992. The Commission has signed a contract with a consortium of three companies, Action Design (Lille) EDEA (Cologne) and IFA (Seville) to organise and manage the activities. After the ceremony, an exhibition of all nominations will go on a tour of several European cities.

The Prize is aimed at encouraging good design, now considered by many sectors of industry as a vital aspect of selling products. The EC Design Prize was first awarded in 1990 in order to promote quality design within small and medium-sized industries throughout Europe, especially in sectors where the influence of design has not been explored to any great extent. This initiative, which is part of the Community's SPRINT programme, places design in the same arena as technology, innovation and research in its contribution to industrial success.

To compete for the prize, up to five companies from each EC country can be nominated by the national organizers of each Member State. An international jury will select the companies which, from their view, best illustrate the way design can be used as a management tool and which have achieved excellence in the fields of product, communication and environmental design. In addition to three prizes directly offered, an honourable mention can be awarded to a person, institution or company which has been outstanding in design-related fields.

Contact: *SPRINT EC Design Prize*
CEC, DG XIII-C/4
L-2920 Luxembourg



Japan overtakes US in R&D spending

Japan has overtaken the United States and may soon overtake Germany in terms of national resources devoted to research and development as a percentage of GDP, according to the latest figures on main science and technology indicators published by the OECD. The Organisation for Economic Cooperation and Development in its publication, *Main science and technology indicators*, classifies 24 countries by order of importance of ten indicators. Four of these relate to R&D, three relate to patents, and three to trade in high-technology.

Percentage spending on R&D is the most frequently used indicator of the role which science and technology plays in the economy. Overall scientific and technological intensity as measured by the sum of ten indicators would rank the top eight countries as: Germany, Japan, Switzerland, the United States, Sweden, France, the United Kingdom and the Netherlands. During the decade of the 1980s, Japan has climbed four places and the United States and the United Kingdom have fallen back. Of the G7 countries, Canada and Italy rank 15th and 16th in scientific intensity.

Germany has been the most consistent leader in the scientific table: it has been in the top seven of all ten indicators over the decade. Japan has improved its position for all R&D expenditure indicators and in the early 1980s was already leading in patent and trade indicators. France has pulled ahead of the United Kingdom for three of the four R&D indicators.

Contact: OECD
2 rue André Pascal
F-75775 Paris
Tel: +33 1 45 24 80 89

Cooperation with EFTA on Erasmus

At its meeting in Brussels on 23-24 September, the Council of Ministers approved the results of negotiations between the European Community and the Member States of the European Free Trade Association, EFTA, to conclude bilateral agreements for cooperation in training and education within the Erasmus programme. The agreements will be concluded after the European Parliament has given its opinion. This cooperation is foreseen to start from the academic year 1992/3. The agreements are aimed at increasing the cooperation already undertaken for the COMETT programme between EFTA and the EC.

The Council also decided on the participation of the Community in the preparatory work of the World Intellectual Property Organisation, on the negotiations for a treaty to resolve differences between Member States on intellectual property, and the conclusion of a Berne Convention on the protection of computer programmes. The Commission will participate in the name of the Community without prejudicing the participation of Member States themselves.

Productivity paradox of the 1990s

The pace of technological innovation and change has accelerated in recent decades. Economic growth has not kept pace; productivity growth has not recovered to post World War II levels.

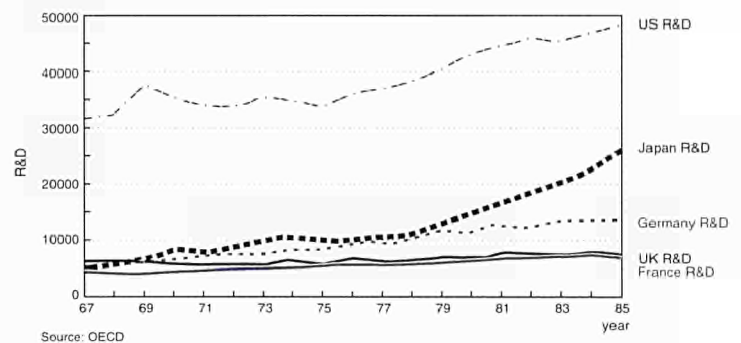
Is this due to the emergence of a new techno-economic system? Or are erroneous measurements of productivity and/or the assessment of technological change to blame? Is the unsatisfactory performance of the productive systems linked to organisational problems within firms or in inter-firm relationships as a result of the need to adapt the productive system to the new technologies?

These and other questions were tackled at a seminar organised by the OECD and now published in a 590 page volume, *Technology and Productivity, the challenge for economic policy*. It is clear, the seminar concluded, that we are living through a transition period but of a difficult to predict duration. Society as a whole, not just economic agents, needs a spirit of innovation to master this transition.

Contact: OECD
2 rue André Pascal
F-75775 Paris
Tel: +33 1 45 24 80 89

Annual R&D expenditures

Millions of 1980 U.S. dollars



Scientific and technical agreements

On 18 September 1991, the Lebanon and the European Community signed a fourth Protocol on financial and technical cooperation. In the context of the Community's renewed Mediterranean policy, the new protocol foresees a number of loans and aids, including a non reimbursable aid of 300 million Ecu for economic reforms related to structural adjustment. Projects which can be financed include agriculture, industry and services, science and technology, commerce and the environment. Practical training projects are also included especially in business and research institutions.

Researchers browse more frequently than information brokers

A survey of subscribers to *Euroabstracts*, a publication giving summaries of European Community R&D projects, indicated that three out of four researchers browsed the publication frequently and nearly a quarter occasionally. Information brokers, although constituting nearly twice as many subscribers as researchers, responded that 44% of them browsed frequently and 44% occasionally. Electronic means of checking for scientific reports, such as the Cordis database RTD-Publications, and CD-ROM represent new possibilities of potential information access.

The survey was conducted by a postal questionnaire and by telephone interviews. Even though it fell just before the summer holidays, more than twenty per cent of those asked returned a total of 371 questionnaires. Of these, 133 came from individual subscribers and 222 came from those describing themselves as information multipliers such as librarians. The UK had the highest number of readers, followed by Germany. Subscribers outside the Community represented 8% of respondents. Three main categories of work were apparent: 27% worked in an educational body or library, 20% in industry and 11% were employed within national or government administrations. More than three quarters of respondents (79%) said they were involved in EC supported research.

Main purpose: current awareness

Of individual subscribers, two thirds browsed frequently and nearly a third did so occasionally. Frequent retrospective use of *Euroabstracts* was less common: 16% against 44% who turned to it occasionally. For this group the main purpose of *Euroabstracts*, was current awareness: 95% looked at it this way. The majority of information brokers, however, used the journal for retrospective searches and 51% of researchers did so.

Further contacts

The results of reading *Euroabstracts* had slightly different manifestations among individuals and information brokers. Among individual subscribers, more than half (42%) occasionally ordered research reports mentioned, (6% frequently, 36% rarely and 16% not at all). For information multipliers 31% ordered reports occasionally, 6% frequently, 36% rarely and 28% not at all. One out of three individual subscribers (33%) occasionally contacted authors of reports cited , 3 % frequently, 40% rarely and 25% not at all.

About 70% of information multipliers considered the coverage of *Euroabstracts* adequate both as a whole and in subject areas. Two thirds found the abstracts helpful, and more than a quarter adequate. Those familiar with the *Euroabstracts* classification system expressed complete satisfaction with it, but new subscribers found some items confusing.

New technological access

Relatively few subscribers know about Cordis and the online version of *Euroabstracts*, though some expressed interest in it. As many as half of the interviewees had access to CD-ROM, mainly universities, government laboratories and major information brokers. Several respondents were very keen about the potential

for *Euroabstracts*. For others the cost of funding equipment was a major factor and smaller organisations thought it would not be cost effective for them to invest in CD-ROM at present.

Cost was also a factor in determining whether a full copy of a report should be ordered. Many people used libraries, spoke to personal contacts or had other means of obtaining free copies or further information. Only when the need was urgent, the results central to current work in hand and the cost low, was the option of ordering considered.

Almost all those who did order reports experienced no difficulty in obtaining them, one person even commenting that reports were always received within 15 days even when out of stock at the date of ordering.

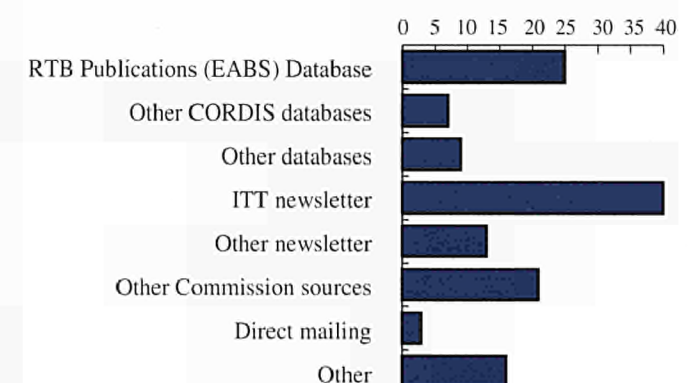
For more information about *Euroabstracts*,

contact: *Euroabstracts*
 DG XIII / C-3
 CEC
 L-2920 Luxembourg
 Fax: +352 4301 2084

Organisation Activities



Individual Subscribers: other sources of information used



Research & Technology Organisations networks selected for SPRINT support

Twenty-five projects have been selected following the call for proposals covering transnational cooperation between research and technology organisations (RTOs). The SPRINT programme hopes to be able to begin funding these projects by the end of 1991.

The RTO networks call for proposals was aimed at encouraging transnational cooperation in the areas of advanced manufacturing technologies, quality management methods, dissemination of information on new technologies, and exploitation of the results generated by the RTOs' research programmes.

Examples of successful proposals include:

- a scheme to promote the implementation of quality management systems in SMEs in the textile industry, submitted by a group of seven research organisations,
- promotion of technologies related to environmentally safe pest control for olive growers, from RTOs in Italy, Spain and Greece,
- dissemination of a concrete testing methodology, with the aim of reducing failures in concrete structures, submitted by a group of Portuguese, Belgian, Spanish and Danish partners.

Altogether SPRINT received 130 proposals. The funding necessary to support the 25 projects emerging from the evaluation procedure will be about 2.5 MECU.

Contact: *Mr D. Janssens or Mr J.R. Tiscar*
 Commission of the European Communities
 DG XIII/C-4 (SPRINT Programme)
 L-2920 Luxembourg
 Fax: (352) 4301-4544

Innovation and technology transfer in the 1990s

A major conference to discuss the issues involved in innovation and technology transfer up to the end of the century is to be organised by SPRINT in Brussels on 22-23 June 1992.

Contact: *Ms Christine Nicasi*
 Commission of the European Communities
 DG XIII/C-4 (SPRINT Programme)
 L-2920 Luxembourg
 Fax: (352) 4301-4544

Technology performance financing scheme under way

Ten financial institutions have been retained as a core group for the provision of short to medium term credit to SMEs under the SPRINT technology performance financing scheme. The aim of the scheme is to help SMEs acquire new technologies, through a tripartite collaboration involving the SME, the supplier of the technology, and a source of finance.

The ten selected financial institutions are: Allied Irish Banks (Dublin), Banco Bilbao Vizcaya (Madrid), 3i plc (Guildford, UK), Générale de Banque (Brussels), Finlombarda (Milan), Banco Espanol de Credito (Madrid), National Westminster Bank (London), Agricultural Bank of Greece (Smirni), Unibank (Copenhagen), Hellenic Industrial Development Bank (Athens).

The scheme will be able to support 250 projects, with a total of 55 MECU being available as unsecured funding for the firms supplying the technology. This funding is intended to fill the gap between the installation of the technology and the reception of payments. SPRINT will offer 5 MECU as a safety net for the banks, to cover cases where the technology does not produce the beneficial results expected.

A further eleven financial institutions, including Innolion (Paris), the Banco Espirito Santo e Comercial de Lisboa and the Banco Portugues do Atlantico, which expressed interest in experimenting with the scheme, have been retained on a second list of institutions which will participate on an ad hoc basis.

Contact: *Mr R. Miège or Mr D. Janssens*
 Commission of the European Communities
 DG XIII/C-4 (SPRINT Programme)
 L-2920 Luxembourg
 Fax: (352) 4301-4544

Implementation of 'Specific Projects'

SPRINT 'Specific Projects' are concerned with the adaptation and transfer of technologies already applied in one sector or region to another sector or region in the Community where they are not yet used. Following a call for proposals in 1989, 25 projects were selected for a definition phase involving full technical and economic feasibility studies. Twenty-four of these projects remain active. A second call in 1990 resulted in a further 23 projects being chosen for negotiation.

A series of 'hearings' is now under way to decide which of the first batch of projects should receive further support under a second, 'implementation', phase. SPRINT budgetary resources will permit support for about half of the projects, each project to receive funding typically in the range 0.5 to 1 MECU.

Contact: *Mr R. Miège or Mr A. Doronzo*
 Commission of the European Communities
 DG XIII/C-4 (SPRINT Programme)
 L-2920 Luxembourg
 Fax: (352) 4301-4544

Mid-term evaluation begins

As laid down in the Council Decision establishing the SPRINT programme, the Commission is to carry out an evaluation of the programme now that it has reached its mid-point. The evaluation, by an independent panel of experts under the chairmanship of Mr Pierre Aigrain, former French Minister for Research and Technology, will review the objectives and activities of SPRINT, and assess the results and benefits that have been achieved so far.

The report of the evaluation, expected to be completed by the middle of next year, will be transmitted to the European Parliament and to the Council of Ministers.

The members of the panel are:

- Mr Pierre Aigrain (chairman), Adviser to the Chairman of Thomson and former Minister for Research and Technology
- Professor Walter Zegfeld (secretary), Professor of Technology and Economic Development, Free University, Amsterdam, and former Managing Director, TNO Policy Research
- Dr Hans-Joachim Hass, Director for Research, Technology and Structural Policy, Bundesverband der Deutschen Industrie
- Sr. Antonio de Carvajal, Vice-President (Space activities), INISEL
- Mr Matthew Bullock, Director, Barclays Bank
- Professore Dario Martegani, University of Padua

Review panel begins assessment of VALUE programme

The panel appointed to undertake the mid-term evaluation of the VALUE programme got down to work in September and is expected to continue its review through to the end of the year. The panel's brief, set out in the Council Decision which set up the VALUE programme in 1989, is to review the programme and assess the extent to which its objectives have been achieved.

The results of this review will be sent to the European Parliament and the Council of Ministers and could include proposals for modification of the programme in the light of the experience gained so far.

Chairman of the panel is Mr W.A. de Jong, former president of the board of management of TNO, the Netherlands organisation for applied research. Other members are:

Mr P. Cordsen, International project manager at the Danish Innovation Centre

Mr C. Dambrine, of ANRT, France

Professor C. Halkias, National Technical University of Athens, Department of Electrical Engineering

Ing. M. Scortecci, Engineering and Management Consultant

Mr G. White, Coopers & Lybrand Deloitte, Head of Environmental Consultancy Services in the Management Consultancy Division

Seminar on science parks planned for 1992

The SPRINT science park consultancy scheme will be one of the main topics at a seminar to be held in Luxembourg on 5 and 6 May 1992. The future of the science park movement, and how Community programmes can support science parks, will also be on the agenda.

Contact: Mr G. Thesen
 Commission of the European Communities
 DG XIII/C-4 (SPRINT Programme)
 L-2920 Luxembourg
 Fax: (352) 4301-4544



SAVE programme launched for energy

The Council of Ministers agreed to launch a programme promoting energy efficiency on 29 October. Called SAVE, the programme with a financial envelope of 35 million Ecu will encourage both national and European actions aimed at reducing by 20% over the next 5 years the energy intensity per unit of GNP.

Four categories of financial participation are foreseen:

- a. definition of standards and technical specifications;
- b. measures supporting Member States initiatives which enlarge or create energy efficient infrastructures;
- c. measures encouraging the creation of an information network and the evaluation of action foreseen in the programme;
- d. measures undertaken to increase the efficiency of electricity use.

1991 Young Scientist awards



Barry O'DOHERTY and Daniel DUNDAS from Ireland

Fifteen awards were made to European young scientists at a ceremony held in Zürich, Switzerland on 25 September 1991. The aim of the contest, organised by the European Commission, is to encourage scientific excellence, creativity cooperation and interchange between young people and thereby contribute to the development of a genuine community of researchers in a Europe without frontiers. More than 10,000 young people took part in national young scientist award contests in all Community countries as well as Austria, Finland, Norway, Sweden and Switzerland. For the third European Community Contest this year, 69 young scientists took part, aged between 15 and 21.

To take part in the contest candidates must, either as individuals or as a team (maximum 3), present a project in one of the exact or natural sciences or technologies.

Of the projects awarded at European level, six won 5,000 Ecu Certificates of Distinction and six others 3,000 Ecu Certificates of Excellence. This year three further 3,000 Ecu COMETT awards were made in relation to the programme on Community education and training in technology and involve industrial placement. Two special prizes were also awarded in the form of visits to the United States Contest and the Nobel Award Ceremony. This year two winning projects from the United States were invited to participate in the exhibition of contestants' projects.



Sabine ZANGL and Christian TOST from Austria

Certificate of Distinction (5,000 Ecu)

Germany	Robert NITZSCHMANN (18) Development and construction of a scanning tunneling microscope
Ireland	Barry O'DOHERTY (18) Daniel DUNDAS (18) The dynamics of a two-well potential oscillator
Luxembourg	Paul HOFFMANN (20) Computer assisted text conversion to Braille
United Kingdom	Angus FILSHIE Clearway: a mucus extractor
Austria	Christian TOST (17) Sabine ZANGL (17) Catalytic converter restoration
Norway	Hans Jacob FEDER (19) Earthquakes as a self-organised critical process
Norway	Torkild JENSEN (15) Birdlife in Oslofjord

Certificate of Excellence (3,000 Ecu)

Belgium	Nicolas BOUCHE (16) Olivier VAN DER AA (16) Flight study of a micro-rocket
Germany	Axel CONRAD (18) Tanja HINDRICHS (18) Hussein MORSY (18) The knight's Hamiltonian path problem
Spain	Valerio ARNAIZ (18) José MORA (18) Alexandre GIRONES (18) Astrometria - the measurement of comet positions
Netherlands	Henk HOEKSTRA (18) Christiaan KOK (18) Oscillating systems of chemical reactions
Austria	Edwin THALLER (17) Friedrich PFLUEGELMEIER Intelligent testing probe
Switzerland	Christof TEUSCHER (19) Flavio STRAGIOTTI (19) AIOLOS II: development of a wind measuring computer system.

COMETT Prizes

Germany	Robert NITZSCHMANN (18) Development and construction of a scanning tunneling microscope
United Kingdom	Angus FILSHIE Clearway: a mucus extractor
Switzerland	Martin HAIRER (16) Electrical circuitry simulation

Luxembourg congratulates its winners

The Association of Young Scientists Luxembourg, Dr Albert Strub of the European Commission (DG XIII-C) and Luxembourg Research Minister Rene Steichen congratulated the Luxembourg winners at a reception in the Jean Monnet Building on 8 October. Besides the Prize of Distinction for the project on computer-assisted text to Braille converter for Luxembourg young scientists, Pol Hoffmann and Yann Baden, Oliver Ruppert won a consolation prize for his project.

29-31 January 1992

Advanced Technologies for Road Traction

Options for energy efficient and clean transportation systems

Rome

Co-sponsored by the US Department of Energy and by ENEA (Italy), this international conference will give an overview of the state-of-the-art and of the future of advanced technologies for road traction in private cars, vans, buses, lorries, etc. which can contribute to a cleaner environment and more efficient use of energy. The technologies which could be considered by the conference include:

- Different types of petrol and diesel engines, including more advanced concepts, control of engines and catalytic converters;
- Internal combustion engines using alternative fuels;
- Gas turbines;
- Hybrid vehicles using different types of internal combustion engines or gas turbines combined with electrical, mechanical or hydraulic transmission systems;
- Battery driven electrical vehicles;
- Fuel cell driven electrical vehicles.

These technologies will be examined in the light of factors such as:

- Potential for reduction of pollutants;
- Energy efficiency;
- Cost-effectiveness;
- Ongoing and future R&D needed to overcome technical barriers;
- Non-technical factors which promote or hinder the introduction of clean transportation technologies.

It is intended to organise an exhibition and demonstration of vehicles, materials, films, etc. in parallel with the conference.

Contact: Mr G. Hoyaux
DG XIII/E-5, SDME 3/30
200 rue de la Loi
B-1049-Brussels
Fax: (32) 2 2363024

18-20 May 1992

Patinnova '92

Lisbon

Following the success of the Patinnova '90 conference on the relationship between industrial property rights and the innovation process, DG XIII is organising a second conference on the same theme. Special attention will be given to factors of particular concern to small and medium-sized companies. The conference will be of interest not only to industrial property experts, but to all involved in the innovation process, bearing in mind that the protection of innovation will be of increasing importance in the highly competitive markets of the future.

The provisional programme includes sessions on

- The strategic value of patenting
- Protecting innovation in new industry sectors
- The strategic importance of branding in the single market
- The valuation of rights
- Enforcing your rights in Europe
- Bringing a new product to market - theory and practice
- Strategies in technology transfer
- Competition

Contact: Mr F. Liisberg
Commission of the European Communities, DG XIII/C-1
L-2920 Luxembourg
Fax: (352) 4301-2073

25-27 May 1992

Reliability, Standardization and Certification of Industrial Electric Drives

First European conference

Milan

This conference, organised by the Italian National Association for Electric Drives (ANAE) with the support of the Commission of the European Communities and of the University of L'Aquila, will include

state-of-the-art papers by representatives from EC standard bureaux and from central and eastern Europe, Japan and the USA. Submitted papers are also welcome.

Contact: RASIED
c/o ANAE, Ist. Piero Pirelli, V. le F.
Testi 223, Milano, Italy.
Fax: (392) 64429213

22-23 June 1992

Innovation and Technology Transfer in the 1990s

Brussels

A major conference organised by the SPRINT programme to discuss the issues involved in innovation and technology transfer through to the end of the century, and to present some of the achievements of SPRINT. The conference will be of interest to decision makers and to all participants in the innovation and technology transfer process. (Please note the new date of this conference: due to postponement, the date given in the previous issue of Innovation and Technology Transfer is no longer correct.)

Contact: Ms Christine Nicasi
Commission of the European Communities, DG XIII/C-4
(SPRINT Programme)
L-2920 Luxembourg
Fax: (352) 4301-4544

14-17 September 1992

Underwater Acoustics

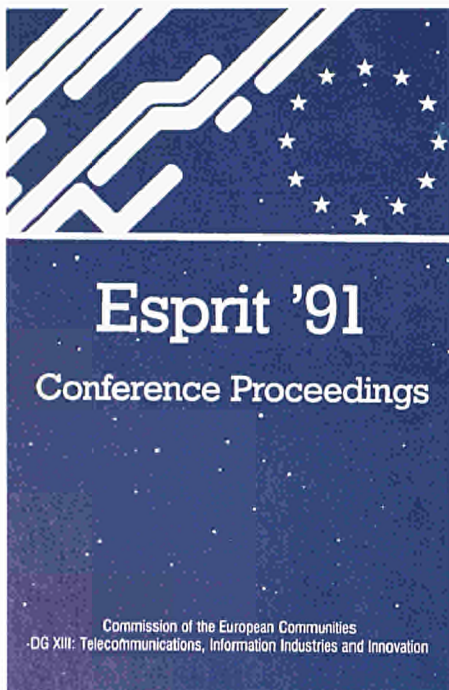
Luxembourg

Lectures, papers and posters on: acoustical oceanography, propagation, imaging, acquisition and processing of data, wide-band signal processing, noise, reverberation, scattering, Arctic and Antarctic acoustics, large scale models, shipboard noise reduction, use of sonar in fisheries, acoustics in marine geology and geophysics, transducers and instrumentation, etc.

Contact: Commission of the European Communities, DG XII/E
(MAST Programme)
Conference Secretariat - SDME 3/46
200 rue de la Loi
B-1049 Brussels

ESPRIT '91

Proceedings of the Annual ESPRIT Conference, Brussels, 25-29 November 1991



EUR 13853 EN 892 pp
ECU 65 ISBN 92-826-2905-8

Presents the latest results obtained in the European strategic programme for R&D in information technologies (ESPRIT), in particular in the areas of microelectronics, information processing systems, business and home systems, peripheral technologies and industrial applications (CIM).

Available from:

Office for Official Publications of the European Communities,
2, rue Mercier,
L-2985 Luxembourg

AUTOMATIC ELECTRONIC IDENTIFICATION SYSTEMS FOR FARM ANIMALS

Edited by E. Lambooj

EUR 13198 EN vi + 139 pp
ECU 11.25 ISBN 92-826-0526-4
English

Techniques for identifying individual farm animals are important for Community

trade, and also at the level of each herd and the national herd. The methods used should be reliable, ethically acceptable, cost effective, and standardised across the Community. This book considers in detail the use of transponders, consisting of a microchip and a passive transmitter, to be injected into the animal, and this method is shown to be a potential solution. The book is based on the proceedings of a conference held under the EC coordination of agricultural research programme, and as well as 19 papers looking at various aspects of identification systems it also includes a summary of the discussions and recommendations.

Available from:

Office for Official Publications of the European Communities,
2, rue Mercier,
L-2985 Luxembourg

PATENTS AS INDICATORS OF THE UTILITY OF EUROPEAN COMMUNITY R&D PROGRAMMES

U. Schmoeh et al.

EUR 13661 EN 236 pp
18.75 ECU ISBN 92-826-2689-X
English

This report, produced by the Fraunhofer Institute for Systems and Innovation Research, Karlsruhe, under a contract as part of the EC's MONITOR/ SPEAR programme of research evaluation, looks at the use of patent applications as a means of evaluating EC research programmes. The report includes a review of the literature on the use of patents as an evaluation tool, and the results of sample exercises involving an examination of patent data from parts of three EC programmes:

- Medical and Health Research (AIDS, cancer and radioprotection)
- BRITE (laser-working, membranes)
- Biotechnology (agro-related).

Available from:

Office for Official Publications of the European Communities,
2, rue Mercier,
L-2985 Luxembourg

THE EUROPEAN OIL AND GAS CONFERENCE

A Multidisciplinary Approach in Exploration and Production R&D

Edited by G. Imarisio, M. Frias, J.M. Bemtgen

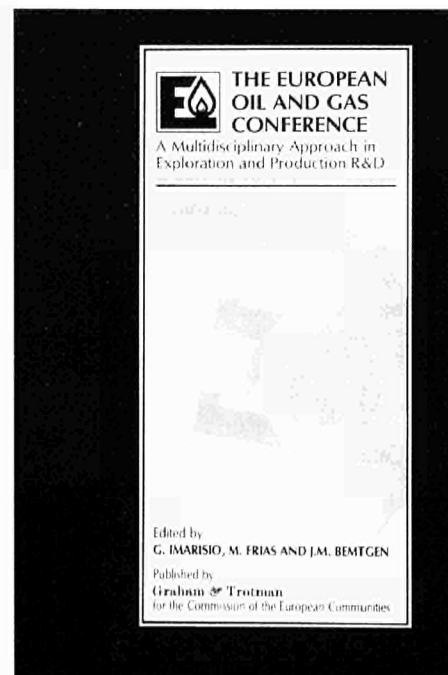
EUR 13793 EN 618 pp
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English

This volume, based on a conference organised as part of the EC non-nuclear energy programme, gives an up-to-date overview of European research in hydrocarbon exploration and exploitation. It includes sections on well production and drilling (2 papers), natural gas (2 papers), geosciences (23 papers), operations (7 papers), mechanics and new materials (23 papers), information processing (15 papers), and conversion of natural gas-to-liquids (8 papers).

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THE COMMUNITY OF TWELVE AND DRUG DEMAND. COMPARATIVE STUDY OF LEGISLATION AND JUDICIAL PRACTICE

L'EUROPE DES DOUZE FACE A LA DEMANDE DE STUPEFIANTS. ETUDE COMPARATIVE DES LEGISLATIONS ET DES PRATIQUES JUDICIAIRES

B. Leroy

EUR 13447 EN/FR vi + 181 pp
ECU 15 ISBN 92-826-0594-9
Complete text in English and French in one volume

This report presents an overview and analysis of legislation and judicial practice in the 12 EC Member States. As the author, Bernard Leroy, Legal Adviser in the United Nations Division of Narcotic Drugs, states in his introduction: "...the need for concerted European action on drugs is becoming ever more pressing. The discrepancies between national laws mean certain aspects of legislation must be coordinated if real European cooperation in this field is to be achieved. It is also true, however, that the existence of so many different approaches to the fight against drugs can be seen as a positive sign, offering a variety of solutions."

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EUROCAT REGISTRY DESCRIPTIONS 1979-90

Edited by H. Dolk, S. Goyens, M.F. Lechat

EUR 13615 EN iv + 108 pp
ECU 8.75 ISBN 92-826-2755-1
English

The European Registration of Congenital Anomalies and Twins (EUROCAT) is a data collection system set up as a concerted action under the EC medical research programme. Its aim is to provide epidemiological information, to monitor trends, and to help evaluate the impact of programmes of diagnosis and prevention. This publication gives details of 22 EUROCAT registries, including population coverage, services available in the area, methods of data

collection, and organisation of the registry. It should aid in the interpretation of data in EUROCAT reports, and will be a help to those who might be setting up new registration systems.

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CONTROL OF EMISSIONS OF VOLATILE ORGANIC COMPOUNDS FROM THE LARGE-SCALE VARNISHING OF CAR BODIES

E.K. Macdonald, I.T. Marlowe, M.J. Woodfield

EUR 13568 EN x + 95 pp
ECU 8.75 ISBN 92-826-2867-1
English

This document outlines the need for a directive to control the emission of volatile organic compounds (VOCs) from works where the large-scale painting of automobiles is performed. It includes a description of the industrial sector and its importance to the European economy and a review of the European legislation relevant to VOC emissions. The bulk of the report is taken up with a technical description of the processes which give rise to VOC emissions, a discussion of where and how these emissions arise, and how they can be minimized by using appropriate paint application techniques, paint formulations, and efficient abatement technology. Finally, the report discusses possible strategies for emission control and makes recommendations for a directive which would harmonize legislation throughout the Community.

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STRESS CORROSION CRACKING AND CORROSION FATIGUE OF STEAM-TURBINE ROTOR AND BLADE MATERIALS

M. O. Speidel, J. Denk, B. Scarlin

edited by J. B. Marriott

EUR 13186 EN v + 65 pp
ECU 6.25 ISBN 92-826-2017-4
English

Research on high temperature materials which are critical for the safe and efficient operation of power equipment has been an important feature of COST concerted action programmes for the last eighteen years. In recent years specific attention has been focused on 'Materials for steam turbines' COST 505.

One of the coordination groups studied features involved in the fields of stress corrosion and corrosion fatigue attack which are very important considerations for rotating components in the low pressure cylinders of a steam turbine. They also characterised a newly developed steel and considered its suitability for use as steam turbine blades in this part of the machine.

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Further refinements and improvements will be made over the coming months in order to produce an upgraded version for the April 1992 Seville Universal Exhibition. This will contain a selection of projects including individual activities, contracts and studies within these programmes, results and prototypes arising from these projects and suitable partners for the submission of proposals. Multimedia versions are also being considered.

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