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# NEWSLETTER new technologies and innovation policy



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#### Stop press:

## Commission proposes a programme for the dissemination and utilization of results of research in science and technology

While the quality of European science is universally recognized, Europe's ability to promote economic growth by translating the results of its science and technology into new or improved goods, processes and services, has in recent years given rise to concern.

Within the overall context of the Framework Programme for Community Research and Technological Development (1987-91) adopted on 28/9/87, the Commission has just transmitted to the European Parliament, the Council and the Economic and Social Committee its proposal for a 'specific programme' to address this crucial problem. In doing so the Commission is exercising responsibilities conferred on the Community by the Single European Act to 'disseminate and optimize the results of activities in Community research, technological development and demonstration' in a manner 'complementing the activities carried out in the Member States'. The proposed specific programme for the dissemination and utilization of results from research in science and technology, prepared under the authority of Vice-President Narjes, is intended to run for four years starting on 30 June 1988, to have a budget of 38 million ECU and to include two sub-programmes. Sub-programme I 'General measures for the dissemination of the results of Community R&D programmes' will cover both results from the JRC and the arising from Community shared-cost R&D contracts.

The objective of sub-programme II 'Computer communications networks' is to contribute to the creation of a common integrated computer communications infrastructure and associated services, accessible to the various public and private research centres in Europe'.

More information on this Commission proposal will be given in Newsletter No. 60.

This Newsletter is issued by Directorate XIII – C, Exploitation of research and technological development, technology transfer and innovation, in Directorate-General 'Telecommunications, Information Industries and Innovation' of the Commission of the European Communities. For more information about its contents please write, including the address label with all your correspondence, to:

Commission of the European Communities DG XIII – C L-2920 Luxembourg

## I. LARGE-SCALE DISSEMINATION OF INFORMATION ON INNOVATION AND R&D RESULTS:

## One year of cooperation between industrial research associations under the SPRINT Programme.

It is one of the principal objectives of the SPRINT Programme to foster transnational European Cooperation in the field of innovation.

Under the various Commission research programmes the industrial research associations in the Member States have in recent years been brought together for joint research projects.

However, it was also realized that there was a strong need for transnational cooperation to pool knowledge of new R&D results and for its large-scale dissemination to industry at European level.

Industrial research associations usually play an important part in the innovation and modernization process in their sector.

However, the research associations in the individual countries, although aware of the potential value of cooperation with their European counterparts, especially in the area of innovation, technology transfer and modernization, have not yet fully exploited the benefits and possibilities of such cooperation.

The Commission has therefore launched, within the context of SPRINT, a sub-programme inviting industrial research associations, located in different Member

With the support of the SPRINT programme, five research centres specializing in building techniques and

possessing expert knowledge of their national markets

have developed a decision-making aid known as DIE, in-

tended for firms or managers in the building trade wishing to **launch a new product or process** on the markets

of one or more of the partner states in the SPRINT sub-

Centre Scientifique et Technique du Bâtiment

Istituto Cooperativo per l'Innovazione (ICIE), Italy

• Instituto Eduardo Torroja de la Construcción y del

Laboratório Nacional de Engenharia Civil (LNEC),

Centre Scientifique et Technique de la Construction

The research centres concerned are:

SPRINT and the building sector in Europe

The standard content of a DIE is as follows:

#### 1. General evaluation

industrial sector, etc.

associations.

Novelty and potential of the product or process on the target market.

States but serving the same sector, to pool their know-

how and the information in their possession and to use these 'pooled' resources to more effectively help the

firms in their sectors innovate and modernize and so re-

main competitive in national and international markets.

In 1987 sixteen such projects involving a total of 75 industrial research associations from all over the Com-

munity and from a range of 'traditional' as well as 'mod-

ern' sectors - ceramics, composite materials, con-

struction, paint, engineering services, shoes, textiles,

welding, wood, etc. - participated in the programme.

The work programmes of these sixteen projects, while

dealing with dissemination of (technical) information

and new technologies, were quite diverse and involved,

for example, the establishment of a European newsletter system, the establishment of a European tech-

nological consultancy service, the establishment of a

European 'innovation diagnosis', comparative cost-be-

nefit analysis of CAD programmes used in a particular

The article below gives an example of such a transna-

tional cooperation project between industrial research

#### 2. Strengths and weaknesses

These are assessed primarily in terms of reference factors in the target market (e.g. design of buildings and structures, climate, building regulations, etc.).

#### 3. Launch on the market

Where possible, essential or desirable improvements and changes are indicated, together with the names of technical organizations able to offer guidance.

To summarize, the DIE helps to answer the following question:

#### Could this product be launched on the target market?

If the answer is positive, the DIE will provide a solid basis for:

- identifying and implementing the technical options;
- analysing the target market (demand, competition) and choosing the method of introduction, based on the technical features of the product assessed in the light of the peculiarities of the market.

This is an example of successful collaboration between research centres in the building and construction sector, initiated by the SPRINT programme.

For further information on the DIE, please contact one of the research centres listed above or:

Mr José R. Tiscar

Commission of the European Communities, DG XIII/C-1 Jean Monnet Building B4/105

L-2920 LUXEMBOURG

Tel. (352) 4301-4102

• Building Research Establishment (BRE), United Kingdom

Three new partners are to join the programme in 1988 to

disseminate the DIE system amongst firms in their

- The Irish Science and Technology Agency (EOLAS), Ireland
- Instituut TNO, Netherlands

sidy contract.

Portugal

countries:

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(CSTB), France

(CSTC), Belgium

Cemento (IETCC), Spain

The DIE (DIAGNOSTIC INNOVATION EUROPEEN) system enables users to:

- assess the advantages, drawbacks and risks of a technical project in each of the target countries;
- identify any appropriate improvements and technical changes and the steps involved.

## Other projects on transnational cooperation between industry-linked research associations under the SPRINT Programme:

Sector	PARTICIPANTS	AIMS OF PROJECT	WORK PROGRAMME
Welding	<ul> <li>Institut Belge de la Soudure (B)</li> <li>Svejscentralen (DK)</li> <li>Institut de Soudure (F)</li> <li>Deutscher Verband für Schweißtechnik (D)</li> <li>The Welding Institute for In- dustrial Research and Stan- dards (UK)</li> <li>Institute for Industrial Re- search and Standards (IRL)</li> <li>Istituto Italiano della Salda- tura (I)</li> <li>Stichting Centrum voor Las- techniek — TNO (NL)</li> <li>Instituto de Soldadura e Qualidade (P)</li> <li>Asociación Española para el Desarrollo (E)</li> </ul>	To enhance exploitation by European industry, especially SMEs, of the (recent) advances in welding technology made by re- search and development orga- nizations both inside and outside Europe	<ol> <li>Establishing means of interfacing with SMEs in welding and allied technologies: analysis of services provided to SMEs, links with SME organizations, identification of unfulfilled needs.</li> <li>Development of collaboration in the area of education and qualifications in new and advanced welding and allied technologies (e.g. welding with robots, laser beam welding, joining of new metals) including quality assurance systems.</li> <li>Installation of a network information service on regulations concerning welded fabrication (e.g. reference scheme for materials, procedures, qualifications and certification of personnel, list of authorized organizations responsible for cross-testing of products).</li> <li>Development of a newsletter to keep SMEs informed about joining technology (e.g. practical data sheets, health and safety regulations, changed or new standards, environmental precautions).</li> </ol>
Wood	<ul> <li>Centre Technique de l'In- dustrie du Bois (B)</li> <li>Centre Régional de l'Innova- tion et du Transfert de Tech- nologie pour les Industries du Bois (F)</li> <li>Institute for Industrial Re- search and Standards (IRL)</li> <li>Istituto per la Tecnologia del Legno (I)</li> <li>Houtinstituut TNO (NL)</li> <li>Instituto dos Productos Flo- restales (P)</li> <li>Fraunhofer Institut für Holzfor- schung (Wilhelm-Klauditz-In- stitut) (D)</li> <li>Timber Research and Develop- ment Association (UK)</li> </ul>	<ol> <li>To foster the application of new technologies in the wood sector</li> <li>To exploit the results of Com- munity R&amp;D with respect to wood</li> <li>To inform enterprises in the wood sector of Community ac- tivities and projects with a view to improving their competitivity</li> </ol>	<ol> <li>Publication of a regular newsletter containing:         <ul> <li>a) technical information of general interest to SMEs all over Europe;</li> <li>b) results of R&amp;D projects including those co-financed by the Community</li> </ul> </li> <li>Organization of at least three international seminars on technical subjects of general interest.</li> </ol>
Shoes	<ul> <li>Instituto Español del Calzado y Conexas (ES)</li> <li>Prüf- und Forschungsinstitut für die Schuhherstellung (D)</li> <li>Centre Technique Cuir Chaus- sure Maroquinerie (F)</li> <li>SATRA Footwear Technology Centre (UK)</li> <li>Quality Control Laboratory Leathers and Shoes Ltd (GR)</li> <li>Laboratório Apiccaps/Ispmei (P)</li> </ul>	To increase the introduction and application by SMEs of new tech- nologies, in particular CAD/CAM, in the European footwear in- dustries	<ol> <li>Information exchange between partners with respect to the ap- plication of CAD/CAM systems in the shoe sector in their coun- try.</li> <li>Technical evaluation of the effectiveness of existing CAD/CAM systems in process- ing standard pattern styles.</li> <li>Dissemination of results of the evaluation (through video, training course, reports, etc.).</li> </ol>

## **II. COMMUNITY R&D RESULTS**

Under this section the Newsletter 'New Technologies and Innovation policy' reports regularly on recent innovations stemming from Community-funded research.

### 1. Real-time monitoring of ammonia concentrations in industrial waste water

Continuous monitoring of plant parameters provides a means of efficient process control whilst maintaining environmental pollutants within 'consent to discharge' limits.

The instrument developed by British Steel Corporation as a result of a European Coal and Steel Community research and development programme has been employed in the Corporation's coking plants to monitor ammonia levels of treated coke-oven waste liquors. The device, which was designed specifically to withstand the aggressive liquors and hostile environment associated with coke-making procedures, has operated successfully for the past four years.

A measurement system, based on the creation of a dynamic equilibrium between sample and reagents within a temperature-controlled cell, indicates changes in ammonia concentrations utilizing an ion-selective membrane probe. A constant supply of sample is maintained via a four-channel peristaltic pump and externally mounted filtration unit. Weekly calibration ensures an accuracy of  $\pm$  10 % over the operating range of 0-1 000 ppm ammonia.

The probe output is fed to a microprocessor which drives the data-handling facilities. Included as standard items are a digital display of concentration and a chart recorder.

The system can be purchased from the licensee:

Morgan Moore Engineering Ltd Pennine House 48, West Street **UK-Middlesbrough Cleveland TS 2 1LZ** Tel.: (642) 21 81 71 Telex: 58 73 62 MOORE G



Device for monitoring ammonia concentrations in industrial waste water



#### 2. E-coliform counter: automatic device for measuring the concentration of coliform bacteria in water

There is an urgent need, for example on the part of river authorities, for rapid tests of the microbiological quality of water. The E-coliform counter is an automatic device for industrial use which measures the concentration of a class of germs, coliform bacteria, associated with faecal contamination. The procedure involves:

- the injection of the sample to be tested into a culture medium specially favouring the growth of coliform bacteria;
- (ii) recording of the length of time before changes in the culture medium can be measured electrochemically;
- (iii) calculation of the initial population as a function of this time lag.

It provides a particularly efficient way of monitoring the performance of water disinfection plants, testing the quality of tap water, detecting contamination in distribution networks and monitoring the quality of industrial water and water used for growing shellfish.

Advantages include:

- (i) enumeration of coliform bacteria with reference to a standard;
- (ii) very short response times (less than 10 hours) compared to classical bacteriological methods, thanks to the use of an improved culture medium;
- (iii) decrease in response time for higher initial concentrations: massive contamination can be detected in 3-4 hours;
- (iv) totally automatic operation needing servicing only every second month;
- (v) microprocessor control of several measuring cells.

This patented device was invented by Mr F. Colin of the Institut de recherches hydrologiques, Nancy (France).

It may be purchased from:

SOBEA 280, avenue Napoléon-Bonaparte **F-92500 Rueil Malmaison** Tel.: (1) 7 49 03 30 Telex: Ruent 203978



The E-coliform counter developed by the Institut de recherches hydrologiques in Nancy.







Ausgestellte Erfindungen aus der Forschung der Europäischen Gemeinschaft

> Inventions from European Community research to be exhibited

> > Frankfurt am Main

5. — 11. Juni 1988

Halle 2

Stand P9 - P15

1	Sauerstoffanalysator — Modell 6300 Oxygen analyser — Model 6300
2	Neues Verfahren der Synthese heterozyklischer Verbindungen New process for the synthesis of heterocyclic compounds
3	Rauchgasentschwefelungsprozeß "Ispra Mark 13A" Ispra Mark 13A flue gas desulphurization process
4	Gerät zur automatischen Herstellung von perlförmigen Proben für die Röntgenfluoreszenzanalyse PERL'X-2® PERL'X-2® automatic sample maker for X-ray fluorescence analysis
5	Echtzeitüberwachung der Ammoniakkonzentration in Industrieabwässern Real-time monitoring of ammonia concentrations in industrial waste water
6	Crystal: ProzeBrechnersystem für das Brauen von Bier Crystal: data processing system for brewing beer
7	Gasgesteuerter Hochtemperatur-Präzisions-Wärmerohrofen ISOPIPE® ISOPIPE® high-temperature high-precision gas-controlled heat pipe furnace
8	Automatisches Durchlaufgerät zur physikalisch-chemischen Analyse von Flüssigkeiten Automatic continuous-flow physiochemical analyser for liquids
9	Meßgerät für flüchtige organische Lösungsmittel in Wasser Device for measuring volatile organic solvents in water
10	Automatisches Nachweis- und Zählgerät für Kolibakterien in Wasser Automatic detector and counter for coliform bacteria in water

## **III. INDUSTRIAL PROPERTY RIGHTS AND INNOVATION**

### 1. Patent applications recently published

The Patent Applications shown in this section concern inventions resulting from EC-funded or from cost-shared EC contract research

#### a. TRANSFER DEVICE FOR GLOVEBOXES

#### Inventor: H.M. STUTZ

#### Ref.: EUR Pat 2179

Gloveboxes are used for manipulating objects contaminated by chemicals or radioactivity. Previously, an object transferred from one glovebox to another was sealed in a gas tight plastic bag into which it was put through a bagging port at the moment of leaving the air lock of the first glovebox. This method did not prevent contamination of the plastic bag's outer surface.

The new transfer device avoids the time-consuming sealing process, and it can even be applied to gloveboxes already contaminated.

A transportable cylindrical container (5) can be locked in a tubular entry port (6) fixed on the side of the glovebox. An inner cover (17) seals the lock port against the inside of the glove box, and an outer cover (12), coupled with the inner one, closes the lock container. The space between both covers is tightened by a seal. Locking discs (28, 34) and bolts (25, 32) prevent erroneous manipulation.



#### b. MICROWAVE CALORIMETER

#### Inventors: P.P. SCHUELLER, R. WILHELM

#### Ref.: EUR Pat 2190

Compared to existing models, this new microwave calorimeter for very high rates of microwave radiation is able to absorb microwaves more uniformly at a larger absorbing chamber volume. It uses chemical compounds instead of water, thus excluding the formation of heat-induced bubbles in the absorbing liquid.

The stainless steel cylinder (10) contains a microwave feeding chamber (22) connected to a wave guide (26) and an absorption chamber (24) separated from the feeding chamber by a dielectric wall (20). The liquid (38) flowing through the absorption chamber consists in part of a compound which does not absorb the microwaves as readily as water (e.g. octanol, liquid alcohol with at least six carbon atoms, or a liquid containing silicon oil). By mixing octanol with other more or less absorbent liquids, the absorption length of the microwave frequency and/or wavelength can be adjusted to the respective dimensions of the absorption chamber.



#### Inventors: P.G. SCHUELLER, G. WILHELM

#### Ref.: EUR Pat 2189

This low-reflectance absorber for microwaves, in particular millimetre waves, consists of a hollow chamber made of microwave-absorbent material (e.g. fireclay) which is surrounded by a cylindrical stainless steel protective housing. A cylindrical wave guide (104) protrudes coaxially into the hollow chamber. A cylindrically-symmetric metal reflector (105), forms the closing element; due to its shape, it is able to respond to the oscillation mode of the microwave radiation to be absorbed. The microwaves enter through the wave guide and are reflected from the reflector surface onto the absorber (101). The flowing coolant conducts the absorbed microwave energy away from the absorber through an inlet (106) and an outlet (108) in the wall of the housing. The invention is particularly interesting within the scope of high-frequency, high-power generator operation.



#### d. HOT CATHODE IONIZATION MANOMETER

#### Inventor: G. HAAS

#### Ref.: EUR Pat 2205

Hot cathode ionization manometers are used for measuring the neutral gas density in the presence of strong magnetic fields at a high noise background. The new manometer is able to measure densities in the range from 10" to 10"m<sup>a</sup> occurring, for example, in fusionoriented plasma experiments. Its high sensivity depends on the magnetic field strength but remains practically unaffected by the field direction or gas density.

A box-shaped plasma shield (18) with a gas inlet opening (20) contains four electrodes arranged in parallel, i.e.: a cathode (10), consisting of a tungsten wire, at least 0.5 mm thick, and a middle active portion (10a); a planar diaphragm-shaped control electrode (12) with an elongated opening in alignment with the active portion of the cathode; a planar accelerating electrode (14) with a series of parallel slit-shaped apertures extending perpendicularly to the longitudinal direction of the active cathode portion; and a planar plate-shaped ion collector electrode (16).



#### Further information on the publications above can be obtained from:

Commission of the European Communities Directorate-General XIII/C/1 Attn.: Ms L. Gerlach (JMO B4/068) L-2920 Luxembourg Tel.: (352) 4301-2922 Telex: 3423/3446 COMEUR LU

## 2. How patent systems actually work

## Two major international studies to improve knowledge of patent economics, launched by the Commission of the EC

by André Bouju, European Patent Attorney (Paris), Professor CEIPI and ESE

Roughly 1 300 000 patents are applied for each year in the world. Why?

The patent systems have two essential functions:

- to disseminate technical information
- to act as an incentive to invest time and money in the research and development of new patentable technology.

This second function is important for progress in innovation within the European Community.

However, the efficiency of any patent system in this respect basically depends on the strength of the temporary exclusive rights granted by the patent law, since if these rights are violated, for instance by a competitor, the patent holder must go to court and sue for infringement.

At the end of the legal battle, if the patent is deemed valid and infringed, the patent holder can obtain compensatory damages and an injunction compelling the infringer to stop the infringements.

This economic power in the hands of the patent holder can be exercised in any country where he owns a patent.

Patents can thus be an effective tool in managing the exploitation of a new technology on a worldwide scale.

In the case of infringement, however, the manager concerned will be faced with several highly pertinent questions:

- How complicated will the legal action be?
- How long will it last?
- How many patent specialists will be involved?

and above all:

— How much will it cost?

Such questions are of limited theoretical interest for patent law, but they are in fact decisive for the effectiveness and even the utility of any patent system.

Until a recent study entrusted to me by DG XIII was completed, it was practically impossible to answer such questions. Above all, comparisons between different countries, even those of the EEC, were extremely difficult.

It is a unique quality of this international survey, which has been accomplished with the valuable participation of eminent patent specialists in 18 countries, that the answers to the above questions are presented in a uniform fashion and as clearly as possible.

Diagrams (flow sheets) have been prepared, summarizing for each country the sequence of steps in litigation, and the associated costs involved are listed on standard charts.

Sample of the standard charts

#### Summary of patent infringement costs

FRANCE

	Patent attorney		Barristers		Bailiff	+ experts		Cumulated	
	Min	Max	Min	Max	Min	Max	Min	Average	Max
1 BEFORE TGI Stage A	3,100	4,300	550	600	450	700			
Stage B	3,100	5,100	3,400	5,100	• 90	300			
Stage C	3,100	6,000	2,600	5.100	1,400 90	6,000 300			
Stage D	2,100	3,400	2,100	4,300	1,500 2,100	4,300 3,400			
Sub-total 1	11,400	18,800	8,650	15,100	5,630	15,000	25,680	37,290	48.900
2 BEFORE COURT OF APPEAL	3,100	6,000	600 2,600	800 6,000	1,500 90	4,300 300			
Sub-total 1 + 2	14,500	24,800	11,850	21,900	7,220	19,600	33,570	49,935	66.300
3 BEFORE SUPREME COURT	300	550	3,400	6,000					
Sub-total 1 + 2 + 3	14,800	25,350	15,250	27,900	7,220	19,600	37,270	55,060	72,850

Such a study, the first of its kind to our knowledge, would appear to be an invaluable tool for all people concerned with patent infringement cases.

To enable the public to benefit from this information, DG XIII has authorized the publication of the survey by

Messrs LONGMAN of London (see advertisement). Its title is: PATENT INFRINGEMENT LITIGATION COSTS.

Also commissioned by DG XIII, the same author has produced a second international survey on PATENT IN-FRINGEMENT PENALTIES. This study will also be published, and will be useful, I hope, to all people technically, economically or legally concerned with inventions and their protection.

The main lesson of this second survey, however, is the lack of precise rules within most national patent laws in the world as to the calculation of the damages due to the victim of a patent infringement. As its conclusion, therefore, the second survey contains proposals for a new, dynamic and universal (or at least European) patent infringement penalties system.

These two studies are an important contribution to a new field of knowledge:

'The econometry of the patent system'



## **PATENT INFRINGEMENT LITIGATION COSTS:** A Practical Worldwide Survey

#### The Editor: André Bouju, Professor of Patent Law (CEIPI), European Patent and Trademark Attorney with contributors from 18 countries

**C**ommissioned by the EEC, this practical worldwide survey on patent infringement litigation gives you essential information on costs incurred by the patent owner when suing an - infringer.

#### Immediate evaluation

Designed to enable you to make an immediate evaluation of the costs and duration of an infringement suit, it demonstrates how to assess the economic advantages of initiating such an action and budget for future fees.

#### Country-by-Country

Each individual country is covered in a separate chapter, which starts with a general survey on the basic rules of the infringement suit. It goes on to examine the important roles of the individuals acting on behalf of the plaintiff (or defendant) in the proceedings.

A study of the costs of patent infringement in 18 different countries, this book analyses the

different steps of patent litigation procedure and the costs involved at each stage.

Unique tables summarise the calculation of the costs and helpful flow charts illustrate the infringement suit procedure.

#### Easy to use

With charts to clarify this complex and often costly area of the law, this international survey enables you to make country by country comparisons of costs that can be incurred by you or your client.

#### About the editor

Andre Bouju, Professor of Patent Law, is both a European Patent Attorney and Patent & Trademark Attorney. With extensive international experience, he has written many successful books on different aspects of patent law.

November 1987

PATENT INFRINGEMENT 085121 3243

LONGMAN GROUP UK LTD FREEPOST LONDON WC1N 3BR

### 3. Publications of the Commission on industrial property.

The patent section of DG XIII-C not only files patents from Community or Commission-funded R&D but also issues publications on industrial property. In this context, particular importance is attached to patent information and innovation in their transnational context. Some of these publications are listed below:

- 1) Protection par les brevets et innovation Réunion d'experts le 3 et 4 novembre 1982 Commission des Communautés Européennes, DG XIII
- 2) Direct Protection of Innovation Kluwer Academic Publishers William Kingston (editor)
- 3) A Novelty Grace Period for Patent Applications: Its Legal and Practical Consequences Prof. Mogens Koktvedgaard and Lise Østerborg

Commission of the European Communities, 1984

- 4) Technology Pattern in the EEC Commission of the European Communities 1977 — EUR 5530 e
- 5) Trends in the Filing of Patent Applications in Germany/The Federal Republic of Germany between 1877 and 1980 Commission of the European Communities Report — EUR 7872 EN

- 6) Analyse und Interpretation der technischen Dynamik der letzten 100 Jahre auf der Basis der deutschen Patentstatistik Kommission der Europäischen Gemeinschaften Bericht — EUR 8645 DE-EN
- 7) Trends in Patent Filing Activities in the EEC A contribution to the study and assessment of the technological trends developing in the EEC from 1969 to 1980, based on a statistical analysis of patents Commission of the European Communities Report — EUR 9735 EN
- 8) Patent Information and Documentation in Western Europe Commission of the European Communities An Inventory of Services available to the Public Third Edition — Edited by Brenda M. Rimmer K.G. Saur, EUR 6614 (1988 Edition)

12

Gutachten, erstellt im Auftrag der Kommis- sion der Europäischen Gemeinschaften IFO-Institut für Wirtschaftsforschung, No- vember 1976	systems Commission of the European C Report — 1987 — EUR 11326 El
<ol> <li>Möglichkeiten für eine inhaltserschließende Indexierung der Patentliteratur Studie für die Kommission der Europäischen Gemeinschaften Bearbeiter: Dr. B. Starkloff, Dr. H. Geschka, H. Emme Batelle-Institut e.V. Frankfurt/Main, BF-R- 62 979-1</li> </ol>	<ul> <li>19) The significance of the novelty for non-industrial research in th the European Economic Comm J. Straus — Max Planck an Ins eign and International Patent L. Commission of the European C Report, 1988, EUR 11271 EN</li> <li>20) One contum of technical programmeters.</li> </ul>
<ul> <li>11) Investigation of the present and future use of patent literature</li> <li>Commission of the European Communities, 1978, EUR 5952 EN</li> </ul>	an analysis of German patent s J. Slama — Osteuropa-Institut Information management Commission of the European C Boport 1987 EUR 11044 EN
12) Towards a European Infrastructure for Tech- nology Transfer Pilot study prepared by The Danish Invention Center Copenhagen under contract to the Commission of the European Communities, October 1983	21) The stimulation of economic ad enterprise through the provisio and commercial information Centre for Urban and Regional Studies University of Newcastle upon T
<ul> <li>13) Survey of readership in public patent libraries</li> <li>Commission of the European Communities</li> <li>1977, EUR 5831 d/e/f</li> </ul>	October 1983 22) Patent Infringement Litigatior Practical Worldwide Survey
14) Parameters for the establishment or exten- sion of regional public patent information and documentation centres E. Thomsen	Commission of the European and André Bouju Longman Group UK Limited, 19 ISBN O 85121 324 3
<ul> <li>15) Erstellung einer Strukturanalyse des Europa- patentgestützten Technologietransfers</li> <li>IFO-Institut für Wirtschaftsforschung</li> <li>Mönghon, Dezember 1096</li> </ul>	23) Study on Patent Infringement F Commission of the European and André Bouju (soon to be published)
<ul> <li>16) The Conception of Industrial Innovation In- quiries in the European Communities IFO-Institut für Wirtschaftsforschung Munich, November 1983</li> </ul>	<ul> <li>24) Patent Portfolio — Methode des strategischen Patentmana Prof. Dr. Werner Pfeiffer, Lehrs striebetriebslehre — Universi Nürnberg (in Beerbeitung)</li> </ul>
17) Mesure de l'innovation en Alsace M. Paul DEGOUL	(in Bearberrung)
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Further information on the publications abov Commission of the European Communities Directorate-General XIII/C-3	e can be obtained from:
Attn: Mr M. Parmentier L-2920 Luxembourg Tel.: (352) 4301-3153 Telex: 3423/3446 COMEUR LU	

ARIST D'ALSACE, Strasbourg Septembre 1983

18) The application of recent software technology to the access to patent information communities Ν

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n Costs - A Communities 987

Penalties Communities

einer Technik gements stuhl für Induität Erlangen-

9) Erfassung der Konzentration anhand von Pa-

Empirische Untersuchung in ausgewählten

tentportefeuilles

Branchen

Kommission der Europäischen Gemeinschaften Commission of the European Communities Commission des Communautés européennes

#### EUROPÄISCHE HOLZBAUKONFERENZ EUROPEAN CONFERENCE ON TIMBER STRUCTURES CONFÉRENCE EUROPÉENNE SUR LES STRUCTURES EN BOIS

Luxembourg, 14-16. IX. 1988

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Mr D. NICOLAY CEC - DG XIII/C3 JMO B4/087 L-2920 Luxembourg

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#### International conference 'Pyrolysis and gasification' Luxembourg, 15-18 November 1988

The Commission of the European Communities is organizing an International conference on the pyrolysis and gasification of waste materials (including plastics, rubber and wood wastes, various forms of biomass and other low-grade solid fuels) as a potential resource for:

(i) the production of storable fuels, chemical intermediates, synthesis gas, monomers, or activated carbon;

(ii) the fuelling of spark-ignited engines, gas turbines or retrofitted boilers.

Weitere Auskünfte erteilt: For further information, please contact: Pour de plus amples informations, s'adresser à: Per ulteriori informazioni, rivolgersi a:

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## **V. PUBLICATIONS**

## A selection of recent publications from the Scientific and Technical

## **Communications Service**

It is well-known that the European Community institutions produce a wealth of documentation on policy, economic and social aspects of the Community. What is less well-known is that the Commission is also a major generator of scientific and technical publications. The topics covered have multiplied in step with the development of Community scientific and technical programmes, beginning with coal and steel research, nuclear science and technology, and agricultural research, then expanding into environmental research and work on alternative energies, and more recently new areas such as biotechnology and information technologies.

The number of scientific and technical publications issued by the Commission averages about 500 per year. All are vetted for possible patentable material before being sent to the Publications Unit of DG XIII/C for publication. The publications range from highly specialized final reports of individual projects to conference proceedings, summaries of research programmes, directories and atlases. They are published through the Office for Official Publications of the European Communities which has sales agents in each of the Member States, or, for about 15% of the titles, through European scientific and technical publishers. All the reports and books published by the Office for Official Publications appear in its catalogues, while all the scientific and technical publications, however they are published, are listed in DG XIII/C's journal **Euroabstracts** (see advertisement on page 16) and in the associated EABS database.

A selection of recent publications is given below: KOHLE — COAL — CHARBON

 Round-table-Gespräch "Chemische und physikalische Veredlung von Kohle" / Round-table meeting 'Chemical and physical valorization of coal' / Table ronde "Valorisation chimique et physique du charbon". Office for Official Publications of the European Communities. EUR 11150 DE-EN-FR

#### KERNFORSCHUNG UND TECHNOLOGIE — NUCLEAR SCIENCE AND TECHNOLOGY — SCIENCES ET TECHNIQUES NUCLÉAIRES

- An analysis of the print media in Europe following the Chernobyl accident. Office for Official Publications of the European Communities. EUR 11043 EN
- Licensing issues associated with the use of computers in the nuclear industry. Office for Official Publications of the European Communities. EUR 11147 EN

- Catalogue of European earthquakes and an atlas of European seismic maps. Office for Official Publications of the European Communities. EUR 11344 EN
- Etude des microorganismes présents dans les couches géologiques profondes. Office for Official Publications of the European Communities. EUR 11141 FR
- The regulatory framework for storage and disposal of radioactive waste in Member States of the European Community. Graham & Trotman. EUR 11292 EN

#### FORSCHUNG "VERKEHR" — TRANSPORT RE-SEARCH — RECHERCHE TRANSPORT

 Shore-based marine navigation aid systems (COST 301). Office for Official Publications of the European Communities. EUR 11250 EN

#### LANDWIRTSCHAFT — AGRICULTURE

- Disease in farm livestock: economics and policy. Office for Official Publications of the European Communities. EUR 11285 EN
- Environmental management in agriculture. Belhaven Press. EUR 11169 EN
- Welfare aspects of pig rearing. Office for Official Publications of the European Communities. EUR 10776 EN.
- Beta-agonists and their effects on animal growth and carcass quality. Elsevier Applied Science. EUR 11167 EN

#### MEDIZIN — MEDICINE

 Expensive health technologies. Oxford University Press.

#### INNOVATION

- Direct protection of innovation. Kluwer Academic Publishers. 10451 EN
- Supporting infrastructure for innovation, technology transfer and enterprise creation in Spain and Portugal. Office for Official Publications of the European Communities. EUR 10955 EN-ES
- Training in innovation management in the European Community Member States / La formation à la gestion de l'innovation dans les pays de la Communauté européenne, EUR 11024
- Utilisation des résultats de la recherche et du développement public / Nutzung der Resultate öffentlicher oder öffentlich geförderter Förschungsergebnisse / Utilization of the results of public research and development. Office for Official Publications of the European Communities. EUR 11243.

#### Politik auf dem Gebiet der Wissenschaft und Technologie — Science and Technology — Politique de la Science et Technologie

 Global telecommunication networks: strategic considerations. Kluwer Academic Publishers. EUR 11389 EN

- New technology and development in employment. Office for Official Publications of the European Communities. EUR 11386 EN
- Les matériaux nouveaux. Dynamique économique et stratégie européenne. Economica. EUR 11049
- Food, health and the consumer. Elsevier Applied Science. EUR 11020 EN
- Vademekum der EG-Forschungsförderung / Vademecum of Community research promotion / Vademecum de la recherche communautaire. Office for Official Publications of the European Communities. EUR 10606
- Evaluation of the Community's medical and public health research programmes. Office for Official Publications of the European Communities. EUR 10606

## Biologische Wissenschaften — Biological Sciences — Sciences Biologiques

 Biotechnology action programme. Progress report 1987. Office for Official Publications of the European Communities. EUR 11138 EN

## $\label{eq:strahlenschutz} Strahlenschutz - Radiation protection - Radioprotection$

- The transfer of radionuclides through foodchains following accidental releases to the atmosphere. Office for Official Publications of the European Communities. EUR 11255 EN.
- Occupational radiation dose statistics from lightwater power reactors operating in Western Europe. Office for Official Publications of the European Communities. EUR 10971 EN

## Naturwissenschaft — Physical Sciences — Sciences Physiques

 High temperature alloys: their exploitable potential. Elsevier Applied Science. EUR 11365

## Umweltschutz und Lebensqualität — Environment and quality of life — Environnement et qualité de la vie

- Agriculture and environment: management agreements in four countries of the European Communities. Office for Official Publications of the European Communities. EUR 10783 EN-FR
- Die Lage der Umwelt in der Europäischen Gemeinschaft 1986 / The state of the environment in the European Community 1986 / L'état de l'environnement dans la Communauté européenne 1986. Office for Official Publications of the European Communities. EUR 10633
- Map of the natural vegetation of the member countries of the European Community and the Council of Europe / Carte de la végétation naturelle des états membres des Communautés européennes et du Conseil de l'Europe. Office for Official Publications of the European Communities and Council of Europe. EUR 10970

- Occupational and environmental exposure to pentachlorophenol. Office for Official Publications of the European Communities. EUR 10795 EN
- Reversibility of acidification. Elsevier Applied Science. EUR 11287 EN
- Identification and guantification of atmospheric emission sources of heavy metals and dust from metallurgical processes and waste incineration. Office for Official Publications of the European Communities, EUR 11086 EN

#### Energie - Energy - Energie

- Grid-connected wind turbines. Elsevier Applied Science. EUR 11241
- European Communities oil and gas development projects. Third status report. Graham & Trotman. EUR 11163 EN
- Photocatalytic production of energy-rich compounds. Elsevier Applied Science. EUR 11371
- The medium- and long-term energy outlook: energy balances in oil-importing and oil-exporting countries. Office for Official Publications of the European Communities. EUR 11038 EN

- 23 piscines solaires en France / 23 solar-heated swimming-pools in France. Office for Official Publications of the European Communities. EUR 11234 FR/EN

#### Informationsmanagement — Information management - Gestion de l'information

- --- Library automation in North America. K.G. Saur. EUR 11092 EN
- Electronic publishing: the new way to communicate. Kogan Page. EUR 11978 EN

#### Informationstechnologie und -wissenschaft --- Information Technologies and Sciences - Technologies et Sciences de l'information

- Esprit '87 Achievements and impact. North-Holland EUR 11192

Persons to be contacted about DG XIII-C Publications:

Mr C. André or Mr E. Phillips Commission of the European Communities Directorate-General XIII/C/2 Jean Monnet Building L-2920 Luxembourg Tel.: (352) 4301-2948 or 2916 Telex: 3423/3446 COMEUR LU



## EURO ABSTRACTS SECTION I

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such as alternative energy sources, environmental research, nuclear reactor safety, radiation protection, thermonuclear fusion and others is being carried out by the Commission of the European Communities in its Joint Research Centres (direct actions) or through re-

Scientific and technical research in certain key areas, search contracts with national research organizations and industry (indirect actions). Current information on published results from these research actions is announced in the monthly abstracts journal 'euro abstracts' - Section I.

## EURO ABSTRACTS SECTION II

Scientific and technical research in coal, steel and social matters.

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## VI. SPRINT, THE EUROPEAN PROGRAMME FOR INNOVATION AND TECHNOLOGY TRANSFER

#### 1. European Symposium on training in innovation management

#### Paris-April 14-15

More than 250 experts from all Member States participated in the first European Symposium on Training in Innovation Management held in Paris on 14-15 April 1988. The Symposium was jointly organized by the CEC (under the SPRINT Programme), ANVAR and the Ministère de la Recherche et de l'Enseignement Supérieur.

It was the aim of the symposium not only to compare the state of art of training in innovation management in the various Member States, but also to devise transnational components to supplement national measures. A survey commissioned by the CEC (see advertisement on page 20) had shown that there are a lot of such programmes within the Community. However, the content of these programmes, which are intended for engineers, managers and firms, varies widely and differs from country to country.

Through the exchange of expertise the symposium helped to identify areas in the field of innovation management which need to be developed. They will help to overcome barriers to innovation and thus contribute to the creation and future of the Single Market by 1992.

It is now up to the Commission to devise, under the SPRINT Programme, activities which will improve European cooperation in the field of innovation management and thus stimulate the wider spread of innovation itself.

#### 2. Venture Symposium'88 — The internationalization of Venture Capital

The European venture capital market is growing at an astonishing rate of 40% per annum, and now has reached a size of ECU 10 billion. Practically non-existent in Europe outside the United Kingdom in the seventies, venture capital in the other European countries has developed considerably, and the availability to entrepreneurs in many of these countries is comparable to the situation in the United Kingdom. Common techniques, working methods and a kindred spirit throughout Europe have emerged, and they provide the professional understanding needed to work on a transnational basis.

To make successful investments in the smaller national business requires as clear as possible a view of the international opportunities as well as any threats. An awareness of external market potential for the growing national business is also an important positive feature for a European venture capital investor to bring to his domestic investments.

The theme of this year's EVCA symposium is the internationalization of venture capital. European venture capital groups or those actively involved in advising entrepreneurs or venture capitalists should find the content of this year's programme of interest, particularly with the 1992 European Community harmonization plans becoming relevant within the near future. We hope for a stimulating conference.

The themes of the symposium will include:

- Cross-Border Syndication
- Product & Process Internationalization/Technology Transfer
- Venture Capital Networks
- International Fund Raising
- International Buyouts/Buyins
- Corporate Venturing
- International Exit Markets
- International Mergers & Acquisitions

For further information, please contact: Nigel Griffiths, Eurocommunications Group, Tel: + 32.2.640.92.23 or EVCA, Clos du Parnasse 11 F, B-1040 Bruxelles, Tel. + 32.2.5137439.



#### 3. Phase I of the ICONE project (Comparative Index of National Standards in Europe) completed

Phase I of the ICONE project (Comparative Index of National Standards in Europe) was completed by the contractor (CEN) at the end of last year.

The Phase I database contains those national standards (some 33 000) which have a relationship with pivotal international/European ones (some 11 000). All Community and EFTA countries participated in the project and provided their national data completely free of charge.

The complete database has been provided on magnetic tape to the various National Standards Institutes, who now have the exploitation rights to it in their respective countries.

ICONE Phase I is widely regarded as a considerable success; a significant amount of interest has been shown by European industry. It has therefore been decided to prepare an "IMPACT REPORT" which will be published in a form suitable for wide distribution.

The final cost of Phase I to the Commission was 158 090 ECU, considerably lower than the 192 200 ECU budgeted. EFTA's contribution was 26 410 ECU.

As provided for, the national standardization institutions are now proceeding with the diffusion of ICONE Phase I in their respective countries.

More information on ICONE can be obtained from: Commission of the European Communities Directorate-General XIII-C

Mr E. Perez Carbonell Jean Monnet Building L-2920 Luxembourg Tel.: (3 52) 43 01-41 17

#### 4. Robots for better security: A Technology Transfer Project under the SPRINT Programme

A typical case of inter-firm cooperation which came about under the SPRINT transnational networks is on robots for better security.

The Chamber of Commerce and Industry (CCI) of Grenoble and the Centro Estero Camere di Commercio Piemontesi of Turin (an organization which works for all the chambers of the Piedmont region of Italy and specializes in export promotion) joined the SPRINT Programme in 1985.

What stands out in the work they have been doing together is the contribution they have made to the MITHRA project. As both organizations have a good knowledge of the potential of the industrial enterprises active in their respective regions, they have played a major role in bringing together the large number of partners that ultimately joined the project.

MITHRA stands for "matériels intertechnologiques de haute robotique avancée". The idea of the project was thrown up towards the end of 1984 by A.I.D. (Assistance industrielle dauphinoise) R&D S.A., a small research and development company established since 1974 in the Grenoble area.

The objective is to design, develop and industrialize mobile remote surveillance robots sufficiently advanced technologically to represent a breakthrough and possess a competitive advantage over presently available systems.

Three main fields of application are envisaged:

Surveillance of office and public buildings ("type A", relatively simple robots);

surveilance of warehouses, supermarkets and factory sites ("type B" robots, capable of moving over more difficult surfaces and of making elementary decisions);

surveillance of high-risk installations, such as nuclear plants and chemical plants handling dangerous substances ("type C", more sophisticated robots).



Figure 1: Drawing of a "type B" robot for the surveillance of warehouses, factories, etc. Besides fulfilling elementary detection tasks, it should be capable of deciding to take certain types of action (hence the presence of a manipulator).

Early in 1986, the CCI of Grenoble and the Centro Estero of Turin started setting up the contacts which, in due course, brought three Italian firms into the project: OLMAT, SEPA and Elkron. By this time, the French participants were A.I.D., I.T.M.I., S.E.I.V., Bertin & Cie and Bossard Consultants, with the cooperation of the Institut national polytechnique de Grenoble (I.N.P.G.) and the Laboratoire d'automatique et de microélectronique de Montpellier (L.A.M.M.). A swiss firm, Cerberus, and the Ecole polytechnique de Lausanne also joined. On 30 June 1986, the project was officially adopted by the EUREKA Programme. Its cost will be about 32 million Ecu over four years.

MITHRA is remarkable in at least two respects.

First, several small or medium-sized firms are directly involved as main partners.

Secondly, although the project is adopting advanced technologies, it is at the same time giving priority to the development of relatively low-priced "type A" robots (possibly less than 10 000 Ecu) for simple applications like fire or burglary detection, for which there are large potential markets. The participation of firms like Cerberus, in Switzerland, and Elkron, in Italy, which already offer integrated security systems world-wide, will be valuable when it comes to commercializing the robots.

The French firms have a 47% stake in the project, the Italian firms 49% and the Swiss 4%. Getting so many organizations to agree to a contract covering industrial property rights and commercial exploitation was quite a challenge, but agreement was reached, with remarkable speed, in the first half of 1987.

A considerable research and development effort will be required to finalize the basic designs for the three types of application which have been selected, to work out in detail the characteristics of the sub-assemblies and define manufacturing procedures. Each participating company has its own particular know-how to contribute to this complex task.

The first MITHRA robots should be appearing on the market by the beginning of the next decade. The participants hope by then to have acquired sufficient experience not only to continue to refine the basic products but to adapt them to new applications.

Further information on the robots for better security can be obtained from:

Enrico GENARO

#### CENTRO ESTERO CAMERE COMMERCIO PIEMONTESI

Via Ventimiglia 165 I-10127 Torino Tel.: (39) 11-69 60 096

Odile ARNOULT

#### CHAMBRE DE COMMERCE ET D'INDUSTRIE DE GRENOBLE

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The brochure can be obtained on free of charge from:

Commission of the European Communities Directorate-General XIII-C Mr R. Miège Jean Monnet Building L-2920 Luxembourg Tel.: (352) 4301-4180 Telex: 3423 COMEUR LU

#### 5. News from TII, the European Association for the Transfer of Technologies and Industrial Information:

#### T.I.I. group visits

Bremen: 6-8 June 1988 Barcelona: 4-6 July 1988

These group visits, subsidized by SPRINT, will provide an excellent opportunity for all intermediaries to gain an insight into the supporting infrastructures for innovation development and technology transfer in these two regions.

Past experience has proved that such meetings offer many opportunities for establishing useful business contacts, both with the organizations in the regions visited and with other delegates.

Information and registration: T.I.I. European Association

3 rue des Capucins L-1313 Luxembourg Tel. (352) 46 30 35

#### 6. Conferences under the SPRINT Programme

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:

Title of the conference	Date	Venue	Organizer	
Flexible manufacturing for small and medium-sized enterprises	12. 6. 1988	Dublin (IRL)	EOLAS (ex IIRS), Dublin	
Methods and techniques for imple- menting flexible manufacturing systems	15. 6. 1988	Amsterdam (NL)	Intervisie, Leiden Fraunhofer Institut für Rationalisie- rung, Aachen Brighton Polytechnic, Brighton	
Licensing in Europe	2324. 6. 1988	London (UK)	Licencing Executives Society (Brit & Ireland), London	
Application of advanced technologies in medium and small-scale clothing and footwear production	1. 11. 1988	Limerick (IRL)	2.000 Plus BV, Maastricht Alan S. Sutton, Cadier en Keer National Institute of Higher Education, Limerick	
Aerospace spinoff to SMEs	10. 11. 1988	Eindhoven (NL)	Microcentrum Nederland, Eindhoven Flemish Aerospace Group, Antwerpen	
Directional properties of materials	17. 8. 1988	Louvain (BE)	Deutsche Gesellschaft für Metall- kunde e. V., Oberursel Catholic University, Louvain	



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