



NEWSLETTER

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new technologies and innovation policy

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SIXTH MEETING OF THE CONSULTATIVE COMMITTEE FOR INNOVATION AND TECHNOLOGY TRANSFER (CIT)

The sixth meeting of the CIT was held in Luxembourg on 26 and 27 February 1985. The main points on the agenda were the continuation of preliminary discussions on determining the priority actions for 1985, on which there was a broad consensus among the delegations, and the consideration of a series of forthcoming activities. The committee gave a positive opinion on six concrete actions, requiring the commitment of around 3.8 MECU, and reserved appropriations for a number of other activities. These six actions concerned

- the continuation of Community support for trans-frontier cooperation between innovation consultancy and technology transfer organizations (2.7 MECU);
- the continuation of Community support for a European dimension to conferences on innovation and technology hitherto held at national level (0.8 MECU);
- the creation of a European information service for the results of national research (EuroTechAlert) (0.2 MECU);
- the improvement of access to scientific and technical information from third countries (2 x 20 000 ECU);
- the expansion of the telefax communication network for European technology transfer and innovation consultancy organizations (50 000 ECU).

In addition, agreement was reached in principle on funds for setting up a European database on the supply and demand for licences (approximately 0.27 MECU). As part of its coordinating activities, the committee would carry out an investigation into the utilization of the results for publicly funded research and development to prepare for an exchange of information and experience.

With these results, the Committee has in all given positive opinions for the commitment of over 62% of the appropriations available for concrete activities under the innovation plan in the year since taking up its work in February 1984.

The next meeting is scheduled for 6 and 7 June.

OPTIONS FOR COMMUNITY INNOVATION POLICY

by Dr. H. BURGARD, Director for New Technologies and Innovation Policy, Commission of the European Communities, and Chairman of the Consultative Committee on Innovation and Technology Transfer

The technological problems of Europe compared with the USA and Japan are not so much due to the quantitative or qualitative inadequacy of our research and development efforts. Europe's technological backwardness is more the result of the inefficiency and slowness with which the results of research and development are turned into new, marketable products and procedures in the course of the 'innovation process'.

When a decision is taken to carry out a certain research activity, there is usually no way of knowing at the basic or even applied research stage what the results of this research will look like in detail and what subsequent applications they may have; in many cases, research results do not acquire a major economic impact until after a horizontal technology transfer from the originating to other economic sectors and applications. The search for opportunities for utilizing new research findings should therefore not be restricted to the originating sector, but must be extended across other sectors to cover the entire spectrum of economic activity. Policies aimed at improving the utilization of research and development results must take this global aspect into account.

At the same time, this search for opportunities should not be geared exclusively to what is technically feasible. Indeed, the exploitation of new research findings must above all be orientated to the market. Commission assessments indicate, however, that an individual Member State's market and purchasing power are not enough in themselves to justify the launching of a major technological investment. The success of innovative enterprises thus depends on the extent to which they can market the new products and services they have developed outside their countries' frontiers. Within the European Communities however, enterprises have hitherto been faced with numerous administrative, legal and linguistic barriers, which small and medium-sized enterprises, in particular, are hardly able to

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cope with without assistance, and which together constitute the main obstacle to strengthening Europe's position in the field of innovation.

The task of strengthening and accelerating the innovation process is hence not only a task for the Member States but of necessity also a Community responsibility. The benefits which the accomplishment of this task will bring for employment and growth cannot be overestimated. Even now, a common research policy aimed at concentrating the research efforts of the individual Member States and directing them towards jointly decided European goals can generate unquestionably valuable multiplier effects — as shown by the ESPRIT programme — even though it has to work via a modest Community contribution not exceeding 1.5% of total research and development expenditure in the countries of the European Community. Community measures in support of innovation and technology transfer, costing only a really modest fraction of the expenditure of the common research policy, would, however, increase many times over the benefits to the economy and the contribution to the welfare of the population from the totality of research carried out in the Community.

Such Community measures can basically be initiated in two areas: internally, to improve the utilization of the results of Community research, and generally, to promote innovation and technology transfer at Community level.

The utilization of the results of Community research, i. e. activities to disseminate knowledge or, where appropriate, to acquire patent or similar protection with subsequent technological development and a search for licencees etc., is a task that has been carried out since the start of Community research. However, whereas in 1970, at a time when the Community only comprised six Member States and the main focus was essentially on Euratom and ECSC research in the form of direct 'intramural' research at the Joint Research Centre, funds amounting to over 0.5% of the research budget were nevertheless already available for the utilization of research results, the just over one million ECU spent in 1983 by the Community of Ten barely came to around 0.25% of research budget — following an enormous expansion in Community research, in both the range of research topics and the level of research expenditure, and following a restructuring of activities away from direct research to contract and coordinated research.

In 1983, in its 'Communication to the Council and the European Parliament on promoting the utilization of the results of Community-sponsored R & D (COM (83) 18 final), the Commission drew attention to this negative development and called for it to be corrected, while also proposing a qualitative expansion of utilization activities, for example the construction of prototypes and pilot systems to improve the marketing prospects of inventions, or the use of patent research as guiding instrument to ensure that the subjects of Community research are oriented to the market, hence providing good prospects for exploitation.

The resources needed in the view of the Commission to ensure optimum utilization of the results of Community research amount to about 1.5% of the research budget. Although a draft resolution confirming the general guidelines of Community policy for promoting the utilization of R & D results and confirming in particular this percentage figure has brought a positive response from the European Parliament, the Council has not yet been

able to give its agreement owing to budgetary considerations. However, the Commission still sees an urgent need for a structural adaptation to changed conditions of the efforts to utilize the results of Community research. Attempted savings in this area place the very purpose of the common research policy at risk!

A study requested by the Commission at the end of the 1970's identified a series of obstacles to innovation, in particular the inadequate implementation of the Common Market owing to differing technical standards, health and other protective regulations, processing times at frontiers, different examination, test and certification procedures not recognized by other Member States, the lack of a Common Market in the public procurements sector, insufficient facilities for innovation and venture capital financing, inadequate structures in the education sector and in cooperation between universities and industry, and finally, quite generally, excessive red tape and bureaucracy.

In 1980, in its communication on 'Industrial Development and Innovation' (COM (80) 755 final) the Commission drew the European Council's attention for the first time to the urgent need for improving industrial innovation in Europe. One year later, it submitted a communication on 'Industrial Innovation Policy — Guidelines for a Community Strategy' (COM (81) 620 final) containing important elements for developing a Community policy to eliminate obstacles to innovation.

A cornerstone of these efforts is the Plan for the Transnational Development of the Supporting Infrastructure for Innovation and Technology Transfer adopted by the Council of Ministers of the European Communities at the end of 1983*, which is designed to create a European-scale environment for innovation in enterprises, especially of small and medium size.

This plan which is a great deal more imaginative than its rather clumsy title suggests is currently being implemented and contains, among other things, packages of measures designed to promote transnational cooperation between innovation and technology transfer advisory centres, to develop transnational marketing and export advisory networks for innovative small and medium-sized undertakings and to organize European-level technology conferences in order to accelerate transnational technology transfer.

Other measures are designed to help establish a European venture capital sector, to open up public procurement policy and to promote transnational cooperation in technology at local authority level. This first innovation plan also includes the establishment of a register to facilitate, at Community level, the rapid identification and classification of comparable standards, the creation of a European technology licensing exchange system, and the development of transnational information services covering the results of the research funded by the Member States of the Community.

Under the provisions of this plan, special programmes for innovation infrastructures may also be foreseen, to enable Member States with weaker infrastructures to participate fully in transnational projects, provided that these programmes are not financed by other Community sources.

* Council Decision of 25. 11. 1983, OJ L 353 of 15 December 1983

ECU to the foreign host organization for each month of the visit.

The budgetary allocations envisaged provide for approximately 120 transnational secondments of Type I and 58 secondments of Type II to take place by the end of 1985.

3. Eligibility

The agents of the transfer of technology, innovation and industrial information to whom the following definition applies are eligible for exploratory visits and transnational secondments:

Definition

The agents of the transfer of technology, innovation, and industrial information are understood as the staff of those private and public organizations (or their specialist departments) whose main function is to act as intermediaries in the transfer of information geared to the particular needs of firms, relating not only to technology but also to commercial, social, administrative and financial matters, with a view to helping firms to innovate, to adapt to technological change and to develop. The task of these organizations, and consequently of their staff, may include the search for new products, processes and services, the assessment of their marketability and the identification of possible business partners. If this task is to be properly performed, these organizations and their staff must have detailed knowledge of the firms they assist and of their problems.

Another aspect of the task of the organizations referred to above and of their staff may — albeit on a subsidiary level — be to produce, disseminate and facilitate access to information of their own.

4. Further information and submission of applications

Applications may be submitted throughout 1985 to the European Association for the Transfer of Technology, Innovation and Industrial Information (TII) P. O. Box 1704 (GISL), L-1017 Luxembourg, telephone (352) 438096 (Mr Glöckner), which can also provide further information.

5. Selection of applicants

Applicants will be selected by the TII-Association under the supervision of the Commission's departments on the basis of the criteria listed in Sections 2 and 3 above.

PATENTS FROM COMMUNITY RESEARCH

In the last three months, the European Atomic Energy Community, represented by the Commission of the European Communities, has obtained 6 patents that are listed below (patent numbers in brackets):

- 'device for passive heat transport and integrated solar collector incorporating same', in the United States of America, (No. 4,467,862)
- 'apparatus and method for leading to the identification of seals', in the United Kingdom (No. 209797B)
- 'apparatus for continuous and direct measurement of the sea surface temperature',; European Patent Office (No. 0040059B1)
- 'ultrasonic transducers, in the United Kingdom (No. 2097630B)

- 'Système de surveillance d'une pluralité de conteneurs utilisant des sceaux ultrasonores', in France (No. 2518751)
- 'apparatus and method for measuring the toxicity of pollutants for aquatic living organisms', European Patent Office (No. 0045623 B1).

Patent work and valorisation of inventions from Community research are carried out under DG XIII-A. For further information contact:

Mr. H. Kronz
Commission of the European Communities
DG XIII-A-1
L-2920 Luxembourg.

ACHIEVEMENTS OF THE EUROPEAN COMMUNITY SECOND ENERGY R & D PROGRAMME

by J. T. McMULLAN and A. S. STRUB

1984, 46 pp. ISBN 92-825-4276-9, EUR 9204 EN, FR

price: BFR 300

published by Office for Official Publications of the European Communities.

This report presents an overall picture of the aims and the achievements of the second energy R & D programme (indirect action) of the European Communities, lasting from mid-1979 to mid-1983 and covering the following subjects (sub-programmes).

After a short introduction on the strategy and policy backing the Communities' strong involvement in energy R & D, the report devotes five chapters to a discussion of the individual sub-programmes, using the same format: introduction, statement of the aims and the study areas (projects), statement of the objectives and achievements (results) of each of the projects. The report refers to work carried out within some 1 000 research contracts and a budget (EC contribution) of 105 million ECU to these cost-sharing contracts and shows about 20 photographs.

Contents:

- I: INTRODUCTION: The European Community energy R & D programmes
- II: ENERGY CONSERVATION: Domestic and commercial sector; Heat pumps; Industrial combustion and heat recovery; Industrial processes; Transport; Energy storage
- III: PRODUCTION AND USE OF HYDROGEN: Thermochemical production; Electrolytic production; Use, storage and transportation
- IV: SOLAR ENERGY: Solar energy applications, del to dwellings; Thermomechanical solar power plants; Photovoltaic power generation; Photochemical, photoelectrochemical and photobiological conversion; Energy from biomass; Solar radiation data; Wind energy; Solar energy applications in agriculture and related industries
- V: GEOTHERMAL ENERGY: Integrated investigations; Subsurface problems; Surface problems; Hot dry rocks (HDR)
- VI: ENERGY SYSTEMS ANALYSIS
- VII: CONCLUSIONS

tion and Industrial Information to organize and implement exploratory visits and transnational secondments for agents of the transfer of technology, innovation and industrial information.

Taking part in such exploratory visits or secondments can also be a good starting point for preparing and launching transnational partnerships between agencies for the transfer of technology, innovation and industrial information which the Commission is either already promoting or will be promoting in the future as part of a call for proposals for the promotion of transnational partnerships (cf. OJ C 210 of 10. 8. 1984).

2. Objectives, organization and financing of the actions

2.1. Exploratory visits

2.1.1. Objective

The aim of the exploratory visits is to permit the agents of the transfer of technology, innovation and industrial information to:

- establish contact with each other as quickly and as effectively possible;
- become acquainted with working methods in other countries, and
- to explore the possibilities for transnational cooperation, primarily in the fields of technology transfer, finance etc.

2.1.2. Organization

- Exploratory visits of about one week's duration will be arranged to at least two agencies for the transfer of technology, innovation and industrial information in Member States of the Community;
- Groups will consist of at least 20 and not more than 30 participants coming from at least three Member States;
- Participants from countries with weaker infrastructures will be given special consideration;
- Applicants need not be members of the European Association for the Transfer of Technology, Innovation and Industrial Information (TII) to qualify;
- When applications are being considered, priority will be given to first-time participants;
- The host organization will draw up a report on the visit.

2.1.3. Financing

The Community will pay the visitors' travelling expenses to and from the point of departure or from the location of the preceding exploratory visit, plus the group's travelling expenses within the country or countries visited in accordance with the provisions currently in force at the Commission.

The Community will also pay the extra administrative costs incurred by the host organization (staff, telex, telephone, photocopies, translation, receptions (in part), paperwork and the drawing up of the report on the visit).

Reimbursement will follow upon production of the relevant documents and evidence.

Participants in the exploratory visits are required to pay a registration fee of 200 ECU per person and must bear their own living expenses.

The budgetary allocations envisaged provide for between five and seven exploratory visits to be organized by the end of 1985.

2.2. Transnational staff secondments

Two types of transnational staff secondments are planned:

short secondments (2 weeks — Type I) and medium-term secondments (3 months — Type II).

2.2.1. Objective

The aim of the action is to enable the agents of the transfer of technology, innovation and industrial information to

- become acquainted with other working methods during a secondment of approximately 2 weeks, (Type I);
 - to acquire a more detailed knowledge of other working methods during a secondment lasting three months, (Type II);
- in order to create the basis for permanent transnational cooperation, thanks to the personal contacts so established.

2.2.2. Organization

- The duration of the secondments is as follows:
- Type I: approximately 14 days, although longer periods may be considered;
- Type II: approximately 3 months.
- Visitors to the agencies for the transfer of technology, innovation and industrial information in the host country need not necessarily be members of the TII Association.
- Special consideration will be given to applications from countries with weaker infrastructures.
- When applications are being considered, priority will be given to first-time applicants for secondments of this type.
- The host organization in the foreign country must draw up a working programme for the visitor and provide whatever facilities are necessary for the smooth running of the visit (office, secretarial services, etc.).
- Upon completion of the visit each participant must submit a summary report on the basis of which the benefits and limitations of the experiment can be assessed and any decisions on an extension taken.
- For Type II visits the host organization in the foreign country must also submit a short report.

2.2.3. Financing

The Community will pay the travelling expenses of the participants on the transnational staff secondments in accordance with the provisions in force at the Commission. It will provide them with a flat-rate allowance (grant) intended to cover a part of the living expenses (25 ECU per day). This money will be paid as soon as the summary report referred to above (Type I visits) has been submitted. For Type II visits it will be paid in instalments.

The remainder of the living expenses are to be borne by the participants themselves (or their employers). In the case of Type II visits the Community will also pay a flat-rate sum of 200

On the subject of venture capital, the Commission submitted in 1983 a proposal for a European innovation loan to co-finance innovation in the Community, but this proposal has still not been adopted by the Council despite several meetings. In the Community there are still inadequate structures for innovation and venture capital financing, both in the various Member States and, far more, at the transnational European level, which is of essential importance if undertakings are to derive the full benefit of the Common Market. It remains a priority for the Commission to use the Community financing instruments to achieve real progress in this field.

Other priority activities are pursued in consultations held between Member States. Prime examples are aspects of the law governing intellectual, industrial and commercial property, together with ways and means of improving the technical content of and access to patent information, as well as problems with taxation systems and tax relief to promote innovation.

The problems of government aids to research, development and innovation, as well as those of training in the new technologies, are as much the subject of discussion as is, last but not least, the problem of how to achieve a lasting improvement in the effectiveness of procedures for utilizing the results of publicly-funded research and development, which hitherto have been limited to the national level and, in particular, the results of military research for civil applications. It is primarily in this area that the scope offered by the European dimension — for example by the creation of European infrastructures — must be utilized as a matter of prime importance and simple efficiency.

The process of innovation is a complex activity with close links to many fields of economic policy. Spectacular solutions cannot therefore be expected from innovation policy. What we should be doing is painstakingly creating, step by step, the best possible conditions for innovation and technology transfer and, by extension, for the restoration and maintenance of our competitiveness and the solution of our employment problems.

SCIENCE PARKS AND INNOVATION CENTRES — POSSIBLE INSTRUMENTS FOR THE REGENERATION OF EUROPEAN INDUSTRY

The conference held jointly by the Commission and the Senate of Berlin on 'Science parks and innovation centres: their economic and social impact' in Berlin on 13-15 February 1985 was attended by some 300 participants belonging to a wide range of professions. The 10 member states of the Community were very evenly represented.

Both Dr. Raymond K. APPLEYARD, Director-general for the Information market and innovation, in his opening speech, and Senator Wilhelm A. KEWENIG, during his closing address, warned against excessive optimism about the job creation potential of science parks and innovation centres.

The emergence of business and innovation centres is a relatively recent phenomenon. They are designed, notably through the provision of shared premises, telecommunications facilities, typing, accountancy and

other services, coupled with easy access to technical and management advice and even finance, to help small new enterprises to start up. They have essentially an 'incubator' function.

Science parks started coming into existence in certain regions of the Community some 15 years ago, under the impetus of diverse motivations. They are seen today as a means of promoting the creation and growth of high technology companies in the vicinity of an institution of higher education in such a way that intensive and fruitful interaction takes place between the institution and the enterprises around it, both in terms of training and research. Science parks are thus interesting because of their contribution to innovation and hence to job creation, but their potential in this respect must be viewed on the long term.

The conference established that it is sometimes difficult to place existing organisations neatly either in one or the other category and that it is better to see them as belonging to a fairly wide spectrum of initiatives, which vary considerably from one region to another, if only because local conditions can be quite different.

More importantly, the participants endeavoured, within the framework of specialised working groups, to propose common guidelines for these organizations, notably in respect of the training and advice required by entrepreneurs, ways of financing both the centres and the enterprises themselves, solving the management problems of the centres, etc.

It should be recalled that the Community has recently been providing support for the creation of business and innovation centres in areas of the Community affected by the decline of certain traditional industries. It is also supporting the European Business and Innovation Centre Network, an association one of the major aims of which is to promote an intensive transnational exchange of experience and information between these centres.

COMMUNICATION FROM THE COMMISSION REGARDING A CALL FOR APPLICATION FOR TRANSNATIONAL EXPLORATORY VISITS AND TRANSNATIONAL SECONDMENTS BETWEEN AGENTS OF THE TRANSFER OF TECHNOLOGY, INNOVATION AND INDUSTRIAL INFORMATION

This communication is also published in all Community languages, in the Official Journal of the European Communities Nr. C 64 of 13. 3. 1985.

1. General

In the framework of the 'Plan for the transnational development of the supporting infrastructure for innovation and technology transfer' (Council Decision of 25 November 1983, OJ L 353 of 15. 12. 1983) the Commission of the European Communities attaches considerable importance to the promotion of transnational cooperation between agencies for the transfer of technology, innovation and industrial information. It was to strengthen this transnational cooperation that the Commission requested the European Association for the Transfer of Technology, Innova-

INNOVATION FROM COMMUNITY RESEARCH

Calendar

Iniex-delogne® transmission systems for mines and tunnels

Anyone will have noticed that radio waves are attenuated or blanked out inside a tunnel, a mine, a underground car-park or any enclosed space.

To solve this problem the Belgian National Institute for the Extractive Industries (Iniex) and the Catholic University of Louvain (UCL) undertook joint research funded in part by the European Coal and Steel Community. The result of their research is a transmission system patented and registered under the trade mark INIEX-DELOGNE.

In this system radiant energy (which may be picked up by a receiving aerial situated outside the enclosed space) is transmitted within the enclosed space by means of a coaxial cable along which special 'INIEX-DELOGNE radiating elements' are installed at intervals (e.g. every 70 metres). These elements radiate part of the energy carried and can capture that from a transmitter situated within the enclosed space in order to send it further by means of the cable.

INIEX has installed the system successfully in

- (a) two coal mines in France (network length 13 km)
- (b) a potash mine in France (network length 17 km)
- (c) a coal mine in Germany, where some 30 radio-controls were installed for machinery,
- (d) a 1 135 m road tunnel in Belgium, in cooperation with the firm of EBES,
- (e) two tunnels (2 x 1 600 m in Belgium and 2 x 800 m in the Netherlands) in cooperation with the firm of ENI.

INIEX-DELOGNE allows all forms of radio communication and radio-control between fixed and/or mobile units within and outside enclosed spaces. The system was invented by Mr Paul Delogne of UCL and Messrs Louis Derijck, Raphael de Keiser and Henry Hellin of Iniex.

The system is currently manufactured under licence by

SAIT Electronics
Chausee de Ruysbroeck 66
B-1190 Brussels, Belgium

Further licences may be granted by

Iniex
rue du Chéra 200
B-4000 Liege, Belgium
Tel. (041)52 71 50

1. 3rd EC Conference 'Energy from Biomass'
Venice, 25-29 March 1985
Contact person: Mr G. GRASSI, CEC, Brussels
tel. (02) 2356 801
2. 6th EC Conference 'Photovoltaic: Solar Energy' London, 15-17 April 1985
Contact person: Mr W. PALZ, CEC, Brussels
tel. (02) 2356 922
3. 2nd EC Conference 'Radioactive Waste Disposal and Management'
Luxembourg, 22-26 April 1985
Contact person: Mr R. SIMON, CEC, Brussels
tel. (02) 2356 623
4. EC Seminar 'A European Strategy for Technological Fairs'
Luxembourg, 29-30 April 1985
Contact person: Mr R. RAPPARINI, CEC, Luxembourg
tel. (352) 4301 2780
5. International Seminar 'Electronics and Traffic on Major Roads'
Paris, 4-5 Juni 1985
Contact: 19, rue de Franqueville
75775 Paris Cédex 16
6. 8th International Conference 'Structural Mechanics in Reactor Technology — SMIRT
Brussels, 19-23 August 1985
Contact person: Mr J. M. GIBB, CEC, Luxembourg,
tel. (352) 4301 2918
7. Colloque Européen sur l'innovation et le transfert technologique 'AGIR 85' (Action for the Growth of Innovation and Research)
Lille, 4 au 6 septembre 1985
Contact person: Mr F. WALLART, Cité Scientifique
F-58655 Villeneuve d'Ascq
tél. (020) 470062
8. EC European Textile Research Symposium, Competitivity through Innovation
Luxembourg, 18-19 septembre 1985
Contact person: Miss J. CANDRIES,
COMITEXTIL, 24, rue Montoyer,
B-1040 Bruxelles
9. Conference 'Ergonomics in the ECSC Industries (1980-1985)'
Luxembourg, 28 - 30 October 1985
Contact person: Dr. J. G. Fox, CEC, Luxembourg
tel. (352) 4301 2783
10. International Seminar, 'The Dual Trolleybus'
Brussels, 5-6 November 1985
Contact: SDR ASSOCIATED, Rue Villain XIII, 17a,
B-1050 Brussels
tel. (02) 647 87 80-647 35 26
11. NOVOTECH, 3rd European Forum of Operators of the Transfer of Technology
Lyon, 19-22 November 1985
Contact person: Mr. A. CARRISSIMOUX, Brussels,
tel. (02) 478 48 60
12. Information Symposium 'New Methods and Techniques of Coal Winning in the Coal Mines of the European Community
Luxembourg, 23-25 April 1986
Contact person: Mr F. W. KINDERMANN, CEC
tel. (02) 2354 394