COUNCIL OF THE EUROPEAN COMMUNITIES
GENERAL SECRETARIAT

PRESS RELEASE

5287/84 (Presse 34)

911th meeting of the Council
- Research -
Brussels, 28 February 1984
President: Mr Laurent FABIUS
Minister for Industry
and Research
of the French Republic

The Governments of the Member States and the Commission of the European Communities were represented as follows:

Belgium:

Mr Philippe MAYSTADT
Minister for Science Policy

Denmark:

Mr Flemming VOLDBY
State Secretary,
Ministry of Education

Germany:

Mr Heinz RIESENHUBER
Federal Minister for Research and Technology

Greece:

Mr Georgios LIANIS
Minister for Research and Technology

France:

Mr Laurent FABIUS
Minister for Industry and Research

Ireland:

Mr John BRUTON
Minister for Industry and Energy

Mr Edward COLLINS
Minister of State,
Department of Industry and Energy

Italy:

Mr Luigi GRANELLI
Minister for the Co-ordination of Scientific and Technological Research

Luxembourg:

Mr Jean DONDELINGER
Ambassador,
Permanent Representative

Netherlands:

Mr G. VAN AARDENNE
Deputy Prime Minister,
Minister for Economic Affairs

United Kingdom:

Mr Kenneth BAKER
Minister of State for Industry and Information Technology

For the Commission:

Mr Etienne DAVIGNON
Vice-President

ADOPTION OF THE ESPRIT PROGRAMME

The Council adopted the Decision concerning a European programme for research and development in information technologies for the period 1984-1989 (ESPRIT). It also adopted the 1984 ESPRIT work programme thus allowing an immediate start to be made on the implementation of this programme.

This Decision represents the successful outcome of the efforts undertaken by the Commission, the successive Presidencies and all the Member States since 1982 with the launching of a series of pilot projects the aim of which was to provide the Community in this area of vital importance for future scientific, technological and industrial development with a Community research instrument enabling it to tackle the problems arising in the sphere of data processing in collaboration with the relevant undertakings, universities and research centres in the Community. The Council expressed its very great satisfaction at this achievement.

In adopting this Decision for a programme, the Council took note of the Commission's commitment in view of the high priority given to the ESPRIT programme, to ensure adequate financing of the latter throughout its duration and to manage the 1984 and 1985 payment appropriations in such a manner that the implementation of the ESPRIT programme did not lead to an increase in the total volume of appropriations.

For its part, the Council undertook to start a debate, on the basis of Commission proposals, on the priorities of Community research. As soon as priorities amongst the various Community projects had been determined and the decisions relating to the funds at the Community's disposal were down, it would be possible to fix an overall amount for the Community's research activities up to 1988.

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The programme has been adopted for a period of 5 years, starting on 1 January 1984.

The programme will comprise pre-competitive research and development projects carried out by means of contracts, to be concluded with companies, including small and medium-sized undertakings, universities and other bodies established in the Community, and the co-ordination of research and development activities carries out under the programmes of the Member States and of the Community.

The projects will as a rule be submitted in reply to an open invitation published in the Official Journal of the European Communities and involve the participation of at least two independent industrial partners, not all established in the same Member State. Each contractor will be expected to bring a significant contribution to the project.

The contractors will be expected to bear a substantial proportion of the costs, 50% of which may normally be borne by the Community.

The Community will contribute to the performance of the programme within the limits of the appropriations entered to this end in the budget of the European Communities.

Out of the overall amount of 1 500 million ECU, the appropriations necessary for the Community's contribution to the performance of the programme will be 750 million ECU over five years, including expenditure on staff whose cost must not exceed 4,5% of the Community contribution.

Up to a maximum of 25% of the Community's total contribution to new projects launched under this programme may for the first year be allocated to new projects for which the Community contribution does not exceed 5 million ECU.

The Commission will see that the programme is properly performed and establish the appropriate implementation measures and infrastructures. In particular, it will establish each year, and update as required, a draft work programme defining the detailed objectives, the type of projects to be undertaken and the corresponding financial plans. This programme will be adopted by decision of the Council acting by a qualified majority.

The Decision also contains provisions relating to the setting up and operation of the ESPRIT Committee, and particularly the cases where the Commission may or must consult the Committee. In addition it provides for exchanges of information between the Member States and the Community and lays down the procedures for such exchanges.

Finally, the Decision specifies that the programme will be reviewed, either after 30 months or as soon as 60% of the amount has been committed, so that any necessary amendments can be made. Provision is made for an assessment of the performance and results of the programme at the end of the five-year period.

A description of the ESPRIT programme follows:

AREAS OF ACTIVITY

The programme contains areas of research and development activity and infrastructure actions.

The envisaged areas of research and development activity include:

1. ADVANCED MICROELECTRONICS CAPABILITY

The main objective is to provide the technological capability to design, manufacture and test the very high-speed and very large-scale integrated circuits (VLSICs) that will be needed in the next two decades.

A concurrent objective is to stimulate research and development on novel materials and devices for special applications. The activities to be pursued include:

- computer-aided design, manufacture and test for very large-scale integrated circuits (VLSICs);

- process steps for submicron feature sizes in silicon and other semiconductor materials, and their integration into complete technologies;

- computer controlled VLSIC fabrication and equipment for design, manufacture and test of VLSICs;

- techniques for interfacing ICs to their environment, including high-speed, high-density interconnect between chips;

- research into optical information processing and transmission, notably integrated opto-electronics, optical switching and storage;

- novel information and image display technologies;

- novel organic and inorganic materials for electronics and optical technologies;

- educational activities related to industrial research.

2. SOFTWARE TECHNOLOGIES

Software technology aims at providing the basic engineering, the methods and tools that are needed in the software development process, the management principles for information technology as well as the scientific knowledge underlying them, and aims to integrate them into a consistent technology. It is founded on traditional mathematics, economics and engineering practices.

Three complimentary research approaches will have to be combined.

(A) The first approach stresses the scientific foundations and covers such areas as formal mathematical techniques, taxonomy and metrics, including empirical techniques and modelling. This would entail essentially theoretical research work aimed at a better scientific understanding of the field with a view to establishing effective theories and methods for software development.

(B) The second approach focusses on the software production process.

Work in this area would have to relate to all parts of the software life cycle and may address activities such as requirements analysis, specification, design, implementation,

verification and validation, maintenance and enhancement. The full integration of methods and tools and phase-to-phase continuity will be of particular importance. Research and development activity in this area would mainly concentrate on methods and tools in software engineering and on their integration into complete systems for software production. The aim is the mastery of the technical production process of software goods.

(C) The third approach is concerned with the software development process as an economic activity in its own right. It focusses on software as a product, investigating the mutual dependencies between the commercial goals of an enterprise and the technical characteristics and performance requirements of the software product. It also addresses the problem of producing application-specific software, and the way in which the knowledge about the field of application may influence the tools and methods for software development.

This would entail research and development in the economics of industrial software production.

The aim of this approach is to provide the techniques and criteria for organizing, managing and optimizing all elements of software application technology and the software industrial production process.

3. ADVANCED INFORMATION PROCESSING (AIP)

The objective is to create an industrial exploitation basis for the transition from data processing to knowledge processing systems that is the key to the next computer generation.

Objectives include the provision of more user-friendly interfaces to non-expert users, intelligent sensors and utilization of VLSICS.

The main thrust of research and development will be in the following topics:

- information and knowledge engineering involving considerable basic research on expert systems, knowledge representation, inference and learning techniques;

- external interfaces, including signal analysis, signal synthesis, pattern recognition, signal understanding, human factors and human perception;

- information and knowledge storage, novel hardware technologies, advanced software techniques;

- computer architectures for AIP. Some of these will be radically different from the classic von-Neumann, and some will seek to exploit parallelism;

- design and system aspects, covering conventions, standards, specification, verification, design methods and general system methodology.

4. OFFICE SYSTEMS

The objective is to carry out research on the information systems that will support the wide range of non-routine tasks performed by humans in the office environment. The research and development activities to be pursued include:

- office system science, as prerequisite and support to the structural and functional analysis and description of office procedures, definition of standards and the design of office products and systems adapted to a variety of needs;

- office work-stations, document description languages, document creation and distribution, man/machine interfaces;

- office communication systems, including local area networks and their interconnection, integrated text-voice-image communication and value-added functions;

- office filing and retrieval systems that provide easy and reliable access to mixed-mode data files, supporting the high-level functions performed in the office, e.g. retrieval of "Knowledge", content-addressable and structure-addressable data bases, office document languages;

- human factors, encompassing all aspects of the interactions between man and information handling systems and aspects of information handling systems as media of communication between people.

5. COMPUTER INTEGRATED MANUFACTURE (CIM)

The objective is to establish the technology base for progressive introduction of I.T. (Information Technologies) to all phases of the manufacturing cycle leading ultimately to fully integrated production systems.

The main emphasis is placed on manufacturing elements as they are needed for discrete batch manufacturing, as this is technologically the most demanding problem.

The main thrust of the research and development will concentrate on:

- system architectures for CIM systems and the infrastructure required to support them;

- computer-aided design and engineering (CAD and CAE) systems;

- computer-aided manufacture, test and repair systems;

- real-time control of machines and systems, including automated assembly, robots, numerically-controlled machine tools, and entire FMSs (Flexible Manufacturing Systems);

- sub-systems and components, including real-time imaging and control systems, micro-electronic sub-systems, sensor systems;

- demonstration models of CIM sub-systems leading to complete CIM demonstrators for experiments in real-life situations.

In all areas, AIP concepts and developments will be exploited where appropriate.

6. INFRASTRUCTURE ACTIONS

The infrastructure actions consist of a number of specific measures aimed at establishing the conditions required for successful execution of co-operative research and development on a Community level and for drawing the maximum benefit from ESPRIT as a whole.

These infrastructure activities include in particular:

- co-ordination of Community and Member States' research and development programmes, acquisition of information, both within the ESPRIT programme and from the world at large, and its appropriate dissemination;

- co-ordination and documentation of standards within the ESPRIT programme and their relationship with national and international standards;

- an Information Exchange System (IES) to ensure ease of communication to serve the good technical execution of research and development projects as well as their management and the appropriate dissemination of their results. Progressive implementation and upgrading would have to enable direct computer communication and distributed software development.

FIRST PLAN FOR STIMULATING EUROPEAN SCIENTIFIC AND TECHNICAL CO-OPERATION AND INTERCHANGE (1985-1988) - CONCLUSIONS OF THE COUNCIL

After a very constructive discussion on encouraging exchanges and mobility of researchers in Europe, the Council welcomed the Commission's initiative aimed at stimulating European scientific and technical potential.

The Council expressed its satisfaction at the way in which the experimental stage of the programme, decided upon on 28 June 1983 and still under way, is being implemented.

As regards the new stage, the Council agreed on the main points in the Commission communication and requests the Commission to put forward proposals in accordance with the following guidelines:

- stimulation measures should, without from the outset excluding any particular scientific and technological field, relate to subject selected on the basis of precise criteria where there is a most obvious need for the devleopment of exchanges;

- the industrial scientific community will be involved in this programme in accordance with arrangements to be determined;

- the stimulation plan should be implemented very flexibly and efficiently by means of research grants, contracts twinning teams or laboratories and measures to encourage the professional integration of young researchers into industry;

- in addition to the above steps, proposals should be drawn up on horizontal support measures to encourage mobility;

- co-operation with partners in non-EEC European countries should be envisaged in line with Council of Europe initiatives in this area with such new partners then sharing in the costs of any such expanded operation. The Commission should define the arrangements, which could be progressive, for such expansion;

- the Council considers that these stimulation measures should cover a significant number of researchers in the Community and requests the Commission to draw up the relevant financial estimates on the basis of a precise programme.

The Council wishes to be able to take a decision on the Commission proposals at its meeting on research on 29 May 1984.

BIOTECHNOLOGY - CONCLUSIONS OF THE COUNCIL

After a detailed and positive exchange of views on the development of biotechnological activities in Europe, the Council recognized the paramount importance for the Community's scientific, industrial and agricultural development of a European programme in this field of the future.

The discussion, on the basis of the work done by the Commission in particular, led to the following conclusions:

- horizontal projects should be put in hand as a matter of priority in the field of research with regard to training, information, basic research and the setting up of networks of teams and laboratories; the establishment of a European network of biological resources banks and biotechnological data banks;

- in the second place, steps should be taken to improve the regulations framework, including the system of intellectual property rights, with a view to facilitating the production marketing and utilization of biotechnology products;

- the role played by the conditions of access to raw materials of agricultural origin in this field is very important. In this regard the Commission is requested to formulate proposals aimed at securing competitive conditions for European industry;

- the close association of laboratories and undertakings in devising and executing such a programme must form the subject of a supplementary evaluation. The Commission will study the possible details.

It is essential, from the standpoint of effectiveness, for proper concertation to be established between the national policies pursued by each Member State and for any unnecessary duplication to be avoided in the Community programme.

The Council requests the Commission to continue its work in close liaison with the Member States on the basis of the above guidelines, with a view to submitting suitable proposals to it for the development of biotechnological activities in Europe and the relevant financial estimates. These proposals will have to be drawn up by the Commission so as to enable the Council to take a decision at its meeting on 29 May 1984.

REVISION OF THE ENVIRONMENT PROGRAMME

The Council approved the Decision on the revision of the sectoral research programme in the field of environment (environmental protection and climatology)(1981-1985).

This Decision is directed towards intensifying research work within the framework of the programme adopted in 1981, notably as regards acid rain and the management of toxic and dangerous waste, and accordingly increases the appropriations deemed necessary for such work from 42 MECU to 49,3 MECU.

EXTENSION OF THE DATA PROCESSING PROGRAMME

The Council gave its agreement to the extension of the second part of the multiannual programme in the field of data processing adopted in 1979.

The aim of this extension is to strengthen, by means of projects for the application of data processing, the competitiveness of the Community's software industry.

The Council agreed to examine this programme by the end of the year, with a view to co-ordinating this programme's activities with those of the ESPRIT programme.

OTHER RESEARCH PROGRAMMES

The Council once again examined the problems outstanding - notably the question of funding - as regards the research programme concerning:

- non-nuclear energy (1983-1987);

- the field of radiation protection (1985-1989);

- basic technologies.

It agreed to return to the matter at its next meeting, scheduled for 29 May, in the context of the discussion which it intends to hold on Community research priorities as a whole (see last paragraph on p. 3 above).

REACTOR SAFETY

The Council discussed the problems arising with regard to the research programme on reactor safety. At the end of its discussion it called upon the Commission to give the matter further consideration in conjunction with the Member States.

Bruxelles, le 27 fevrier 1984

NOTE BIO (84) 93 AUX BUREAUX NATIONAUX
CC AUX MEMBRES DU GROUPE

Preparation Conseil Recherche du 28 fevrier (W.Helin)

1. Le programme ESPRIT devrait, enfin, obtenir le "feu vert" formel des Dix, mardi a Bruxelles. (Voir P-40 mai 1983).

2. La Commission espere obtenir egalement l'accord du Conseil sur une revision du programme de recherche concernant la protection de l'environnement. Ce programme, qui est en cours et vise la periode 1981-1985, devrait, selon la Commission, se concentrer en priorite sur les problemes lies aux pluies acides d'une part, et aux dechets toxiques et dangereux d'autre part.

3. La strategie dans le secteur de la biotechnologie fera l'objet d'un debat de fond afin que la Commission puisse presenter dans les prochaines semaines des lignes d'action concretes.

Amities,

W. HELIN COMEUR 19.00////

Bruxelles, le 28 fevrier 1984

NOTE BIO(84)93 (SUITE 1) AUX BUREAUX NATIONAUX
C.C. AUX MEMBRES DU GROUPE DU PORTE-PAROLE

CONSEIL RECHERCHE (Willy HELIN)

1. ESPRIT - LE FEU VERT DEFINITIF

Les Dix ont formellement approuve le programme ESPRIT mardi matin a Bruxelles. Ce programme qui doit mettre en place une percee technologique en Europe dans le secteur des technologies de l'information est une veritable strategie de rattrapage qui doit permettre a l'industrie europeenne a termes (10 ans) de depasser la concurrence americaine et japonaise. Les Dix ont approuve l'enveloppe financiere que reclamait la Commission europeenne, a savoir 750 millions d'ECUS pour les cinq premieres annees du programme. Un montant identique sera mis a la disposition du programme par les industriels du secteur.
(Pour les details voir P-40 de mai 83.)

2. RECHERCHE - ENVIRONNEMENT

(voir BIO(84)93 du 27.2.84)

Les Dix ont egalement approuve - comme on s'y attendait - une revision du programme de recherche dans le secteur de l'environnement qui doit permettre a la Commission de concentrer ses activites sur deux aspects particuliers, a savoir les pluies acides d'une part et les dechets toxiques et dangereux d'autre part.

A SUIVRE

Amities,
M. SANTARELLI/COMEUR 13.05

Bruxelles, le 28 fevrier 1984

NOTE BIO (84) 93 (SUITE 2) AUX BUREAUX NATIONAUX
C.C. AUX MEMBRES DU GROUPE DU PORTE-PAROLE

CONSEIL RECHERCHE (Willy HELIN)

ACCORD SUR LE PROGRAMME ESPRIT :
L'EUROPE REDEVIENT AMBITIEUSE,
ESTIME LE VICE-PRESIDENT DAVIGNON

La decision qui vient d'etre prise, de lancer le programme ESPRIT avec un budget de 1,5 milliards d'ECUS comme le souhaitait la Commission, ouvre non seulement des perspectives de developpement importantes, mais elle signifie egalement le retour de l'Europe a l'ambition.

C'est une decision d'envergure, c'est la premiere decision optimiste des annees 83-84 qui va impressionner egalement nos partenaires americains et japonais, conscients eux aussi que le programme ESPRIT signifie un souffle nouveau pour l'Europe. Nous nous sommes en effet fixe un niveau d'activite comparable a celui du Japon et des Etats-Unis et des moyens pour le realiser.

La Commission a obtenu en quelque sorte aujourd'hui des lettres de creance : cela signifie que lorsque nous evoquerons les actions concretes dans les secteurs des telecommunications et de la biotechnologie, on ne pourra pas nous opposer d'alibi quant a l'envergure de ces programmes.

Il est significatif de l'excellente atmosphere qui a regne au Conseil ce mardi, que la decision sur ESPRIT ait ete prise sans arriere-pensee et sans lien avec le contentieux budgetaire general qui caracterise le debat actuel de la Communaute. Concretement,la preuve a ete faite qu'il s'agit bien d'un programme strategique : la gestion d'ESPRIT sera entierement orientee sur les objectifs a atteindre. L'enveloppe financiere retenue n'est donc pas un quelconque subside ni un fond que l'on distribue. L'objectif poursuivi par ESPRIT permettra la realisation d'importantes innovations par des entreprises petites et moyennes grace a la presence et a l'infrastructure des grands projets.

Tout ceci demontre, conclut le Vice-President DAVIGNON, que lorsque l'on peut faire entrevoir clairement aux gouvernements l'impact de la non-decision, le bon sens reprend le dessus.

A SUIVRE
Amities, M. SANTARELLI COMEUR 15.05