

COMMISSION OF THE EUROPEAN COMMUNITIES

COM(82) 737 final

Brussels, 16 November 1982

Proposal for a

COUNCIL DECISION

on a preparatory phase for a Community research and development programme
in the field of information technologies

(submitted to the Council by the Commission)

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THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,
and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament, (1)

Having regard to the opinion of the Economic and Social Committee, (2)

Whereas by its Resolution of 14 January 1974 the Council invited the
Commission to define projects of interest to the Community in the field of
science and technology ;

Whereas the need to develop scientific and technical research at Community
level was stated by the Council on 9 November 1981 and the Heads of State
or Government on 26 and 27 November 1981 ;

Whereas the overall Community strategy results from the creation and
implementation of a general framework programme of common scientific and
technical activities ; whereas amongst the basic options proposed by the
Commission for the framework programme the "promotion of industrial
competitiveness" calls for special support measures ; whereas the
development of the new information technologies is a special objective,
especially as they must back up and enhance the efficiency of the
Community's research and innovation capability, which are essential
factors for European industrial competitiveness ;

Whereas it is necessary to make an urgent start on a preparatory phase in
order to prepare a full-scale programme of research and development in
information technologies ;

Whereas the Treaty establishing the European Economic Community has not
provided the necessary powers for this purpose,

(1) (date + reference)

(2) (date + reference)

HAS DECIDED AS FOLLOWS :

Article 1

A Community research and development activity in the field of information technologies is adopted for a maximum period of one year commencing not earlier than 1 January 1983.

This activity will be a preparatory phase for a Community research and development programme in this field.

Article 2

The activity is designed essentially to verify the approach to the establishment, in the field of information technologies, of precompetitive research and development cooperation at Community level concerted with national programmes.

The activity will take account of requirements regarding the development of standards to serve the interests of European industry in this field.

The activity will consist of 16 pilot projects as defined in the Annex (1). The projects will be executed by means of shared cost contracts, normally on the basis of a minimum of 50% from contractors with the remainder being contributed by the Community. In some exceptional cases, it may be necessary to fall below the minimum of 50% from contractors but, in all cases, a substantial contribution from contractors will be required.

Article 3

The activity will be open, on an equal footing and under appropriate conditions, to participation by all undertakings, including small and medium sized undertakings, universities and other bodies in all the Member States which are carrying out research and development activities in information technologies in the Community and which are interested in taking part. Each contract should have at least one industrial participant.

(1) Annex I

Article 4

The Community funds estimated as necessary for the execution of the activity should be 11.5 MECU.

Article 5

The Commission will institute an evaluation by experts of the experience obtained during the activity with special reference to the establishment of precompetitive research and development cooperation at Community level concerted with national programmes and will transmit a report thereon to the Council at the end of the activity.

Done at Brussels, December 1982.

For the Council

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The pilot Projects include within the given areas the following specific R&D projects :

I. Advanced Microelectronics

- Advanced Interconnect for VLSI

The development of a multi-layer metal interconnection technology that will enable one micron minimum feature size components to be interconnected at high density within the chip.

- High Level Computer Aided Design for Interactive Layout and Design.

The development of new high level computer aided design tools needed to solve the layout and connectivity problems inherent in VLSI circuit technology.

II. Software Technology

- Portable Common Tool Environment

A research and development project to investigate the problems of providing a common base for software development toolsets to be used to foster European cooperative research and development in software technology. The work should lead to a software tool environment and the definition of interfaces and standards.

- Formal Specification & Systematic Program Development

A research and development project to identify a systematic approach to software development based on formal specifications and transformations of representations and to develop a coherent toolset supporting each phase of the software life cycle.

- Software Production & Maintenance Management Systems (SPMMS)

A research and development project to define and implement a complete consistent and efficient information management system for all the activities in the life cycle of software. Emphasis is on the organisational aspects of software development, on the product characteristics of software, and on the mutual dependencies between business and technical decisions.

III. Advanced Information Processing

- Advanced Algorithms and Architecture for Signal Processing

To develop algorithmic structures, languages for expressing them and experimental prototypes for signal processing leading to a technology for the man machine interfaces that will be an essential part of future information systems and will enable input and output information to be spoken and visual.

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- Knowledge Information Management System

A research and development project leading to the definition and construction of experimental prototypes of a first generation knowledge based system. These will serve as vehicles for the development of advanced knowledge processing technologies.

- Interactive Query System

A research and development project concerning query language, inference techniques and query optimization leading to the technology needed for interactive query systems that will be significantly easier to use by non-dp experts.

IV. Office Automation

- Functional Analysis of Office Requirements

A methodical investigation leading to the classification of office activities by high level function. The classification will enable the functional specifications of new systems to be formulated and the technologies needed to implement the chosen functions to be developed.

- Multi-media User Interface at the Office Workstation

A research and development project leading to the development of the technologies needed to handle in an integrated way multi media communications and documents, carrying simultaneously text, picture and voice. Work is to include ergonomic considerations of new terminals that will be needed.

- Local Wideband Communication System

A research and development project to define and take to experimental prototype stage a local area wideband communications system embracing speech data, text, graphics and video, that can also form the basis for a European standard.

- Office Filing & Retrieval of Unstructured Information

A project defining office filing systems permitting (partially content addressable) retrieval of mixed mode information. This is expected to lead to the establishment of requirements and functional capabilities suitable for standardisation proposals.

V. Computer Integrated Manufacturing (C.I.M.)

- Design Rules for Computer Integrated Manufacturing Systems

A methodical investigation into the design rules required for system integration of different sub-systems of computer integrated manufacturing systems. The investigation is to include a detailed study of manufacturing system design for the automated factory covering such topics as operating rules, production control, productivity and economic factors.

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- Integrated Microelectronic Sub-Systems for Plant Automation

A development project to design, develop, test and prove experimental prototypes of a single chip integrated three axis continuous path interpolator, a single chip integrated axis controller and a single chip integrated servo interface. The work is to be done for application to machine tool and robot control systems.

- Process and Production Control based on Real-Time Imaging Systems and as a tool for cooperative R&D

A research and development programme to define target applications involving 2 1/2 and 3D imaging, utilising visual, tactile and thermal sensing and to implement the hardware and software development of an experimental prototype with which to demonstrate and study, complex, real time, image driven, pattern directed control applications in actual or simulated production environments.

.VI. Information exchange system.

A system for exchange of information and to link computing facilities to allow distributed software development.

ARTICLE 773 — STRATÉGIE COMMUNAUTAIRE EN MATIÈRE DE TECHNOLOGIE DE L'INFORMATION

Action nouvelle

POSTE 7730 — ACTIONS PRÉPARATOIRES AU PROGRAMME ESPRIT

(en Écus)

1983 — crédits d'engagement demandés	11 500 000	
— crédits de paiement demandés		7 500 000

1. Base juridique et description de l'action

a) Base juridique

- Résolution du Conseil du 15 juillet 1974 concernant une politique communautaire de l'informatique.
- Communication de la Commission au Conseil européen « La Société européenne face aux nouvelles technologies de l'information : une réponse communautaire » (COM(79) 650 final du 26.11.1979).
- Résolution du Conseil du 11 septembre 1979 concernant une action communautaire de promotion de la technologie microélectronique.

b) Description de l'action

Reconnaissant comme la Commission des CE la nécessité et l'urgence de développer une stratégie commune, les principales sociétés européennes actives dans le domaine des technologies de l'information ont procédé avec le concours de la Commission à un « Exercice conjoint de planification en technologies de l'information » (JEPE-IT, Joint European Planning Exercise). En 1982, une centaine d'experts de ces sociétés prennent part à l'exécution de cet effort de réflexion et d'identification des objectifs.

Le Conseil sera appelé à statuer sur une proposition de la Commission concernant un programme stratégique d'action dans le domaine des technologies de l'information, le programme ESPRIT. La date visée pour le début de ce programme est le 1^{er} janvier 1984. Il comprendra des projets à mener en coopération entre des firmes industrielles et des instituts, pendant une durée de 5 à 10 ans, l'objectif visé étant qu'au terme de cette période, une amélioration substantielle et durable ait été provoquée dans la situation de l'industrie européenne des technologies de l'information.

Un programme d'une telle portée demandera au cours des exercices à venir la mise en œuvre de moyens d'une importance proportionnelle.

Le lancement d'un programme de cette importance pose de nombreux problèmes pratiques, en particulier dans le domaine de l'organisation de la coopération, des modes de financement, de l'exploitation des résultats. Afin de pouvoir entreprendre le programme ESPRIT en 1984 dans des conditions optimales, il importe d'accumuler préalablement les solutions les plus opérationnelles et d'en faire la vérification. C'est dans cette perspective de préparation que seront lancés en 1983 un nombre limité de projets pilotes ponctuels. L'exécution de ces projets pilotes, utiles en eux-mêmes, ne préjugera pas la décision du Conseil sur le programme ESPRIT.

2. Nature de la dépense

La participation de la Communauté permettra de financer les projets pilotes à raison de 50 %, le reste étant financé par l'industrie.

3. Mode de calcul et justification de la variation

a) Mode de calcul

Évaluation faite en liaison avec l'industrie sur base du coût du personnel hautement qualifié à affecter aux projets pilotes.

ÉCHÉANCIER PRÉVISIBLE DES CRÉDITS DEMANDÉS POUR 1983

(en Écus)

Engagements		Paie ments			
		1982	1983	1984	Exercices ultérieurs
Engagements contractés avant 1982 à liquider sur crédits de paiement nouveaux					
Crédits substituants de 1981					
Crédits 1982					
Crédits 1983	11 500 000		7 500 000	2 000 000	2 000 000
Total	11 500 000		7 500 000	2 000 000	2 000 000

b) *Justification de la variation*

Ces actions préparatoires doivent constituer la démonstration de l'avantage que peuvent retirer les États membres et l'industrie d'une coopération étroite au niveau communautaire, impliquant la mise en commun de ressources humaines et matérielles.

Action nouvelle

POSTE 7731 — ESPRIT — PROGRAMME STRATÉGIQUE D'ACTION EN MATIÈRE DE TECHNOLOGIE DE L'INFORMATION

(en Écus)

1983 — crédits d'engagement demandés	p.m.	
— crédits de paiement demandés		p.m.

1. Base juridique et description de l'action

a) *Base juridique*

- Résolution du Conseil du 15 juillet 1974 concernant une politique communautaire de l'informatique.
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- Résolution du Conseil du 11 septembre 1979 concernant une action communautaire de promotion de la technologie microélectronique.
- Proposition de décision du Conseil concernant le programme ESPRIT (European Strategic Programme in Information Technologies) (COM) 82...

b) *Description de l'action*

Le Conseil sera appelé à statuer sur une proposition de la Commission concernant un programme stratégique d'action dans le domaine des technologies de l'information, le programme ESPRIT.

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Ces projets pilotes porteront sur les cinq domaines du programme :

- traitement de données avancé,
- technologie du logiciel,
- technologie avancée des circuits intégrés,
- bureautique,
- technologie de production flexible.