European Communities

EUROPEAN PARLIAMENT

Working Documents

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REPORT

drawn up on behalf of the Committee on Energy, Research and
Technology

on the proposal from the Commission of the European Communities
to the Council (Doc. 1-466/83 - COM(83) 258 final)
for a Decision adopting the first European Strategic Programme
for Research and Development in Information Technologies
(ESPIRT)

Rapporteur: Mr P. VERONESI

By letter of 20 June 1983, the Council of the European Communities consulted the European Parliament, pursuant to Article 235 of the EEC Treaty, on the proposal from the Commission of the European Communities to the Council for a decision adopting the first European Strategic Programme for Research and Development in Information Technologies (ESPRIT).

The President of the European Parliament referred this proposal and the motion for a resolution tabled by Mr PURVIS and others (Doc. 1-340/83), pursuant to Rule 47 of the Rules of Procedure, to the Committee on Energy, Research and Technology as the committee responsible and to the Committee on Budgets and the Committee on Economic and Monetary Affairs for their opinions.

At its meeting of 15 June 1983, the committee appointed Mr VERONESI rapporteur.

It considered the Commission proposal and the motion for a resolution tabled by Mr PURVIS and others at its meetings of 12 July 1983 and 21 September 1983. At the latter meeting, it decided unanimously to recommend that Parliament should approve the Commission proposal and adopted unanimously the motion for a resolution as a whole.

The following took part in the vote: Mr SELIGMAN, acting chairman; Mr VERONESI, rapporteur; Mr BERNARD, MR GHERGO (deputizing for Mr SASSANO), Mr HERMAN (deputizing for Mrs PHLIX), Mr MORELAND, Mr PEDINI, Mr PFLIMLIN, Mr PURVIS, Mr SCHMID, Mrs VANDEMEULEBROUCKE (deputizing for Mr CAPANNA).

The opinions of the Committee on Budgets and the Committee on Economic and Monetary Affairs will be published separately.

This report was tabled on 22 September 1983.

C O N T E N T S

Annex: Motion for a resolution tabled by Mr PURVIS and others
          on research in information technologies to the year 2,000

The Committee on Energy, Research and Technology hereby submits to the European Parliament the following motion for a resolution:

MOTION FOR A RESOLUTION

closing the procedure for consultation of the European Parliament on the proposal from the Commission of the European Communities to the Council for a decision adopting the first European Strategic Programme for Research and Development in Information Technologies (ESPRIT)

The European Parliament,

- having regard to the proposal from the Commission to the Council (COM(83) 258 final),
- having been consulted by the Council (Doc. 1-466/83),
- having regard to the motion for a resolution tabled by Mr PURVIS and others (Doc. 1-340/83),
- having regard to the report of the Committee on Energy, Research and Technology and the opinions of the Committee on Budgets and the Committee on Economic and Monetary Affairs (Doc. 1-   /83),
- having regard to the result of the vote on the proposal from the Commission,

1. Approves the proposal for a Council decision;

2. Requests that the guidelines followed for the implementation of the proposed five-year research programme should be those laid down in its resolution of October 1982, the contents of which it affirms in their entirety (Doc. 1-682/82)[1];

3. Calls on the Commission to monitor closely general developments (techno-logical and economic) in the sector in accordance with the points made in the motion for a resolution by Mr PURVIS and Mr SELIGMAN (Doc. 1-340/83), which it endorses;

4. Instructs its President to forward to the Council and the Commission the proposal from the Commission as voted by Parliament and the corresponding resolution as Parliament's opinion.

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[1] OJ No. C 304, 22.11.1982, p. 261

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EXPLANATORY STATEMENT

I - INTRODUCTION

1. The Treaties of Rome do not mention a common scientific research policy, apart from a reference to
   - coal and steel (Article 55 of the ECSC Treaty of 18 April 1951);
   - agriculture (Article 41 of the EEC Treaty of 25 March 1957).

   The EAEC (EURATOM) Treaty lays down a number of research objectives, programmes and measures (Articles 2 and 4(2) of the EURATOM Treaty of 25 March 1957) relating exclusively to nuclear energy.

2. Faced with the meteoric developments in technological progress and new technologies and in their dramatic economic and social impact, the 1972 Paris Summit of Heads of State or Government identified the need for a coordinated Community commitment in this field.

   On instructions from the Foreign Ministers, in 1973 the Commission drew up a document on objectives and instruments for a common scientific research policy.

   For the last ten years, then, the Community has been active in various scientific and technological research sectors, although limited financial resources have been allocated to these activities (see LINKOHR report: Doc. 1-654/82).

3. It would be useful at this point to summarize once again the major initiatives in the field of information technology:
   (a) July 1974: Council resolution in favour of a uniform informatics policy, which explicitly lays down the objective of creating 'by the beginning of the 1980s a European industry which is fully viable and competitive in all sectors of common interest and open to transnational cooperation'

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(b) September 1975: submission by the Commission of a communication on a 'Community policy in the informatics sector - First elements of a medium-term programme - Second group of priority proposals' (COM(75) 647 final)

(c) November 1976: in COM(76) 524 final the Commission submitted a 'four-year programme for the development of informatics' as the basis of activities for the period 1979-1983

(d) December 1979: following instructions issued at the Bonn Summit, the Commission drew up a document entitled 'European society faced with the challenge of new information technologies: a Community response' (COM(79) 650 final)

(e) September 1980: the Commission carried out an initial assessment of activities in this sector in its communication to the Council entitled 'New information technologies: first Commission report' (COM(80) 513 final). This background information is well known and was also included by the rapporteur in his first report on ESPRIT (Doc. 1-682/82). It is reiterated here to provide a clearer framework for the programme in question.

4. In 1982 the Commission confirmed its interest in informatics and all related applications in a new series of proposals.

Three important documents were submitted to the Council:

(a) COM(82) 287 final - 'Towards a European Strategic Programme for Research and Development in Information Technologies'

(b) COM(82) 486 final - 'Laying the foundations for a strategic programme of research and development in information technology: the pilot phase'

(c) COM(82) 737 final - 'Proposal for a Council decision on a preparatory phase for a Community research and development programme in the field of information technologies'.

The three documents together form the basis for the ESPRIT programme, for which further and more general justification is provided in the following documents:

(d) COM(81) 639 final - 'A Community strategy to develop Europe's industry'

(e) COM(82) 865 final - 'Proposals for a European scientific and technical strategy: framework programme 1984-1987'.

5. The document under consideration here - COM(83) 258 final of June 1983 - contains the proposal for a Council decision adopting the first European Strategic Programme for Research and Development in Information Technologies (ESPRIT), which complements the documents referred to under point 4 above.

Leaving aside the fact that the term 'first programme' is questionable, given all the efforts of the last ten years, in their planning aspect the group of documents and proposals relating to the ESPRIT programme forms a logically and formally convincing whole. Following its sound analysis of the present situation and future prospects of information technologies at both international and Community level and its proposal for pilot projects, the Commission is now envisaging the implementation of a multiannual, structured programme.

It is worth repeating that this is the natural culmination of all that was analysed and investigated in the previous documents.

6. The rapporteur does not, therefore, see any point in repeating yet again all the general points justifying the Commission's initiative. Our Committee and Parliament itself have several times discussed these matters in depth and at length and all Members are aware of them.

There is no need to stress once again the Community's alarming inferiority in the scientific, technological and commercial field when compared to the USA and Japan. An attempt could perhaps be made to identify the failure to take a decisive initiative, on the part both of the individual Member States and of the Community, which has exacerbated this inferiority despite ten years' clear and accurate political awareness of the problem.

It would be interesting to probe the practical and subjective causes of this situation and indeed the success of the programme depends upon such an investigation.

II. THE STRATEGIC PROGRAMME

7. The document under consideration, COM(83) 258 final, is clearly the work of several authors. The same subjects (and even the same tables) appear more than once, though from slightly different angles. This is not a defect, but it does present a difficulty for the Members who have to read the document. This second part of the explanatory statement will therefore seek to summarize the document and to provide a systematic outline of the proposed strategic programme.

However, the rapporteur will obviously not discuss the merit of the more strictly technical aspects, both because he is not competent to do so and because Parliament's assessment must relate essentially to the political aspects.

(a) Content

8. The ESPRIT programme covers five priority research areas. Although they are mentioned several times in the documents referred to above, it will perhaps be useful to reiterate them as a reminder, without further comment:

- advanced microelectronics
- software technology
- advanced information processing
- office systems
- computer integrated manufacturing.

These sectors have been chosen as a result of

- extensive consultations
- a high degree of selectivity designed to produce a programme which focuses on key technological themes, without presuming to cover every aspect of informatics.

A further influential factor was the awareness that, given the increasing use of this technology and the involvement of an ever larger number of people, the resulting software and hardware must aim for maximum simplicity in their structure and maximum ease of use.

9. The programme provides for long-term, more complex projects requiring a large input of resources, known as type A projects, and short and medium-term projects, known as type B projects.

The projects will be assessed and selected on the basis of criteria relating to

- technical soundness
- Community dimension
- industrial strategy contribution
- economic and commercial exploitation of results.

(b) Resources available

10. As regards the resources for the implementation of the programme, the Commission identifies two vital conditions presupposing a 'joint effort' (the term used in the Commission document), which the rapporteur hopes would be coordinated between research institutes (public and private) and industry (large and small).

The two conditions are:

- concentration of human and financial resources
- compatibility of such resources with the planned objectives.

To adopt any less stringent criteria would be to render all hope of success illusory and the Community proposal merely a weak, and expensive, profession of good intentions.

11. Table 1 of the Commission proposal indicates that human resources will be built up during the first five-year phase of the programme, 1984-1988, to a maximum of 1967 man-years/year, involving scientific and technical workers and with the Community providing 51 staff in Category A (47 scientific and 4 administrative), 9 in Category B (4 scientific and 5 administrative) and 31 in Category C (all administrative).

12. The financial resources involved in the programme during the first five-year phase of implementation should total around 1.5 m ECU, 50% of which would be granted by the Community.

The main emphasis is on indirect action (50% of the financial costs to be contributed by the EEC), but more varied forms of financing are not excluded in order to take account of the different situations (e.g. small undertakings, universities) of the contracting parties.

In the light of the proposed objectives, the rapporteur considers the general resources available to be the absolute practicable minimum.

(c) Management methods

13. The arrangements for managing the programme appear to be well thought out and balanced (provided the necessary resources are made available in good time and without any bureaucratic or political obstacles).

The Community programme is expected to last for a total of ten years, divided into two five-year phases.

The following are envisaged to ensure efficient management:
- regular and systematic consultations between the Community (Commission), the Member States (national administrations), academic institutes, and industries in the sector
- organizational infrastructures and instruments designed to facilitate the implementation of the programmes and the achievement of the proposed objectives
- smooth administrative procedures for the implementation of the contracts
- advice of a Management and Consultative Committee (MCC).

(d) Monitoring and control

14. The Commission proposal provides for the programmes to be monitored (as a rule each year) in relation to
- their implementation
- their soundness
- the results achieved.

This clearly involves

- not an overall, fundamental review of the programmes (other than under truly exceptional circumstances) but

- establishing whether there is a need to update and modify the programmes by means of timely adjustments prompted both by the progress of the work and by general developments in technology at international level.

The rapporteur sees as justifiable this concern to provide for adequate flexibility in the implementation of the various projects.

(e) Utilization of results

15. In order to exploit fully the synergetic effect of ESPRIT, it is essential to ensure adequate dissemination of information and results and free access to their industrial and commercial utilization.

For this purpose, in addition to conventional methods of exchanging information (meetings, workshops, secondment of researchers, etc.), the Commission has provided for a special clearing house infrastructure to facilitate the provision of information on the progress and results of the work.

16. The general guidelines adopted for exploitation of results are those applicable to other projects financed by the Community, that is, that 'ownership and the right to exploit any information and industrial property rights resulting from the work under any contract (foreground information) will normally reside with the contractors'.

17. This is clearly a delicate area, not least because the projects are to involve research at pre-industrial level (a concept which has not yet been precisely defined).

There has been much discussion of this aspect in the past, both in the Committee on Energy, Research and Technology and in the Committee on Economic and Monetary Affairs and it still prompts considerable uncertainty and confusion. The subject will be taken up again in part IV of this report.

III. THE COUNCIL DECISION

18. The proposal for a Council decision cites two basic justifications for
    its adoption:

    (a) the need to create a common market and to approximate the economic
        policies of the Member States, possibly by integrating these policies;

    (b) the recognition of the exceptional importance for these objectives
        of developing scientific and technological research and, in parti-
        cular, information technologies.

        In addition, the Council refers to the fact that the programmes in
        the pilot phase had a wide impact in the economic and scientific
        world and prompted a response from industry, universities and research
        institutions which was of very high quality and showed considerable
        interest.

19. As already mentioned, the decision relates to an initial five-year period
    of implementation of the programme (from 1 January 1984) but provides for
    it to be extended for a further five years. In essence, the six articles
    comprising the proposal for a Council decision summarize and systematize
    all the financial, administrative and practical aspects of the programme
    already dealt with in part II of this report.

20. The two annexes to the proposal for a decision contain a more detailed
    analysis of the whole range of problems connected with the strategic
    programme.

    They are of major interest and form a more solid technical and scienti-
    fic study. They are extremely useful in creating a more soundly based
    and rational awareness of the problems of informatics and the role of
    this complex technology in the development, for good and for evil, of
    modern industrialized societies.

    As already stated, the rapporteur considers it neither appropriate nor
    useful to make detailed reference to these documents.

IV. POLITICAL COMMENTS

21. Parliament has already discussed the ESPRIT project and it adopted a resolution on the subject at the October 1982 part-session. This resolution supported the Commission's proposal and raised various political questions which have in no way lost their relevance.

   Although it would be inappropriate to reiterate all the critical points made on that occasion, some should be reaffirmed, not least because the Commission, and in particular the Council, have shown no sign of taking into account the comments made by the Committee on Energy, Research and Technology and endorsed by parliament.

22. The first prerequisite for the success of the programme is a reliable source of finance. This may seem a superfluous, banal and indeed fatuous comment, but it is harshly indicated by recent experience.

   There have been a series of alarming decisions:
   - suspension of research projects already under way (with a considerable wastage of resources)
   - cuts in the financing of multiannual programmes precisely in their final phase (thereby wasting much of the work already done)
   - pretentions to implementing, to an absurd and unreasonable extent, mobility of research workers between activities with little inter-connection (impossible to carry out in a short period)
   - hypocritical attribution to the JRC and its staff of blame and respon-sibilities which lie elsewhere (Council).

   Parliament cannot and must not tolerate such actions, which are becoming increasingly frequent. It has a political and moral duty to the people of Europe which elected it openly to denounce this unacceptable situation.

23. The second requirement for a successful outcome to the programme lies in a practical assessment of the limitations and possible shortcomings of previous experience.

This invaluable source of guidance should not be seen as a 'putting on trial by Parliament' but as a vital part of the procedure. It is essential to profit from the lessons provided by activities undertaken in the past in order to make those about to be launched more incisive and effective.

The rapporteur does not consider that the Commission has so far made an adequate move in this direction.

24. The third prerequisite is constantly to check that the objectives and the means used to achieve them are compatible, a point of which the Commission has shown itself to be fully aware. The Council must be asked to show a willingness to take account of exceptional requirements if and when they arise (as frequently happens in the field of research) during the implementation of the programme.

25. An important, and, as the rapporteur admits, extremely delicate aspect is the relationship between Community and national initiatives.

The governments of various EEC countries have allocated substantial sums to national programmes.

What is this relationship with Community programmes and in particular with ESPRIT? Has consideration been given to the possibility, and in particular to the advantage, of closer cooperation being introduced at this level too? What is the attitude of industry and of the national authorities? These questions are extremely interesting, though fraught with difficulties. Adequate answers must, however, be found to them to ensure a European revival in this sector.

26. Although the Commission documents referred to do mention the market they do not assign to it sufficient importance. It has been noted on more than one occasion that technological research cannot be regarded exclusively as an attractive and enthralling intellectual adventure. It cannot ignore the market, understood in its more global sense as the creation of resources and the exploitation of services which improve the quality of life, the organization of human society and social advancement.

The 260 million citizens of Europe already represent a large potential market, or at least an internal, predominantly self-sufficient market

(free from any protectionism). To ensure this, appropriate steps must be taken based primarily on measures designed to harmonize bureaucratic and administrative procedures and services.

The rapporteur does not intend to dwell on this important point but hopes that it will be taken up and considered in depth by the Committee on Economic and Monetary Affairs, which has been asked to deliver an opinion on the proposal for a Council decision.

27. An important aspect of information technologies is teleinformatics, which provides a link with telecommunications technologies. According to the rapporteur's information, the Commission has drawn up a specific programme for this sector which will provide an opportunity for a thorough examination and assessment of this highly important technological field.

V. COMMENTARY ON A NUMBER OF OWN-INITIATIVE MOTIONS FOR RESOLUTIONS TABLED BY MEMBERS OF PARLIAMENT

28. The subject of information technology has for ten years evoked lively interest among Members of Parliament and it continues to do so. There is a lively and clear awareness of the current and future role which such technologies, with all their implications and consequences, will play in the development of industrialized societies.

The daily political press, using fantastic and picturesque images, and the specialist press, with a sounder scientific content, have for some time been weaving various scenarios around the possible changes which may be brought about in the way of life of individuals and nations and in relations between different nations.

Such speculation reveals a mixture of hopes and concerns, enthusiasm and scepticism.

The following text considers and comments on four recent proposals, taken not in the order in which they were tabled but in relation to their content.

29. SIEGLERSCHMIDT and GLINNE oral question (Doc. 1-42/83): 'Drawing up of a Community directive on the protection of the rights of the individual in the face of technical developments in data processing'.

This subject has been fully dealt with in the past and there is no need to go into it again here.

The question refers to the recommendation of 29 July 1981 in which the Commission called upon the Member States to sign, by 1982, the Council of Europe Convention on this subject. Since only six countries have complied with this request, the question proposes that, in accordance with the Commission's stated intentions, an ad hoc legal instrument be adopted based on the Treaties.

30. THEOBALD-PAOLI motion for a resolution (Doc. 1-908/82) and SABY motion for a resolution (Doc. 1-46/83).

The first motion for a resolution calls for the creation of a European Electronics and Informatics College (EEIC) and the second for the creation of a European scientific computer centre.

Our committee has always been openly diffident about the creation of new structures, an attitude which, in the rapporteur's view, is rational and not a priori and based on an objective assessment of all the implications of such proposals. Only a genuinely favourable cost-benefit ratio - to be rigorously checked in relation to both the immediate and the potential consequences - can justify such decisions.

In this particular case our committee requested the Commission to identify existing potential within the Community in the two abovementioned areas. No information has as yet reached Members of Parliament in this connection.

31. However, these motions for resolutions are prompted by a more far-reaching and undeniable requirement - the need for instruments and structures to coordinate the activities envisaged by the Community.

Without contradicting the comments made under point 30, which he firmly supports, the rapporteur considers it useful to pose a number of questions, prompted by more general considerations.

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- Does the management committee envisaged for the ESPRIT programme offer adequate practical and operational guarantees as regards its ability to manage the programme?

- Is it realistic to expect fruitful cooperation between the various partners, given that it is, after all, to be based primarily on spontaneity?

- Would it not be useful to establish a practical point of reference with a view to overcoming the limitations of past experience?

- Is the 'clearing house' intended to fulfil this role?

32. These considerations are also prompted by an assessment of the measures taken by the giants in the field, the USA and Japan. In this connection, it is not merely a question of examining the scale of investment of human and financial resources in research into information technologies but of gleaning the managerial techniques used in these countries, which ensure that their programmes are implemented extremely efficiently.

33. Consider for example how the two countries are tackling the important race to build the high-speed computer (fifth generation computer)

In Japan, the MITI is coordinating six giants in the electronics field (Fujitsu, Hitachi, Nippon Electric, Mitshbishi, Oki and Toshido) for this purpose, on the basis of an initial investment of 200 million dollars.

In the USA, the same objective is being pursued by a special consortium (MCC) which groups together a dozen leading firms in the field of advanced technologies and has established a centre in Austin, Texas, with an annual budget of 150 million dollars.

It would be interesting to obtain information and analyses on, or at least some basis for assessment of, the operational structure of these coordinating centres which, while complying with market rules, succeed in achieving a remarkable level of constructive dynamism by harmonizing the interests of all the parties involved.

34. PURVIS and SELIGMAN motion for a resolution (Doc. 1-340/83). The motion relates to the request for a commitment by the Commission to monitor

closely the situation with regard to research and information technologies to the year 2000.

The rapporteur fully agrees with the need, expressed by the authors of the resolution, to 'probe the future' (by scientific, not astrological methods). Activities of this kind have been pursued for some time by the major international institutions (UNO, OECD, IEA etc.) and by many private, economic and entrepreneurial organizations (suffice it to mention in this connection the Leontiev report on economic development to the year 2000, commissioned by the UNO).

Without presuming to make any prophecies, there is no doubt that a study of the trends and their variations in the widest range of human activities could help to a certain extent to guide their development and to prevent the occurrence of unexpected 'catastrophies'.

Parliament's recent adoption of the second multiannual FAST programme (proposed by the Commission) testifies to its awareness that a commitment to medium and long-term forecasting techniques is fully justified.

The rapporteur therefore expresses his firm and sincere esteem for the PURVIS and SELIGMAN initiative.

35. The document in question refers explicitly to information technologies, to their likely development up to the year 2000 and to their possible impact on mankind in general and European society in particular, taking account of the rapid advances being made in this sector by the USA and Japan.

In the nine recitals the authors draw attention in concerned but realistic terms to certain aspects of the Community's present situation with regard to development and the market when compared with their international competitors. The points they make are already well known but their repetition is justified to back up the proposals made in the second part of the resolution. This part is further supported by the reference in the recitals to the prospects for the rapid development of information technologies now becoming evident in the most advanced countries.

The authors of the resolution take the view that this calls for a decisiv
and committed Community initiative in order to avert the danger of Europe
being dominated in the technological and scientific field by other powers
and being relegated to a subordinate role even at political level.

36. The six articles of the PURVIS and SELIGMAN resolution reassert concepts
    that are of undoubted value and are vital for a policy of European
    economic integration. They establish objectives and conditions for achie
    ing them which should be supported and which the rapporteur has set out
    in the section of political comments contained in this report. They have
    already been fully explained and do not therefore require repetition
    but the rapporteur wishes to declare his agreement in principle with the
    way in which they are expressed by the authors of the resolution.

37. That being said, the rapporteur must also draw attention to a certain
    degree of scepticism which was expressed in Parliament concerning the
    PURVIS and SELIGMAN motion for a resolution.

    In particular, paragraph 2 of the resolution is the most important but
    the least realistic. Although it makes a positive point, it is considere
    by some to be rather Utopian.

    Given that the Committee on Economic and Monetary Affairs, which has
    been asked for an opinion on the proposal for a Council decision on the
    ESPRIT project, has stated its intention of preparing a comprehensive,
    thorough and therefore soundly reasoned opinion, the rapporteur considers
    it appropriate to ask his colleagues on that committee to include in
    their consideration the PURVIS and SELIGMAN motion for a resolution. The
    committee's experience and competence would without doubt make a major
    contribution which could enhance the debate in the plenary and help
    Parliament to adopt a more soundly based and hence more authoritative
    position. The rapporteur would therefore suggest to the bureau of the
    Committee on Energy, Research and Technology that it specifically notify,
    in good time, the bureau of the Committee on Economic and Monetary Affair
    to this effect.

VI. CONCLUSIONS

38. Finally, the rapporteur calls on the Committee on Energy, Research and Technology to adopt, as regards its own terms of reference and endorsing the requests made in the resolution, the proposal for a Council decision adopting the first European Strategic Programme for Research and Development in Information Technologies.

He asks Parliament to support the Commission's initiative in accordance with the positions already adopted by Parliament in the past on this subject. He believes that this is a challenge which must be faced and he hopes for a coordinated effort and a commitment by all the political forces to wage a campaign which will to a large extent decide the future of Europe.