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Report

drawn up on behalf of the Committee for Economic and Monetary Affairs

on the Communication from the Commission of the European Communities to the Council on a Community Policy on Data-Processing

Rapporteur: Mr Pierre-Bernard COUSTÉ

PE 36.983/fin.

English Edition

At its plenary sitting of 11 February 1974 in Strasbourg, the European Parliament instructed the Committee on Economic and Monetary Affairs, as the committee responsible, to draw up a report on the Communication from the Commission of the Communities on a Community Policy on data processing (SEC(73) 4300 final).

The President of the European Parliament also asked the Committee on Energy, Research and Technology and the Legal Affairs Committee for their opinions.

The Committee on Economic and Monetary Affairs appointed Mr COUSTE rapporteur on 11 January 1974.

It considered the draft report at its meetings of 8 March and 27 May 1974 and unanimously adopted the motion for a resolution and the explanatory statement on 7 June 1974.

The following were present: Mr Lange, chairman; Sir Brandon Rhys Williams, vice-chairman; Mr Cousté, rapporteur; Mr Artzinger, Mr Baas (deputizing for Mr Brøndlund Nielsen), Mr Behrendt (deputizing for Mr Kater), Mr Krall, Mr Nørgaard, Mr Normanton, Lord Reay, Mr Scholten, Mr Thornley (deputizing for Mr Cifarelli) and Mr Wohlfahrt.

The opinions of the Committee on Energy, Research and Technology and the Legal Affairs Committee are attached.

C O N T E N T S

A

The Committee on Economic and Monetary Affairs hereby submits to the European Parliament the following motion for a resolution together with explanatory statement:

MOTION FOR A RESOLUTION

on the Communication of the Commission of the European Communities to the Council on a Community Policy on Data-Processing.

The European Parliament,

- having regard to the Communication of the Commission of the European Communities to the Council (Doc. SEC(73) 4300 final),
- having regard to the report of the Committee on Economic and Monetary Affairs and the opinions of the Committee on Energy, Research and Technology and of the Legal Affairs Committee (Doc. 153/74),

1. Approves in principle the draft Council resolution proposed by the Commission with a view to promoting a European-based data-processing industry given the essential role of this industry in the context of economic development;

2. Considers, however, in view of Europe's very weak position in this field, that the promotion of a European data-processing industry also implies the conclusion of cooperation agreements with non-dominant firms outside Europe;

3. Also considers that, in order to produce a viable European-based data-processing industry, the relevant research and development work must be carried out in industrial establishments within the Community;

4. Regrets that the Commission has not made any concrete and clear-cut proposals regarding ways and means of promoting this European data-processing industry, for without such proposals the draft resolution can be no more than a statement of 'good intentions';

5. Considers that the Commission is not making sufficient efforts to encourage the regrouping of various European firms that is essential in view of the urgent need for a European data-processing policy;

6. Considers that national or Community financial aid is not sufficient to promote a European data-processing industry and requests the Commission to undertake a study in depth of the conditions of this aid (concept of an 'infant' industry, constraints on the professions, size of technical and financial resources to be employed, effects of this aid on non-European manufacturers);

7. Invites the Commission to formulate concrete proposals for projects for both the international and national applications which it simply envisages for stimulating a European data-processing industry; hopes that the users concerned in the private sector will be involved in the determination of these applications;

8. Invites the Commission to take effective measures:

   - to ensure that common world-wide hardware and software standards are developed;

   - to obtain all possible expert advice to ensure that the standards adopted do not stifle innovation;

9. Considers the measures envisaged by the Commission in respect of the training of data-processing specialists quite inadequate;

10. Hopes that since the directives of 15 March 1971 and 19 March 1973 on the harmonization and coordination of procedures for the award of markets were not adopted, the Commission will not propose sectoral rules applicable to national policies on computer procurement before the general framework to accommodate these rules has been determined;

11. Invites the Commission to submit detailed proposals on aid for leasing and on setting up a European leasing company;

12. Points out that a European data-processing industry can develop only if the guiding principles of the Treaty of Rome are observed and invites the Commission therefore to ensure that:

   - the European data-processing industry is restructured in accordance with the rules of competition laid down in the Treaty,

   - where at all possible, the development of a European-based data-processing industry does not affect employment in this sector, with particular reference to the location of computer factories in less industrialized regions;

13. Invites the Commission to prepare without delay a directive on 'data processing and freedom' to ensure that citizens enjoy maximum protection against abuses or failures of data-processing procedures and to avoid the development of conflicting national legislations;

14. Finally, invites the Commission to submit an annual report on the developments in European data processing in view of the importance of and the urgent need for a European data-processing policy and the number of parties concerned;

15. Instructs its President to forward this resolution and the report of its committee to the Council and Commission of the European Communities.

B

EXPLANATORY STATEMENT

The measures advocated in the Communication from the Commission for a European data-processing policy can be grouped into two complementary categories: measures to promote a European-based data-processing industry and measures to ensure that there is a truly European market for this industry.

I. THE PROMOTION OF A EUROPEAN-BASED DATA-PROCESSING INDUSTRY

(a) Aim

1. The Communication from the Commission to the Council on a Community policy for data processing contains a most instructive analysis of the situation in this sector. The sector is expanding very rapidly;[1] according to the Commission, computers could become the third largest world industry by 1980, after oil and cars.

An even more important aspect of the data-processing industry is the major role it will play in economic progress: for not only has it revolutionized the processing of numerical data but it also occupies and will continue to occupy an important position as an administrative instrument and as a method of improving decision-making procedures; in this respect, data-processing will penetrate every walk of life.

The very structure of society may thus be determined in future by the way it uses data-processing systems. At a time when the energy crisis and concern for the environment are calling in question certain economic policies, data-processing will definitely have an essential part to play. In fact, the economy will increasingly depend not on the very distorted and inadequate information represented by monetary value but on a far more diversified body of information which takes account of the nature of things and not just their value.

While the data-processing industry plays such an essential role in economic development, it is noted that, in this sector, Europe is almost exclusively dependent on American technology and that a single American company, IBM, controls some 60% of the European market. The conjunction of these two circumstances form the background to the Communication from the Commission: the existence of this key sector for the economic future on the one hand and Europe's very weak position in that sector on the other.

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[1] more than 20% per year for services and small computers, but only 10-12% for peripherals and about 8% for central processors.

2. In view of this situation, the Commission's aim is to promote a European-based data-processing industry. At first sight, this initiative would seem to deserve only approval. Yet the Commission's economic analysis appears excessively optimistic, for the dominant firm is so strong that, inspite of total self-financing, it still has reserves far greater than the turnover even of its closest competitors. Manufacturers financed by purely European capital together account for 14.76% of the Western European market, i.e. less than 4% of the world market. Outside Europe their position is very weak; so the Commission seems to be optimistic in giving them 6% of the world market, which is still far below the profitability threshold of at least 10%. Furthermore, even if joint efforts by all its competitors reduced the relative value of IBM's share of the market, this firm would continue to increase in absolute value much faster than any other. Many experts conclude that whereas a firm must control 10% of the world market at present in order to reach the crucial size for survival, this percentage will be too low in 1980; so there are no guarantees for the future of an exclusively European-based industry. Consequently, although it is absolutely necessary to formulate a sectoral policy in this field, it is unrealistic on the basis of known economic data and future trends to aim at an exclusively European-based data-processing industry. Europe alone is not strong enough to be successful in the action it ought to take in the field of data-processing. The aim of a European data-processing policy therefore seems a relative one. Above all, it is doubtful whether the means the Commission intends to employ are of a nature to achieve this aim.

(b) Means to be employed

The Commission plans to promote a European data-processing industry through two sets of measures: by increasing the capability of the European industry and by increasing the applications of data processing.

3. In order to increase the European data-processing capability the Commission proposes firstly to encourage the restructuring of this industry. If various European companies regrouped, this would considerably increase their competitiveness at world level. Although there is a need for rapid action, the Commission notes, however, that such re-grouping is 'unlikely in the near future' and that in fact 'in the next three years the two major groups of companies are expected to continue to coexist competing with each other in the marketing of separate series of computers'. This being so, the Commission merely proposes limited collaboration for the time being; this may well make the anticipated regrouping very chancy, or will at least postpone it to the distant future; and yet the Commission notes the urgent need for a European data-processing policy. The Committee on Energy, Research and Technology

believes, however, that 'even if ICL's and UNIDATA's computers are different, this does not in practice constitute any great barrier to closer collaboration'. In this context, the rapporteur of this committee suggests that financial aid to European data-processing firms should be made conditional on their membership of a joint organization in which they collaborate on research work and sales and marketing policy.

4. Moreover, as stated above, to aim at a purely European-based data-processing industry would anyway seem too ambitious. Consequently, together with the need for regrouping European industries, the Commission should also have placed more stress on the need to encourage cooperation agreements with non-dominant firms outside Europe. To consider only the source of capital for data-processing firms is to take a somewhat restricted view of the problem. The considerable technological and financial contribution which non-European firms could make to Europe's economic development must not be overlooked. There are complementary interests which favour the conclusion of balanced agreements between European firms and IBM's American competitors. Considerations of the respective sizes of possible partners are merely secondary, Moverover, there is no certainty that the present disparities will lessen with time. Conversely, it is certain that IBM's competitors need Europe and that they will organize themselves accordingly; they are thus likely to become redoubtable competitors of the European firms who could have been their allies.

5. The Commission also proposes to promote this industry by granting development contracts in the manner of the United States Federal Government. It proposes action by the public sector at Community level to promote innovation by means of development contracts, especially in the field of 'terminals', where there are good commercial opportunities for European firms. However, the Council has still not approved the Commission proposal of 18 July 1972 on development contracts.

Moreover, experience shows that the effect of the aid given by the United States Federal Government on the development of the American data-processing industry must not be exaggerated. This industry has expanded mainly thanks to the size and demands of the American market. Furthermore, the Commission is right to state that the support which may have to be given to the infant European industry over the coming years must not be considered a form of permanent protection.

The Commission should here specify what it means by an 'infant' industry. UNIDATA and ICL comprise a number of firms; the most recent dates from nearly ten years ago, and the oldest was one of the pioneers of data-processing. It is possible neither to call these companies 'infant' nor to forecast how long they will require support. For a reply to this question, the Commission must be requested to prepare a detailed study of the constraints on the profession,[1] of the funds to be allocated for supporting the manufacturers, their chronological distribution, their limits, the impact of the proposed decisions on such other computer manufacturers as effectively contribute to the development of the European economy.

Moreover, is there not a risk that the manufacturers drawing this aid may be subordinated to the political wishes of the government(s) that grant it and so lose the independence essential to their competitiveness?

6. The Commission rightly points out that there are greater commerical opportunities in European data-processing for peripheral equipment than for central processors. But the Commission uses the general term 'peripherals' to cover:

-on the one hand, ancillary equipment necessarily linked to the central processor to form data-processing systems;

-on the other hand, terminal equipment or small computers which can either be linked up with the central system or, in many cases, function independently.

Each of these categories deserves to be studied separately.

It is certain, however, that the terminal-equipment and small computer industry enjoy a rapidly expanding market and, moreover, that investment is relatively low here by comparison with the investment necessary to produce central processors. That is why it would seem possible to give effective support to European producers specializing in small computers and terminals.

7. The Commission notes that the European semi-conductor industry is now entering its crucial phase but adds that this problem will be studied in a separate document.

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[1] To research and development costs (the development of a computer series costs between 2.3 and 3 thousand million francs) must be added the investment necessitated by the fact that computers are leased, the need to develop a complete range, to retain clients who become more demanding and the need for an international network. For each increase of 1 F in turnover, investments have to increase by 1 F.

Advanced research (bubble memories, holography...) could perhaps be conducted in universities. Applied research is already so costly that apart from IBM, the HONEYWELL Group is the only firm to allocate sufficient funds (more than $100 million per year) to ensure that the time needed to develop a new generation of products will not exceed the life-span of the preceding generation.

Will the Commission's document on semi-conductors take account of these constraints? When will it be ready?

8. In order to stimulate the application of data-processing, the Commission proposes a wide series of applications of an international and national character both with a view to saving public money and to stimulating the European data-processing industry.

At international level it should be recalled that the solutions adopted ought to be:

- open, since major international applications are not of interest only to the Community Member States; it must remain possible to liaise with other European or non-European countries within the framework of data-processing networks;

- effective and, therefore, should exploit the most appropriate techniques, using where necessary the experience acquired by other countries.

Regrettably, the Commission merely alludes to possible applications without making any concrete proposals. It will therefore have to specify the conclusions arrived at by the study designed to identify priority projects, as also the conditions under which such projects will be carried out.

9. At national level the same remarks apply. Moreover, the proposed applications will very often relate to questions of direct interest to a number of users in the private sector; the possibility of their collaboration is therefore worth considering. In the private sector the Commission further proposes giving priority to the development of applications in sectors that will be the subject of Community sectoral policies. Should applications be limited to these sectors, or would it not be preferable for the industry itself to determine the applications required?

Consequently, quite apart from the fact that the Commission's aim is no more than relative, it is regrettable that the Commission limits itself in the draft resolution to listing its 'good intentions' (as the report of the Committee on Energy calls them) in respect of action to be undertaken. More vigorous action to promote the regrouping of European firms is essential and concrete proposals in the near future must be sub-

mitted by the Commission.

However, the development of the European data-processing industry also depends largely on the existence of a real European market.

II. A EUROPEAN DATA PROCESSING MARKET

Europe has an advantage which it should not underestimate: the economic and technical potential of its market is greater than any other, outside the USA. This market should be made fully accessible.

The various observations made by the Commission in its communication seem to touch on two aspects; the opening up of the market and the subsequent control of the market.

(a) Opening up of the market

The Commission contemplates the mitigation of various obstacles to the development of a European data-processing industry which would be grouped under the headings technical, legal and financial.

10. Technical obstacles: The Commission rightly points out that 'for both the user and the computer industry the development and effective application of common standards in hardware and software is an urgent priority'. It notes on the other hand that 'users are often tied to a particular company by the language and form of the programs they use'. Programs for Community-wide application written for a certain type of computer could, for example, be accepted by UNIDATA and IBM computers, to the exclusion of other makes. Prescription of these programs for the administrations of Member States would amount to giving IBM the freedom of the market whilst heavily penalizing ICL.

A solution to this problem has recently been put forward in the shape of the new HONEYWELL BULL series of computers which are capable of assuming the 'personality' of other machines and accepting their programs without any modifications.

Another more general solution would be to make all manufacturers adapt their computers to take one or more universal performant languages, for which strict standards would be laid down.

Meanwhile the development of 'oriented analysis' contracts (independent of programs) would seem to be the most likely way of making significant progress in the study of transferable application.

However, there is the possibility of concerted action on a European scale with other governments, users, and manufacturers in a field which directly concerns users, i.e. application procedures; this usually involves the use of common high level languages.

Finally it should be borne in mind that whereas standardization may be justified when it protects the user, it should not be allowed to stand in the way of innovation, which also benefits the user. This field should therefore

be approached with the greatest caution after consulting all available qualified opinions. Although this field is instrumental for the opening up of a European data-processing market, the Commission states only that: 'the main need at Community level is to put a few key agreed standards into practice through coordinated procurement'. This attitude seems inadequate since the Community must not commit itself to norms which may appear excellent by virtue of the fact that they are Community norms, but which may be a source of trouble if they ultimately turned out to be different from those of the rest of the world.

11. A further technical consideration is that in a genuine European data-processing market European firms should be able to recruit the specialized staff they require. In this respect it is possible to agree with the Committee on Energy, Research and Technology that the creation of a European Institute of Software Engineering, the Commission's only practical proposal in this area, is inadequate. Over and above the creation of such an institute a general compaign would seem to be called for to improve both the quantity and quality of the training of data-processing specialists, without which it will be impossible to build up the European industry.

In point of fact, data-processing is too often badly taught and remains the prerogative of a close-knit group of specialists. This is partly the fault of manufacturers who tend to place more importance on languages and programming methods than on the philosophy of data-processing and logical analysis of the flow of information. But this is no excuse for the indifference of public authorities. Also, apart from the training of specialists, data-processing training should also be provided for administrators and executives whose offices employ computer services.

The Commission refers only to the courses run by PREST on Education in Computer Sciences and should present proposals which are more practical and more apposite to the problem in hand.

12. From a <u>legal</u> point of view, bearing in mind the primordial role which the public authorities will play as users of data-processing system, it is especially important for the development of a European data-processing industry that legislation on public contracts in the various Member States should not in effect close up the market. In this connection neither the proposal for a directive of 15 March 1971 on the harmonization of procedures for the award of contracts nor that of 19 March 1973 on the coordination of procedures for the award of contracts have been adopted. In these circumstances it is regrettable that the Commission should propose a definition of sectoral rules applicable to national computer procurement policies before the general framework into which these rules will be incorporated has been set out in detail.

It is of course possible to support European industry by controlling public contracts for data-processing equipment but care will have to be taken to see that the awarding of these public contracts should not be the source of any discrimination, especially with regard to data-processing firms considered as being foreign but which are in fact European by virtue of their legal statute and staff. In the awarding of contracts the same criteria should be applied in respect of performance and price as in the private sector.

13. Finally, from a financial point of view, promotion of a European data-processing industry means that there will have to be considerable financial resources available. In this respect the Commission contemplates maintaining present aid on a national basis for R & D support. It is to be feared that these national aids will not favour the desired restructuring of European firms. The Commission, referring to Article 92 of the Treaty, does state that 'an effort must however be made to move on from the limited collaboration .... to a systematic program for the development of European data-processing' and considers that 'there is a case for introducing a larger element of common finance to support the overall program'. Such financial aid would, moreover, only be a temporary aid to help European data-processing to stand on its own feet.

It is reasonable to say that these suggestions are very vague and too readily accept present conditions.

Secondly, the Commission considers the possibility of support for leasing and the creation of a European leasing company to aid the European data-processing industry. As far as this last kind of support is concerned, it would be desirable to know which interested parties are studying this question with the Commission, and what is in the detailed proposals which the Commission intends to submit in the near future - all the more so since no indication is given of the budgetary cost of the operations envisaged.

So although the Commission may have realized that the development of European data-processing depends to a large degree on the abolition of a number of technical, legal and financial obstacles, its Communication contains but few precise proposals for solutions to these problems.

Finally it should be borne in mind that, urgent as the development of the European data-processing industry may be, it can only operate with due respect for the guiding principles of the Treaty of Rome. Consequently the existence of a European data-processing market means that there also has to be control over such a market.

(b) Control of the European data-processing market

Although the Commission expresses concern on this point in several respects, it is unfortunate that its observations are presented in such a diffuse style in the document in question.

14. Control of a European data-processing market presupposes the development of this industry in compliance with the competition rules laid down by the Treaties.

In this connection the Commission recalls that as far as the dominant position of IBM in the European market is concerned 'the Commission, in accordance with its obligations under Article 86 of the Treaty establishing the European Economic Community, will be vigilant to ensure that there is no use of such a dominant position'. It naturally goes without saying that the restructuring of the European data-processing industry will also have to be carried out in conformity with the competition rules laid down by the Treaty. In particular the Commission will have to keep a watch on the various national subsidies in this sector as long as such aid is still granted.

15. Nor should the regional and social aspects of the development of European data-processing be overlooked. On these points the Commission confines itself to observations of a very general nature; for example it looks for a 'reasonable distribution of this growth industry throughout the Community' and believes, without stating why, that there will be 'appreciable shifts in the structure of employment'.

As a matter of fact not all jobs will benefit from the expansion of the market. The Commission underlines the need to cut down production costs. This requires more than simply increasing the number of units supplied; manufacturing processes will also have to be automated. Seen in this light technical progress makes possible productivity gains which, expressed as percentages, exceed the rate of growth of the market. Although this is a pleasant situation for the users, it is very worrying for workers in computer factories which are at present adequately staffed to cover reasonable estimates of requirements for the 1980's. Any disturbance caused by an economic crisis or by pressure to alter the competition rules could well provoke a social crisis the seriousness of which would be augmented by the fact that a large proportion of the computer factories established in Europe are located in under-industrialized areas.

16. However indispensible it may be, the progress of data-processing should be watched especially closely with respect to the protection of citizens' rights.

The Commission rightly points out that the establishment of data banks with international ramifications means that the Community will have to work out common measures for the protection of individual privacy. The development of data-processing can bring progress in civilization just as readily as it can create alienation. It would certainly be better for the Commission to seek a genuine political consensus in order to lay down basic common rules, rather than having to harmonize contradictory national laws in the light of experience .. and to insist on the modification of data-processing systems which have already been developed. But is it not already almost too late since several countries already have laws and projected legislation, on the one hand, and data-processing systems on the other? The Commission should therefore consider investigation of a possible directive on 'data processing and civil rights' as an urgent requirement.

What is really needed is Community action to ensure that data-processing does not give rise to moral contamination and annoyance. Several ways of avoiding mechanical or programming failures and the reprehensible use of information stored in data banks have already been investigated (scrambling devices, passwords, etc.). If it was decided that such devices should be made obligatory in the interests of the public, such measures would clearly have to be the subject of community regulations in order to avoid distortion of competition. This directive could also cover the formulation of a code of ethics for data-processing staff.

III. CONCLUSION

17. The objectives set by the Commission are, essentially, beyond dispute. But the lack of preciseness in the Communication about the measures to be taken is to be regretted. Nor should one ignore the contribution made by other data-processing firms to the European economy. Further action is to be regulated in later proposals and it is the Commission's intention to examine the progress of Community data-processing policy in a report to be submitted at the end of 1975. This date seems very far off for a matter of such importance; hence the request for an annual statement of work undertaken, results obtained and difficulties encountered.

In conclusion, this policy cannot be studied independently of the work carried out by the Commission in all the spheres for which it is responsible. It would in fact hardly be worthwhile launching new policies limited to statements of principles, and which conceal the lack of real progress in the application of the Treaty (e.g. aid, public contracts, the European Society) instead of the completely different kind of development required.

Opinion of the LEGAL AFFAIRS COMMITTEE

Draftsman: Lord MANSFIELD

By letter of 13 February 1974 the President of the European Parliament invited the Legal Affairs Committee to deliver an Opinion for the Economic and Monetary Affairs Committee on the Communication of the Commission to the Council concerning Commission Policy on Data Processing .

The Legal Affairs Committee appointed Lord Mansfield draftsman on 20 February 1974.

The Committee discussed this subject at its meetings of 10 April and 9 May 1974 and approved the following draft opinion unanimously at the latter meeting.

The following were present: Mr HÉGER (Acting Chairman), Lord MANSFIELD (Draftsman), Mr BERTHOIN (substituting for Mr JOZEAU-MARIGNÉ), Mr BREWIS, Mr BROEKSZ, Mr BRUGGER, Mr LAUTENSCHLAGER, Mr SCHWÖRER, Mr VERNASCHI Sir DEREK WALKER-SMITH, Mr YEATS.

I. SUMMARY OF COMMISSION POLICY ON PRIVACY AND AUTOMATIC DATA-PROCESSING

1. The Commission's Scientific and Technical Policy Programme[1] emphasises that its primary objective is the progressive implementation of a common policy on scientific research and technological development with a view to achieving the fundamental aims set out in Article 2 of the Treaty establishing the European Economic Community.

2. The programme

(a) draws attention to the fact that modern companies are increasingly dependent on a broad range of information which is of great importance where decision-making is concerned,

(b) undertakes to consider whether to create a permanent surveillance service in the sensitive field of information management and

(c) affirms that the improvement of technological standards in the data-processing sector, requires a close link between research and development aspects and policy in general, in view of the speed at which techniques are developing.

3. The Commission proposal to the Council for a Community policy on data processing[2]

(a) points out that the structure of society may be determined in the future by the way it uses information systems,

(b) calls for a Community policy which will

(i) develop the capacity of the European based industry and
(ii) promote the effective use of data-processing.

4. The attention of the Legal Committee is directed specifically to paragraph 39 of the Commission's proposal for a Community policy on data-processing which relates to the protection of the Citizen.

5. The growing concern about the problems of individual privacy vis-à-vis computerised data storage is reflected in the parallel studies carried out by the Organisation for Economic Cooperation and Development and by the Council of Europe.

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(1) COM (73) 1250 final 25.7.73

(2) Doc. SEC (73) 4300 final 21.11.73

II. REVIEW OF CURRENT LEGISLATIVE PROPOSALS WITHIN THE MEMBER STATES OF THE COMMUNITY AND IN NORTHERN AMERICA

6. The attention of the Legal Affairs Committee was specifically directed to the dangers to the privacy of the individual Community citizen inherent in the storage of personal information in electronic data banks.

7. This problem has already received and is receiving varying degrees of Parliamentary attention in the individual member states. In most cases there already exists some legal protection against misuse of census information, of taxation returns and of the postal and telegraphic services. Some countries have taken steps to protect the secrecy of computerised information while others have such legislation under active review at the present time.

8. Outside the Communities (for example in the North American continent where automatic data-processing and data-storage is extensively used) public concern has similarly found expression in proposals for legislation. In the United States the Citizen Privacy Act (1972) was designed to prohibit disclosure by Government Agencies without the consent of the individual concerned, to create a right to inspect files, and to add supplementary information.

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III. CONCLUSIONS

9. The Legal Affairs Committee

- bearing in mind the evident and increasing public concern throughout the Communities at the possibility of misuse, or misapplication of personal information stored in regional, national and international data banks;
- having regard to the proposals for legislation already current in many of the member states of the Communities;
- taking account of the unanimous support expressed in the debate of the European Parliament on Oral Question 193/73 (1) by Mr Cousté (on behalf of the Group of Progressive Democrats) for measures protecting the privacy of the Community's citizens;
- welcomes the recognition by the Commission of its obligation to establish common measures for the protection of the individual citizen;
- supports the Commission in its endeavour to inaugurate public hearings by the appropriate Parliamentary committee,
- urges

(i) the early inauguration of public hearings to consider the establishment of common measures for the protection of the citizen as envisaged in paragraph 39 of the Communication of the Commission relating to Community policy on data-processing (2);

(ii) consideration by the Commission of the determination of Community norms in this area, and especially of the determination of a minimum standard of protection for the privacy of the individual Community citizen;

(iii) that the question of the protection of the individual personal rights of Community citizens be a primary consideration in the elaboration of all Community policies.

10. Subject to the aforementioned considerations the Legal Affairs Committee is of the opinion that the proposals of the Commission to the Council on Community policy on data-processing (2) can be approved.

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(1) OJ Annex no. 173 March 1974, p. 34

(2) SEC (73) 4300 final

Opinion of the COMMITTEE ON ENERGY, RESEARCH AND TECHNOLOGY

Draftsman of the opinion: Mrs H. WALZ

On 5 March 1974, Committee on Energy Research and Technology appointed Mrs Walz draftsman for an opinion on the Communication from the Commission to the Council on a Community policy on data processing.

It considered the draft opinion at its meeting of 25 March 1974 and adopted it unanimously with one abstention.

The following were present: Mr Springorum, chairman; Mr Leonardi, vice-chairman; Mrs Walz, draftsman of the opinion; Lord Bessborough, Mr Brégégère (deputizing for Mr Giraud), Mr Burgbacher, Mr Covelli (deputizing for Mr Jakobsen), Mr Flämig, Mr Glesener, Mr Hougardy, Mr Kater, Mr Krall, Mr Lagorce, Mr Lautenschlager, Mr Martens (deputizing for Mr van der Gun), Mr Memmel, Mr Willi Müller, Mr Noé, Mr Normanton, Mr Petersen, Mr Schmidt (deputizing for Mr Nørgaard), Mr Verhaegen and Mr Vetrone (deputizing for Mr Andreotti).

Basis for the committee's opinion

1. Data-processing is one of the most advanced sectors of technology and is expanding at an extraordinarily fast rate. An annual growth rate of about 15% in the USA and 20% in Europe is therefore to be expected in the next ten years. Data-processing is gradually being introduced in all fields. It has not only revolutionalized the processing of purely numerical data but, as a management tool, the computer opens up new possibilities for making the decision-making process more efficient in industry and public administration (process control of production, budget control, efficiency analysis, cost-benefit analysis). The computer is also invaluable in almost all branches of research, town planning, futurology, etc. Control of the market in this field, the full extent of which cannot now be foreseen, could in the future have an effect on political and social development.

2. In spite of the enormous importance of data-processing to the Community, Europe has until now been obliged to proceed almost entirely on the basis of American technology in this field. More than 90% of the computers installed in Europe are based on American technology, and a single American company, IBM, holds about 60% of the European market. The largest European firms, ICL (English), CII (French), SIEMENS (German) and PHILIPS (Dutch) are 'dwarfs' by comparison (the latter three now collaborate within UNIDATA). Even on the home markets of these European firms, the American firms, particularly IBM, are completely dominant. The only exception is ICL, which has about 35% of the British market, about the same as IBM's share.

3. It is extremely alarming that in such an important field Europe is so ill-equipped to satisfy its own needs and that we are almost completely dependent on non-European, in this case American, technology. The greatest technological gap between Europe and the USA is in fact in the data-processing and electronic industries. And because of the computer's additional use as a management tool, Europe's handicap in this field is also reflected in a managerial gap; in other words, European backwardness where the use of modern methods of management is concerned. It should therefore be borne in mind that a greater effort to develop data-processing and its uses can help to bring Europe up to date in both technology and management, thereby placing European firms in a more competitive position.

4. We know from the present energy situation what it means to be largely dependent on foreign suppliers. Even though conditions in the data-processing industry are by no means to be compared with the energy sector, there is nevertheless every reason to stress that low European production of computers and the more limited use of data-processing in Europe could result in real dependence (and, to a great extent, on a single supplier, too), which could perhaps, at some later date, be used to Europe's detriment. Reference should also be made in this connection to the abandonment of the development of the Europa III carrier rocket, which will effectively limit Europe's possibilities

of participating in and exploiting space research. In this case, too, the managerial as well as the technological gap is to be deplored. This situation must be avoided in the field of data-processing. There is therefore every possible reason for doing all that is possible at Community level to strengthen the data-processing industry.

5. The Commission has now submitted to the Council a communication on 'Community policy on data-processing' (SEC(73) 4300 final), which is envisaged as the basis for further proposals to be put forward this year. This communication is to be welcomed, though it would have been better if the Commission had also made specific proposals, now that there is no time to be lost. European firms have their hands full merely trying to maintain their modest share of the fast expanding market. Only firms of considerable size will be in a position to do so, and no firms of the minimum size required have yet emerged in the United Kingdom, France or Germany in spite of considerable government subsidies. Only after a restructuring of the industry will it be possible for a company to grow to the size necessary for it to be viable and competitive.

6. IBM's dominant position on the data-processing market is the result not only of the very thorough and systematic research and development it has carried out in all fields of data-processing, but also of its vigorous marketing policy. IBM was one of the first companies to develop the new generations of computers and has also extensively developed data-processing programs and systems, both within its own organization and in extensive collaboration with research centres, universities and institutes of higher education. It has also invented and developed the most commonly used computer languages. All this gives a clear indication of IBM's dominant position in all areas of the market.

It is estimated that IBM spends 400-500 million dollars a year on research and development, more than the total turnover of the largest European company (ICL). Furthermore, a special feature of the American situation is that the Federal Government bears up to half the total research and development costs in the data-processing sector.

7. The cost of the hardware is often not even half of the purchase price of a computer. The remainder goes to purchasing the software (programs and systems) necessary for the data-processing operation. Efficient use of data-processing is becoming more and more dependent on the availability of sufficiently advanced software. Until now, however, developments in software have been slower than in hardware, and in data-processing systems even slower. That is why it is sometimes said that third generation hardware is today being used with second generation software and first generation systems. The company able to develop the best software and the best problem-solving techniques will therefore be in a very strong competitive position.

Even if today computers are so advanced that very few people know how to exploit them, it does not mean that major developments in hardware cannot be expected in the near future. Many innovations will be put on the market - not necessarily because of a recognized need - but as a result of competition on the market.

8. It is therefore certain that research and development work will be crucial to developments in the data-processing field in the future too. The European firms are in a very weak position in this respect and are ill-equipped to participate in the planned innovation process of which the American data-processing industry and IBM in particular are the exponents. A gigantic effort will have to be made by the Community if the European data-processing industry is not to be left behind completely or forced to concentrate on sub-sectors of the market, leaving the bulk of production to American firms.

Prospects of making the European data-processing industry more competitive are best in the software sector, which does not require large investments, but is very much a product with a creative potential.

9. A study of the data-processing industry carried out for the Commission estimates that a data-processing firm must have a yearly turnover of 600 million dollars to survive without outside help. All the European firms are far below this level. In 1971, ICL had a turnover of 368 million dollars, SIEMENS 282 million dollars, and CII 232 million dollars. Since then SIEMENS, CII and PHILIPS have merged as UNIDATA, but the joint turnover has not yet been published.

It is also estimated that 5-8% is the smallest share of the market on which a data-processing firm can survive on the European market. Below that level the only possible way to survive is to specialize. According to estimates made by the Financial Times, the market is at present split up as follows: ICL 7.5%, UNIDATA 8%, IBM 55%, HONEYWELL-BULL 13%. So as far as their share of the market is concerned, the European firms have just about the minimum necessary for survival.

10. The size of a data-processing firm is significant in another way too. It is estimated that unit costs for a product drop by about 15% every time production doubles. On this basis, it can be shown that unit costs are 2-3 times greater for European data-processing firms than for IBM. The unit costs for an amalgamation of the leading European firms would be almost double those for IBM.

11. This brief summary of some of the market conditions in the data-processing sector indicates that there is an urgent need for immediate restructuring of the European-owned firms so that all the leading European firms are joined in close cooperation, receiving assistance on a massive

scale from the Community and national authorities in the form of orders and development contracts. Such assistance, as the Commission rightly points out in its communication, should not be regarded as some sort of permanent protection but as an essential measure to counter the imbalance on the European market by offering European firms possibilities for development which would enable them to expand and meet competition on equal terms.

12. The Commission mentions development of the capacity of the European-based industry as one of the first aims of a Community policy on data-processing. The Commission also points out that restructuring with a view to actual amalgamation as the final goal is the only way forward if the European data-processing industry's competitive position is to be quickly improved. But at the same time it is noted that full amalgamation is not in the realm of immediate possibility as the two leading European data-processing groups, UNIDATA and ICL, have different plans for the next few years. It is expected that in the next three years these two groups will continue to compete with each other, each marketing different types of computers.

In the short term the Commission therefore hopes to be able to submit a proposal that will promote more limited cooperation, which in the rather longer term may be replaced by an overall policy for the European data-processing industry.

13. The Commission proposes that cooperation be initiated in such fields as peripherals (terminals, disc units etc.), electronic components (Large Scale Integration, holography, etc.), and software (especially development of 'Bridgeware' programs which can easily be used in various types of computers).

As a means of promoting such development cooperation, the Commission proposes Community development contracts (a proposal dated July 1972 which has not yet been adopted by the Council; Parliament approved the proposal with some amendments - see Bousch report (Doc. 10/73) and special programme-oriented development contracts to be linked with a particular development programme and adopted by the Council in each individual case.

14. As the second aim of a common policy on data-processing the Commission mentions in its communication the promotion of the effective use of data-processing by adapting it to the needs of the users.

What is mainly envisaged here is the fact that the national authorities in the various Member States should be interested in close cooperation at Community level to promote rationalization and standardization in the data-processing sector through joint-procurement and research and through building up computer networks and services. Liberalization of public procurement policy in the individual Member States would naturally be involved. A Commission proposal on this subject already exists which, in its Resolution of 17 December 1973 on the common industrial policy, the Council undertook to deal with during 1974.

15. The Commission also intends to propose in 1974 that, in order to promote the use of data-processing, the Community should initiate and finance a limited number of large development projects of an international character such as environmental monitoring, meteorology, traffic control systems, customs and trade statistics and technological information systems.

It also proposes cooperation in and coordination of national projects concerning, for instance, central government administration, social security systems, data-bank and data-transmission systems. But the Commission has not put forward any definite proposals and gives no indication that it intends to do so in the near future.

16. The Commission also refers briefly to the fact that there is a pressing need to set common standards and norms for hardware and software; that there could be a need for financial assistance for the leasing of computers; and that it will be necessary to make special efforts in the field of education and fundamental research in data-processing. The possibility of establishing a European Software Engineering Institute is also mentioned.

Conclusions

17. From this brief summary of the main points of the Commission's proposal, it can be clearly seen that it is merely the basis on which to discuss a common policy on data-processing and a lead-up to definite proposals at a later date. It is thus yet another declaration of the Commission's 'good intentions'; we have seen many of these recently on various subjects.

So it is of course easy to agree with many of the points of view put forward in the Commission's communication. But it is equally obvious that the decisive factor will be the concrete proposals with which the Commission is to follow up the matter. There is therefore all the more reason for urging the Commission to draw up concrete proposals immediately. There are many reasons for not wasting time. Developments are rapid, the European data-processing industry is weak and ill-equipped to hold its own in competition, and really efficient use of data-processing would be of advantage to both the industrial and the public sector in Europe. If, as the Commission, maintains, there is a real hope that the Council will be able to take the relevant decisions before the end of the year, then the Commission must submit its proposals very soon.

18. The basic objective of the Commission's communication - to create a viable European data-processing industry before 1980 - is not open to question. The aim must quite clearly be to arrange for the closest possible cooperation between the leading European firms as quickly as possible. But it is precisely on this point that the Commission appears to be adopting a wait-and-see policy. It is noted that, because of different company policies, there is at present a possibility of only relatively limited collaboration between the two leading groups, ICL and UNIDATA. Seeing that the Commission

also realizes that full amalgamation is necessary to ensure the future prospects of the European data-processing industry, the Commission could have been expected to suggest more active measures in its communication.

19. Attention is drawn to the fact that even if ICL's and UNIDATA's computers are different, this does not in practice constitute any great technical barrier to closer collaboration at the present time. An arrangement whereby the leading European firms collaborate on their research and development and marketing policies should be made as attractive as possible for the firms concerned and participation in such an arrangement could be made a condition for financial assistance. The Commission could perhaps investigate the possibility of encouraging such cooperation by establishing a joint enterprise with the active participation of the leading European firms and the Community. This could perhaps also provide the proper organizational framework for greater research and development effort in the data-processing sector.

The European firms and the Community as such have mutual interests in the present situation. It is up to the Commission to do what it can, in spite of existing differences, to crystallize these mutual interests in fruitful cooperation. It is impossible to over-emphasize the fact that an independent European data-processing industry can be said to exist only when Europe's own computer systems are being developed and produced and not just built under licence.

20. Many of the individual proposals in the Commission's communication are worth stressing: for example, the Commission's suggestion that specific data-processing projects be assisted, in particular the development of software and systems. The Commission also intends to submit proposals on some large development projects of an international character. It is worth mentioning by way of illustration that not one of the air lines in Europe uses European equipment in its reservation system, and that both the British and the French railway companies use American equipment in their traffic control systems. On the other hand, as mentioned above, it is by developing software that an increased European effort has the greatest chance of a break-through and, at the same time, it would lead to a more efficient use of and greater benefits from data-processing. It would also be useful if European public authorities would, by insisting that the European data-processing industry supply them with equipment to meet their particular needs, take this opportunity to influence the development of software and systems, instead of having to adopt or adapt systems developed on the basis of American problems.

Obviously, incentives to promote the applicability of data-processing programs must be supported, in other words they must be made largely independent of any particular type of computer. This is just as much a question of problem definition as of software engineering in general.

21. Two additional remarks should, however, be made. Firstly, every effort should be made to ensure, in the case of such development projects, that European data-processing firms collaborate on research and development and thus promote the necessary restructuring of the European data-processing industry. Secondly, such Community projects should obviously be coordinated with the efforts being made at national level. If, before a detailed programme was drawn up for the data-processing sector, arrangements were made for financial assistance, which would inevitably be poorly coordinated with national financial assistance arrangements, there would be a danger that applicants rejected at national level might try to obtain assistance from Brussels. It would therefore be better if only international groups of firms were eligible for assistance from the Commission.

In particular, the procurement policy of the public authorities in the various countries should be liberalized as the Commission has suggested, so that in practice a joint European market is created for the public sector which can form a basis for a joint European data-processing industry.

22. One of the prerequisites for the strengthening of Europe's position on the data-processing market will be a determined effort to promote training and fundamental research in computer science. A wide-ranging and thorough effort will have to be made: firstly, there will be an enormous need in the coming years to train data-processing specialists; and secondly, an effort must be made to improve the standard of training, which is after all the basis of a more efficient use of data-processing. In this sector the Commission should come forward with more concrete ideas as soon as possible. It has given as an example the possibility of establishing a European Software Engineering Institute. But it might perhaps be pointed out that it is not so much new institutions that are required as a policy to promote European cooperation in training and fundamental research in computer science.

23. Last but not least, legislation must be adopted by the Community as soon as possible to protect the rights of the individual in connection with the many data banks in existence. Rules must be laid down which clearly state who shall have access to the information in such banks and which protect the individual against its misuse; this is absolutely essential for each one of us. Similarly, security arrangements must be made against misuse of data in multinational firms or authorities with responsibility at international level (Interpol, for example). There should also be rules for controlling data and limiting the time that data may be held, and stipulating to what extent and under what conditions (for example, for statistical purposes) multiprogramming of the individual data banks may be effected. Without such rules to protect the individual, increased use of data-processing - regardless of its advantages - is bound to be regarded with suspicion by the general public.