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At the request of many readers, at the beginning of next year we shall be publishing an INDEX of all the annexes to "Industry, Research and Technology" from No. 1 (11 December 1968) to No. 170 (end of December 1972).

** It is widely realized that CABLE TV will not be a mere extension of aerial television, but will play an important part in many fields, affecting both production and applications. Although its use is still limited in Europe to particular areas, it is bound to grow rapidly in the next few years.

It appears desirable to prevent this new means of communication from developing on similar lines to TV, and with similar consequences i.e., on separate and insufficiently coordinated national bases.

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The information and articles published in this Bulletin concern European scientific cooperation and industrial development in Europe. Hence they are not simply confined to reports on the decisions or views of the Commission of the European Communities, but cover the whole field of questions discussed in the different circles concerned.

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It therefore seems necessary to check, supplement and render more accurate the incomplete information at present available, particularly concerning aid, public or semi-public orders, technical barriers to trade and all the usual factors contributing to the fragmentation of markets, in order to obtain an overall view of the present situation and future prospects and to deduce the optimum conditions for development at Community level.

The Commission of the European Communities has therefore asked the design office Innovation, Communication Structures (ICS) of Paris to carry out a study on cable TV and its applications in the countries of the European Community.

On the basis of an analysis of the present situation of cable TV and its applications, this study will seek to evaluate the present and medium-term repercussions of the development of this means of communication on the electronics industry, on ancillary or rival industries and on users.

ANNEX 1 summarizes the problem raised by the development of cable TV in Europe.

** On the basis of an overall programme for the period 1971-75, the Commission of the European Communities is participating in a READAPTATION PROGRAMME FOR WORKERS AFFECTED BY CLOSURES IN THE LORRAINE STEEL INDUSTRY. ANNEX 2 contains details of the Commission's work in this sector supplied by the Commission in a recent reply to a written question from Mrs Lulling and Mr Oele, members of the European Parliament.

** While INTERNATIONAL SCIENTIFIC COOPERATION in Europe since 1945 has chiefly taken the form of the pooling of resources in international institutions, a trend is now evident towards procedures such as the distribution of research work among

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national research institutions by way of a joint administrative structure.

This emerges from an information note on European scientific cooperation prepared by the European Office for Scientific Cooperation of UNESCO. Extracts from this note will be found in ANNEX 3.

** ANNEX 4 contains a selection of RECENT PUBLICATIONS acquired by the Scientific and Technical Library of the Commission of the European Communities. These works can be consulted on the spot (1, avenue de Cortenberg, 1040 Brussels, Loi offices, 1st floor, No. 43) or borrowed.

** THE ASSOCIATION OF BRITISH SCIENCE WRITERS has just joined the EUROPEAN UNION OF ASSOCIATIONS OF SCIENCE WRITERS, which since 8 March 1971 has grouped together the German, Belgian, French, Italian and Dutch Associations of Science Writers.

More than 600 EUROPEAN SCIENCE WRITERS will now belong to the European Union, the Chairman of which for this year is Giancarlo Masini (Corriere della Sera - Italy) and the Vice-Chairman Nicolas Skrotsky (France Soir - France).

** The amount of the taxes paid at the various stages in PATENT PROCEDURES varies from one member to another, as is shown by the following table:

Taxes	Belgium	West Germany	France	Italy	Luxembourg	Netherlands
Filing	340 FB	50 DM	79 NF	3,500 Lit	100 FL	200 fl
Examination	-	300 DM	-	-	-	350 fl
Granting	60 FB	-	-	500 Lit	-	100 fl
Opposition	-	-	-	-	-	100 fl
Appeal	-	150 DM	-	1,500 Lit	-	100 fl

These differences in the amounts of procedural taxes are due primarily to differences between the national patenting systems (examination or registration); mere harmonization of the costs of the national procedures therefore does not appear feasible. It does not even appear desirable, as the introduction of the European patent granting system (see IRT No. 152) will probably reduce the demand for national patents, and thus considerably lessen the effects of the differences between national procedures.

This is the substance of a reply given by the European Commission to a written question from Mr Oele, a member of the European Parliament, concerning the harmonization of patenting costs.

** An inventory of the work on SAFETY in progress and planned under the various FAST REACTOR programmes is now being drawn up by the Working Party on Safety of the Community's Coordinating Committee on Fast Reactors and is expected to be ready by the end of the year. In addition, the accident trends will have to be analysed by means of fault trees in order to evaluate the phenomena concerned and the possible consequences.

This information was given by the European Commission in a reply to a written question from Mr Oele, a member of the European Parliament. The Commission states that the conclusions reached by the Working Party on Safety are constantly being embodied in the current discussions on the safety of fast reactors under construction or planned thanks to the participation of all the organizations concerned and also by dint of their representation on the Coordinating Committee on Fast Reactors.

** A group of BRITISH PARLIAMENTARIANS specializing in industrial policy will be received by the European Commission on 4 December 1972.

A group of FRENCH JOURNALISTS also specializing in industrial questions will pay a fact-finding visit to the Departments of the European Commission in Brussels on 30 November 1972, following the visit on 20 November by a group of GERMAN JOURNALISTS specializing in the same field.

** Jean Flory, Director for Industrial and Technological Policy in the Commission of the European Communities, will open the discussions at the Centenary of the École superieure de commerce in Marseilles, on 8 December 1972.

As an introduction to the round tables on the training of directors of undertakings in 1985, he will present a FORWARD SURVEY OF THE EUROPEAN INDUSTRIAL ENVIRONMENT. Mr Yvon Bourges, French Minister for Commerce and Crafts, will sum up the conclusions drawn from this get-together of industrialists and specialists in management training.

THE GROWTH OF CABLE TV IN EUROPE

Cable TV is destined to develop rapidly in Europe during the next few years, and to play an important part in many fields. It is therefore desirable to prevent this new means of communication from developing on similar lines and with similar consequences to television, i.e., on separate and insufficiently coordinated national bases, and to try to ascertain the optimum conditions for the development of cable TV at Community level.

The European Commission has therefore asked the design office Innovation, Communication Structures (ICS) of Paris to carry out a study on cable TV and its applications in the countries of the European Community. On the basis of an analysis of the present situation of teledistribution and its applications, this study will seek to evaluate the present and medium-term repercussions of the growth of this means of communication on the electronics industry, ancillary or rival industries and users.

The following is a summary of the problem raised by the emergence of cable TV in Europe.

The possibilities offered by cable TV

Cable TV appeared for the first time in the United States during the '50s, as a means of transmitting TV programmes to "disadvantaged" areas, such as "shadows" behind hills, buildings, etc., linked by a coaxial cable to an aerial situated at a high point "lit" by Hertzian waves.

Technical progress (particularly in the field of relay stations) soon made it possible to pass beyond this stage of relaying a small number

of programmes to certain households, and today a cable TV system has the following main features:

1. The possibility of transmitting by cable a much greater number of programmes than can be broadcast (e.g., 20-40 as against less than 10 depending on standards).

2. The possibility of reserving part of this capacity for specific audiences or users (e.g., by fitting electronic filters at the input to the TV set).

3. The possibility of producing and inserting programmes at various points in the network with a view to their transmission over all the cables.

These new technical possibilities go hand in hand with a whole range of new services which are practically out of the question with Hertzian wave TV. The following are among the services already being provided in the USA:

1. Local activation, i.e., the use of the televised message as a means of expression, and also for reorganizing a community, at local, regional or even national level.

2. The decentralization of management resulting from the use of the system by a local administration, thus "shortening the distances" from those administered and providing new services, better information, etc.

3. The offer of specific services, e.g., in the field of education, leisure, supervision, etc., where the large number of programmes and the access to specific audiences make it possible to match each programme to precise objectives and to escape from the rule of the lowest common multiple, which applies when a single programme has to satisfy several million viewers.

Such uses of cable TV are already to be found in various European countries. In France, for example, collective aerials are employed to relay French programmes in certain large areas, and foreign programmes in the frontier areas. In Belgium cable TV is used to relay almost all the European TV programmes. In Britain, "interactive" systems are in operation with which specific programmes (e.g., educational) transmitted over the network can be selected at the set.

Problems arising at European level

But while the potentialities of such systems already appear considerable, the problems raised by their development at European level are still far from being solved, and the present backwardness with respect to the United States is liable to increase further. Cable TV requires relatively massive and costly infrastructures, and hence the coordination of a considerable number of factors, namely:

1. As regards industrial policy, it is probable that equipment costs compatible with really wide diffusion can be obtained only on a European market; but in that event what technical standards will be adopted, and how will compatibility with the various existing forms of equipment be ensured?

2. As regards the installation and operation of the systems, methods will have to be found of financing the initial investment and of operating the networks. Will ownership of these networks be left to local communities, to franchise-holders, to joint companies combining communities and users, or to other agencies?

3. As regards software production policy, what will be the attitudes of the various public or private partners towards a system which multiplies the possibilities of local expression and brings the camera as close to viewers as the TV set now is?

The Community's efforts to assist the
RECONVERSION OF WORKERS AFFECTED BY CLOSURES IN THE LORRAINE STEEL INDUSTRY
(extract from a reply by the European Commission to a written question from Mrs Lulling and Mr Oele, Members of the European Parliament)

The departure for Fos of the approximately 1,200 Lorraine workers who have volunteered hitherto might take place at a rate close to that originally proposed.

The Commission is participating in a retraining programme for workers affected by closures in the Lorraine steel industry, on the basis of an overall programme for the period 1971-75.

The Commission has therefore allotted an initial sum of 22.5 million FF for the reconversion operations proposed for the period 1 June 1971 - 31 December 1972, covering about half the 1971-75 programme.

About 75% of this sum is earmarked to finance periods of professional training and to pay the trainees' wages during courses; in particular it is to be used to cover costs of transport and removal to the Fos area.

In addition, workers who are, or before 31 December 1975 will be, more than 60 years of age will be entitled to benefit from special payments from the National Employment Fund in the form of early retirement, the costs being entirely borne by the French authorities.

In order to create new jobs designed to ensure the reclassification of workers and mitigate the effects of redundancy on the regional and local balance, under the terms of the ECSC Treaty the Commission is facilitating the financing of projects put forward by the French Government.

The new jobs created hitherto in Lorraine with the ECSC aid break down by sector as follows:

3 engineering	4,639
2 chemistry	242
1 transport	225
1 testiles	200
1 rubber	1,000
1 iron and steel	140
	6,446

In addition, it may be estimated that about 6,000 new jobs will be created in the industrial zones and will be financed by ECSC funds.

It is too early to assess the multiplier effect of the jobs now being created. However, the new industries now being set up (automobile, rubber, etc.) have a larger and more varied multiplier effect than the basic industries which they replace.

SCIENTIFIC COOPERATION IN WESTERN AND EASTERN EUROPE

(extracts from a note prepared by the European Office for Scientific Cooperation of UNESCO)

While international scientific cooperation in Europe since 1945 has chiefly taken the form of the pooling of resources in international institutions, a trend is now evident towards procedures such as the distribution of research work among national institutions by way of a joint administrative structure.

This emerges from an information note on European scientific cooperation prepared by the European Office for Scientific Cooperation of UNESCO.

In the planned economies of Eastern Europe, owing particularly to several advantages of their system (e.g., uniform decision-making process and implementation mechanism), conditions are more favourable than in Western Europe for international cooperation on science and technology. While West European countries appear to be still in a transition stage between the formulation of national scientific policies and the working out of common criteria with a view to new cooperative projects, those of Eastern Europe have already reached the stage of the formulation of a coherent subregional scientific policy.

The proposals relating to a joint policy for scientific research and technological development recently presented by the Commission of the European Communities to the Council are representative of the ideas of the former group of countries (Western Europe). The Commission has been actively concerned with scientific policy since about 1965 (creation of the Group for Scientific and Technical

Research Policy - PREST: see IRT No. 151), but the results (as approved by the ministerial meeting of November 1971: see IRT No. 122) are - frankly - modest. The Commission now proposes that the member governments recognize that its competence extends to all fields of science and technology and provide it with the information, the financial means and the special instruments (European Committee for Research and Development, European Agency for Research and Development) necessary to devise a unified strategy for research and development in the sub-regions (see IRT No. 148).

The basic document for the East European countries is the overall programme published in Moscow last summer by the Council for Mutual Economic Aid (COMECON). The COMECON countries defined the aims, principles and basic methods of scientific and technological cooperation as early as 1949. Their long-term ambition to make a common effort in support of scientific and technological development led them in 1962 to create a permanent commission for the coordination of scientific and technical research. As a result, a first integrated biennial plan for coordination of major scientific and technological research projects was drawn up in 1963, and in 1971 an overall programme was set up. This ambitious plan, which is to be implemented in several stages over the next 15-20 years, is designed to strengthen economic, scientific and technological cooperation and promote economic integration between the member countries of COMECON. From the scientific standpoint, the plan's salient points are systematic consultation on scientific and technological policy, cooperation concerning scientific and technological forecasts with a horizon of 10-15 years, various joint research projects, and cooperation on scientific and technological information and the training of research personnel.

While the European Communities and COMECON provide us with operational documents, the evaluation of past experience and the analysis of the problems of scientific cooperation in an international context are

essentially the task of a regional body (the Economic Commission for Europe and UNO) and three Western organizations (the Council of Europe, the Organization for Economic Cooperation and Development, and the European Association for the Administration of Industrial Research). The Economic Commission for Europe provides a very useful set of criteria for the choice of suitable research projects for international cooperation. It recommends three main categories of project, namely:

1. Oriented basic research.
2. Research applied to economic objectives leading to innovations in the economic infrastructure.
3. Research applied to social objectives.

The recommendations which the Organization for Economic Cooperation and Development has submitted in Paris to the Ministers of its member countries are not very different. The OECD recommends that the projects selected to form the subject of cooperation should fall into one or other of the following major categories:

1. Basic research.
2. Applied research with no market orientation.
3. Public services and social infrastructure.
4. General technology.

The analysis of the conditions for the success of international activities gives those responsible for policy a useful set of criteria applicable in the field of scientific cooperation.

Professor Freeman has made a penetrating observation on this subject in his report to the Council of Europe. Basing himself on the experience of the associations for industrial research which exist in numerous European countries, he says that international scientific collaboration produces the most tangible results when it

is directed to the creation of common scientific and technical services which the participants could not provide independently. The European Association for the Administration of Industrial Research, located in Paris, gives an industrial point of view on the question of cooperation between different firms, within a single multinational firm and internationally with substantial State participation.

RECENT PUBLICATIONS

which have been acquired by the scientific and technical library of the Commission of the European Communities and can be consulted on the spot (1, avenue de Cortenberg, 1040 Brussels, Loi offices, 1st floor, No. 43) or borrowed.

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