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5 May 1982

# Worldwide Report

TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

(FOUO 10/82)

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WORLDWIDE REPORT  
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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INTERNATIONAL AFFAIRS

## BRIEFS

TELECOM 1 OPERATIONAL IN 1984--The first national network for satellite telecommunications, Telecom 1 should be operational in March 1984. This 15 million francs program covers the construction of three satellites, two of which should be launched in mid- or end-1983 (see article p 40). These satellites will have a triple payload, including four 4-6 GHz repeaters for domestic connections with Dom-Tom (Antilles-Guyana, Reunion, and so on), six 12-14 GHz repeaters for intra-enterprise connections in France and Europe, and two 7-8 GHz repeaters for military and governmental connections in the Syracuse program (see AIR ET COSMOS No 879). The ground network devoted to intra-enterprise connections could include about 300 stations (with 3-5 m-diameter antennas), which will be leased by PTT (Mail, Telegraph, and Telephones) to the various users. In a presentation of the Telecom 1 program, PTT has just indicated that it will be possible to connect these stations to about 8000 terminals, serving some 3000 users in France and Europe. PTT anticipates 150-200 stations in France. From its inception, the Telecom 1 network will be intended for Europe. Agreements have in fact already been reached with Germany, and others are being negotiated with the European organization Eutelsat. The Telecom 1 system, PTT admits, could eventually even be connected to the United States through Intelsat satellites or future optical fiber underwater cables. The Telecom 1 satellites are designed for a lifetime of seven years, which means until 1990. But PTT is already studying their successor, which could be either a national Telecom 2, or a European Eutelsat 1. In any case, it is expected that these future satellites will operate simultaneously at frequencies of 12-14 GHz and 20-30 GHz, with reutilization of frequencies and shaped-beam antennas. [Text] [Paris AIR ET COSMOS in French 6 Mar 82 p 43] [COPYRIGHT: A. & C. 1982] 11,023

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JAPAN

LAWS ON CITIZENS' BAND, COMPUTER CONNECTIONS REVISED

Tokyo NIHON KEIZAI SHIMBUN in Japanese 19 Mar 82 pp 1, 3

[Text]

The Government, at a Cabinet meeting held on the 19th, decided on a permission and approval one-package readjustment bill (administrative tasks simplification and rationalization bill). The purpose of the bill is to materialize the second recommendation formulated by the Second Provisional Administrative Affairs Research Council (Chairman: Toshio DOKO). This is the second package bill concerning the Research Council's recommendation, after the Administrative Reform-Connected Special Exceptions Law. It includes the permission and approval readjustment bill, drawn up separately from the Research Council's recommendation, and also the laws and ordinances readjustment bills shelved at the previous Diet session. It calls for dealing with the revising or abolishing of a total of 355 laws on a one-package basis.

The second recommendation calls for the readjustment of 24 items which require permission or approval. In order to carry it out, it is necessary to revise 17 laws. The Road Vehicle and Transportation Law revision bill for the purpose of extending the period between regular intervals for the inspection of automobiles and the Radio Waves Law revision bill calling for abolition of the license [system] for the establishment of citizens' bands (a kind of transceiver) have become single, independent legislation, in view of the purports of the respective Laws and because of the problem of legislative techniques. Therefore, the package bill covers 15 laws, including a Passport Law revision [bill] calling for expansion of the scope of applications by proxy for the issuance of passports and a Public Tele-Communications Law revision bill which will generally liberalize the use of data communications circuits.

In regard to the readjustment of permission and approval, the 1,147-case readjustment plan, on which the Administrative Management Agency, from its own standpoint, has been carrying out co-ordination with various other Ministries, has been formulated, besides another plan based on the Research Council's recommendation. Eight laws, including a Monopoly Law revision [bill] calling for extending the period for the

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designation of tobacco and salt retailers, have been added to it. Moreover, the laws and ordinances readjustment bills for the purpose of abolishing laws, which exist in form only, and which have become unnecessary, have been unified, too. In this connection, there are 332 laws excluding those which are overlapped. Therefore, the revising or abolishing of a total of 355 laws will be handled on a one-package basis.

At the very beginning, the Administrative Management Agency had planned to have [the package bill] decided by the Cabinet by the 12th. But co-ordination between the Postal Services Ministry and MITI on the liberalizing of data communications had hard sailing, and [the reaching of a decision] slid into the 19th. The bill will be submitted to the Diet even on the 23rd. Deliberations will be conducted at the Cabinet Committee, because the Administrative Reform Special Committee has not been set up, as in the case of the previous Diet session.

Gist of Permission and Approval Readjustment Bill

Following is the gist of the permission and approval one-package readjustment bill decided at the Cabinet meeting on the 19th:

Fair Trade Commission: Paragraph 2, Article 6 of the Anti-Monopoly Law: In regard to the kinds of agreements or contracts (such as contracts for borrowing of money and loaning of money), which, it is thought, will hardly raise any problems, from the standpoint of the Anti-Monopoly Law, the submitting of reports shall be made unnecessary.

National Public Security Commission: Paragraph 3, Article 2 of the Law Concerning Control over Business Which May Affect Public Morality: The period of renewal as to the licenses for the operation of game centers, such as pin-ball houses and mah-jong parlors, shall be extended from the present six months to one year.

Administrative Management Agency: Paragraph 2, Article 10 of the Statistics Law: With regard to statistics superintendents, a part (stationing of statistics superintendents in cities, towns, and villages) of the established restrictions shall be abolished.

Foreign Ministry: Article 3 of the Passport Law: In applying for the issuance of a passport, when the application is submitted through the spouse of the applicant or through a relative within the second degree of consanguinity, the application shall be accepted in case the submitting of an application is not regarded as being difficult, for unavoidable reasons.

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Finance Ministry: (1) Paragraph 1, Article 32 of the Tobacco Monopoly Law: The period of designation as to retailers of manufactured tobacco shall be extended from the present within three years to within five years.

(2) Paragraph, Article 65 of the same Law: With regard to appliances in the appliances and machinery for the production of manufactured tobacco, there shall be no need to obtain approval, for example, in the case of their being manufactured.

(3) Paragraph 1, Article 26 of the Salt Monopoly Law: The period of designation as to salt sellers shall be extended from the present within three years to within five years.

(4) Article 17 of the Sugar Consumption Tax Law: As regards the clarification of tax exemption as to the transfer of sugar, etc., without paying taxes, it shall be clarified only when this is deemed particularly necessary, from the standpoint of securing taxes.

(5) Paragraph 3, Article 8 of the Playing-Card Tax, Etc., Law: In connection with playing-cards, etc., to be used as samples, [the system for obtaining] the tax office superintendent's or the customs-house superintendent's approval for exemption from the application of the Law shall be abolished.

(6) Article 14 of the Petroleum Gas Tax Law: The tax-exemption clarification system shall be abolished, in regard to the imposition of a tax on petroleum gas concerning the tax-free transfer thereof.

(7) Article 104 of the National Tax-Collection Law: In connection with the public sales of real estate, etc., persons, who make the second highest-priced bid, after the highest-priced bid, shall be designated as "applicants for buying it at the second highest price," and when the decision on sales to the highest-price bidder is withdrawn, sale to the "applicant for buying it at the second highest price" can be decided, instead of carrying out re-sales, and necessary procedures can continue to be taken as they are, after that.

Education Ministry: (1) Paragraph 3, Article 45 of the School Education Law: In regard to the granting of permission by prefectural boards of education for the establishment or abolition of senior high schools which have curricula based on a wide-area correspondence system, the obtaining of the Education Minister's approval shall read the submitting of reports.

(2) Article 9-2 of the Social Education Law: As regards assistant superintendents concerning social education, the established restrictions shall be abolished.



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Welfare Ministry: (1) Article 20 of the Welfare Ministry Establishment Law: Quarantine stations can be forced to carry out inspection or guidance in regard to the imports of foodstuffs, additives, appliances, containers and packing materials, etc., which are put on sale, or which are used for business.

(2) Article 8 of the Public Health Center Law: The Welfare Minister's approval shall be abolished in the case of using such words as to mean public health centers, in the name of facilities other than public health centers.

(3) Paragraph 2, Article 1 of the "Trachoma" Prevention Law: The system shall be abolished under which doctors will submit reports to the public health center directors concerned when they conduct check-ups on cases of trachoma.

(4) Article 5 of the same Law: The established restrictions shall be abolished as to facilities concerning the prevention of trachoma and medical treatment.

(5) Article 4 of the Helminthiasis Prevention Law: The established restrictions shall be abolished with regard to facilities concerning the prevention of and medical treatment for helminthiasis.

(6) Paragraphs 1 and 2, Article 16 of the Venereal Disease Prevention Law: The established restrictions shall be abolished in regard to hospitals or clinics for conducting checkups on venereal disease.

(7) Paragraph 5, Article 2 of the Law Concerning Masseurs, Chiropractors, Acupuncturists, Moxa-cauterists, and Others: Examiners for the license to become massager-chiropractors, acupuncturists, or moxa-cauterists shall be unified with those for the license to become judo adjusters.

(8) Article 3-3 of the same Law: In connection with massager-chiropractors, acupuncturists, and moxa-cauterists, the system of reporting on (changes) in their addresses shall be abolished.

(9) Paragraph 3, Article 6 of the Physicians Law: The annual report system shall be reformed, and reports shall be submitted once every two years.

(10) Article 14 of the Law Concerning Medical Radiation-Rays Technicians and Medical X-Ray Technicians: In regard to medical X-ray technicians, the system of reporting on changes in their addresses shall be abolished.

(11) Article 7 of the Judo Adjusters Law: With regard to judo adjusters, the system of reporting on (changes) in their addresses shall be abolished.

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(12) Paragraph 1, Article 11 of the same Law: Examiners for the license to become judo adjusters shall be unified with those for the license massager-chiropractors, acupuncturists, or moxa-cauterists.

(13) Paragraph 3, Article 6 of the Dentists Law: The annual report system shall be changed, and reports shall be submitted once every two years.

(14) Paragraph 3, Article 7 of the Dental Hygienists Law: The annual report system shall be changed, and reports shall be submitted once every two years.

(15) Paragraph 3, Article 7 of the Dental Technicians Law: The annual report system shall be changed, and reports shall be submitted once every two years.

(16) Article 33 of the Law Concerning Health Nurses, Midwives, and Nurses: The annual report system shall be changed, and reports shall be submitted once every two years.

(17) Article 9 of the Pharmaceutists Law: The annual report system shall be changed, and reports should be submitted once every two years.

Agriculture-Forestry-Fisheries Ministry: (1) Fertilizer Control Law: The established restrictions shall be abolished as to fertilizer inspectors.

(2) Article 21 of the Veterinarians Law: The annual report system shall be changed, and reports shall be submitted once every two years.

MITI: (1) Paragraph 1, Article 14 of the High-Pressure Gas Control Law: In connection with changes in the manufacturing facilities of the Group A manufacturers, approval shall be shifted to reporting, with regard to small-scale changes which will raise no particular problem, from the standpoint of safety.

(2) Paragraph 3, Article 14 of the same Law: In connection with changes in the manufacturing facilities of the Group B manufacturers, there shall be no need to submit reports, with regard to small-scale changes which will pose no particular problem, from the standpoint of safety.

(3) Article 181-8 of the Measuring Law: The validity term of designation as to special-container manufacturers shall be extended from the present three years to five years.

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(4) Article 6 of the Electric Repair Work Personnel Law: The established restrictions shall be abolished, with regard to examiners for the license to become electric repair work personnel.

Transportation Ministry: Article 99 of the Road Transportation Law: The scope of trucks for private use, to be reported to the Transportation Minister in connection with the use thereof, shall be limited to trucks the maximum loading capacity of which exceeds the tonnage prescribed by the Transportation Ministry Ordinance.

Postal Services Ministry: Article 55 of the Public Tele-Communications Law: The connection of computers to computers, which connection has not been approved so far, shall be approved under certain fixed conditions, and the establishment of diversified data communications shall be made possible through the mutual connection of computers. The connection of public communications circuits and specific communications circuits, which connection will only be approved under an individual approval system, shall be liberalized. The public-specific-public connection, which has not been approved up until now, shall also be made possible under an individual approval system.

Construction Ministry: Regulations Attached to the Architects Law: The selection system shall be abolished under which one can obtain an architect's license even if one does not undergo examinations for becoming an architect.

Autonomy Ministry: Article 13-4 of the Fire Defense Law: The established restrictions shall be abolished, with regard to examiners for the license to become personnel who handle dangerous objects.

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JAPAN

MITI, POSTAL SERVICE HEAD FOR 'SECOND ROUND' OVER COMMUNICATIONS

Tokyo MAINICHI SHIMBUN in Japanese 20 Mar 82 p 9

[Text]

A Public Tele-Communications Law revision bill for the purpose of "liberalizing data communications," over which confusion had been continuing between MITI and the Postal Services Ministry since the autumn of last year, was drawn up through the mediation of the LDP, and it was decided at a Cabinet meeting held on the 19th. It is expected to be submitted to the current Diet session.

Data communications mean networks for tele-communications to be established through the use of circuits of the Nippon Telegraph and Telephone Public Corporation (NTT). At present, they are being used for on-line systems, including banks' cash cards and the National Railways' "Green (TN: First Class Ticket) Windows." There are many restrictions on the use of such communications circuits; therefore, industrial circles have from before been requesting the liberalization thereof. Moreover, the Provisional Administrative Affairs Research Council also called for the liberalization of data communications. That is why the Postal Services Ministry finally started to take action and drew up its Public Tele-Communications Law Revision Bill, including the liberalization of the processing of on-line information.

However, in regard to the proposed liberalization, how far the communications circuits should be liberalized, is a major problem. On that point, controversy has been continued between the Postal Services Ministry and MITI, during a long period of more than six months.

From the viewpoint of outsiders, the contents of the controversy between the two Ministries are very difficult to understand, partly because they contain technical terminology. In the final analysis, however, the problem can be boiled down to the point of whether [the Government] should approve the free use of circuits by private circles through the liberalization thereof to the greatest possible extent, as called for by MITI, in order to cope with the development of information-processing services, or whether the contents should have a strong restrictive coloring, with importance attached to the public-utility nature, as proposed by the Postal Services Ministry.

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In other words, the stand of MITI is as follows: "The Postal Services Ministry's plan envisages too many restrictions and limitations, even while calling for liberalization. It is very far removed also from the Provisional Administrative Affairs Research Council's recommendation calling for the adoption of a negative-list formula (under which liberalization will be carried out as a general principle, while the scope of restrictions will be clarified to the minimum necessary extent)."

The contents of the Revision Bill, agreed upon between the two Ministries this time, use such expressions as "it shall be based on the spirit of administrative reform." When viewed as a whole, the direction of liberalization has been clarified. Also, in regard to use by others (which means that for the sake of enterprises which cannot have their own computers, information-processing enterprisers will lease circuits from NTT and sub-lease them to such medium and small enterprises through the establishment of an on-line system) who are medium and small enterprisers, which use was regarded as a problem pending between the two Ministries, it will be approved under certain fixed conditions. Thus, the direction of liberalizing communications circuits has been generally clarified. A MITI leader also emphasized the "general achievement," saying as follows: "This marks one step forward." "I myself will rate it at 70 points or so."

However, when one carefully views the contents of the agreement, one will find that they are "ambiguous." For example, in connection with use by others, they call for the imposition of such restrictions as "it shall be limited to use by medium and small enterprisers who have close business connections," or "under certain fixed conditions." The contents of these restrictions are vague, and it will also become possible to strengthen the restrictive coloring through the establishment of a Ministry ordinance. Moreover, the expression "it shall be based on the spirit of administrative reform" shows the direction of permitting liberalization, but the degree will depend largely on the completely subjective judgment to be formed. As regards use by others, the agreement between the two Ministries this time only takes the form of a provisional step, to the last.

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When the agreement this time is likened to a meal, this can also be said to be a situation whereby the kinds and size of tableware have been decided, but whereby it is still not clear what kind of food will be served. Therefore, in regard to the revising of the Postal Services Ministry Ordinance for the purpose of deciding on the detailed contents of the agreement, a vigorous exchange of words is expected to be carried out between the Postal Services Ministry, which wants to carry it out, from its own basic standpoint, and MITI, which wants to promote the proposed liberalization, as far as possible, even during the current Diet session. Also, in regard to the final settlement of the problem of liberalizing data communications, which settlement, it is said, will be secured within the next one year, the second round of fierce offensive and defensive battles will probably be continued between the Postal Services Ministry, which thinks it necessary to enact a new law which will recognize the State's right to grant approval and permission, and MITI which regards such a new law as unnecessary.

(By reporter Shigeki MORI)

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JAPAN

INDUSTRY STARTS PREPARATIONS FOR DATA COMMUNICATIONS ROLE

Tokyo NIHON KEIZAI SHIMBUN in Japanese 20 Mar 82 p 1

[Text]

The Government, at a Cabinet meeting held on the 19th, decided on a "permission and approval one-package readjustment bill" which incorporates a revision of the Public Tele-Communications Law for the purpose of liberalizing data communications. The bill will be submitted to the current Diet session. Big users and suppliers as to the data communications system have already started to move simultaneously to provide for the proposed liberalization. The "Mitsubishi CC Research Council," composed of 14 major companies which are affiliated with the Mitsubishi group, has inaugurated two experts committees concerning communications technology and estimation of demand. Fujitsu FIP (with its Head Office in Tokyo [President: Heiji KIDA; capital: ¥240 million), a big information-processing services company, has also inaugurated a "Data Communications Circuits Project Team" within that company. Moves for connecting the effective use of data communications with a new business chance will probably be accelerated.

The "Technological Experts Committee" and "Demand Experts Committee," set up by the Mitsubishi group, for the first time, will be participated in by Department Vice Chief- or Section Chief-level experts from the information-processing and communications sectors of the various companies concerned.

To begin with, "joint use," in which data communications circuits will be leased and used jointly by a plural number of enterprises, is expected to be shifted from the present "banned in principle" to "liberalization in principle." Therefore, the Technological Experts Committee is scheduled to study what kinds of technology will become necessary when joint use is carried out after the liberalization. It is also scheduled to carry out also the work of establishing a circuits network which will become a model. Furthermore, it will check into such problems as whether a joint company will be necessary to exercise control over the circuits to be thus leased, and in what form such a company should be established if it is to be done.

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Moreover, the Technological Experts Committee will conduct studies on VAN (added-value communications), in parallel, from the stand that in order to enhance the functions of the joint circuits networks, VAN services will hold the important key.

On the other hand, the Demand Experts Committee will conduct research as to what new demand for data communications will arise among industrial circles, with which various enterprises are affiliated, and among the enterprises concerned, after the liberalization of circuits. In other words, studies will be conducted as to what kinds of new communications will become possible between the participating enterprises, including enterprises which are not affiliated with the Mitsubishi group, and other enterprises with which they have business transactions connections, and what change this will cause in regard to the handling of business.

In the midst of the moves for securing the liberalization of circuits, such enterprise groups as Mitsubishi, Mitsui, Sanwa, and Ito-Chu have already started to hold study meetings on data communications. Among them, the "Mitsubishi CC Research Council" is running out front.

Fujitsu FIP to Tie Up Also with European and US Enterprises

Fujitsu Ef Ai Pi (abbreviated to Fujitsu FIP) is carrying out the work of establishing a new information-processing services set-up on the premise of data communications, through its Project Team. It will also carry out the following tasks with the co-operation of Fujitsu, its parent company: (1) Research on the market and commodities on the basis of the new data-communications system after revision of the Law, and (2) development of a software operation system for on-line services which will use the new data communications system. The said Company says that it "wants to make efforts, so as to enable the start of new services," at the same time as the start of the new system.

The same Company also says that the following lines of business are conceivable: "Business in which information will be transmitted to many customers through the use of circuits to be leased from the Nippon Telegraph and Telephone Public Corporation (NTT)." "Acting as an intermediary in case communications circuits are used jointly by a plural number of enterprises." "Business of connecting enterprises with customers through the establishment of a new system."



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For that purpose, the Company, centering on its Project Team, intends to conduct surveys on the situation concerning the use of communications circuits in the US and various European countries, with the co-operation of Fujitsu. At the same time, if there are systems and software, which may be able to be introduced into Japan, the Company intends to accumulate know-how and software through the conclusion of tie-ups with the local enterprises concerned. The Company further says that it wants to make efforts, so that it may realize the "profits of the original enterpriser," to the fullest extent, ahead of other information-processing services companies.

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JAPAN

FURTHER DISCUSSIONS ON DATA COMMUNICATIONS URGED

Tokyo YOMIURI SHIMBUN in Japanese 24 Mar 82 p 4

[Text]

The problem of liberalizing the use of data communications circuits has been generally settled, with the Public Tele-Communications Law revision bill incorporated in the administrative tasks simplification and rationalization bill which was decided at a recent Cabinet meeting.

Data communications mean a system for connecting communications with the processing of information through the use of computers, as in the case of the National Railways' "Green (TN: First Class Ticket) Windows and the banks' on-line systems. The establishment of networks for the processing and distributing of information is rapidly progressing among enterprises.

Under the present system, however, the use of data communications circuits is restricted strictly. In industrial circles, voices calling for liberalization were strong.

The use of circuits for data-processing purposes, between enterprises will be liberalized, due to the revision this time. Thus, the restrictions will be eased to a considerable extent. However, this is still nothing but the first step toward liberalizing data communications. Rather, it should be said to be a stop-gap, provisional measure.

From the standpoint of improving the conditions for developing data communications, there are still many problems.

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For example, in regard to "message exchange" for transmitting information, without changing the contents thereof, the recommendation, submitted earlier by the Provisional Administrative Affairs Research Council, points out as follows: "The use of circuits should be liberalized, with the exception of [enterprisers] who carry out message exchange, with an unspecified large number of persons as the objects." However, as far as the revision this time is concerned, restrictions will be left behind to a considerable extent.

The Nippon Telegraph and Telephone Public Corporation (NTT) is performing data communications services by itself, while offering communications circuits. However, it holds the position of a privileged organization, as a report on the results of its inspection, which report was released by the Administrative Management Agency last year, points out as follows: "[NTT] is carrying out message exchange, which is banned toward private circles. It has also made up the deficit of as much as ¥50 million in its data-communications sector through the use of earnings from its telephone services, etc."

Even if NTT is to extend data communications services, it should establish a set-up for carrying out fair competition with private circles.

Data communications are a system which will form the foundation of an informationized society in the future. In regard to the discussions conducted up until now, MITI emphasized its views, from an industrial standpoint. However, [data communications] will fulfill an important role, not only in the industrial field but also in various other fields, including education, medical service, administration, and science. Efforts should be made to establish a desirable data-communications system through wide-range discussions.

At this time, therefore, it will probably be necessary to clarify what were the substantially problematical points of the data-communications problem discussions conducted up until now.

The characteristic of the informationization of today is the point of connection between communications and the processing of information through the use of computers. Despite the fact that the field of information-processing is growing in importance, the Postal Services Ministry regards the long-established communications system as the premise, and it is trying to take informationization on an extension line thereof and to impose restrictions on it. Is there no problem in regard to this posture?

Apart from the data communications, the realization of picture communications, in which necessary pictures will appear on the television through the use of communications circuits, is also close at hand. Technology for satellite communications and optical communications, too, has already been put to practical use. It is certain that informationization in Japan will markedly progress within the next 10 or 20 years, thus causing a revolutionary change in economic society.

It is important for Japan to promote such informationization smoothly. A communications policy should be formulated, from the viewpoint of what should a necessary communications system for that purpose be like, that is, from the standpoint of the informationization policy.

At this time, we want to propose the establishment of a deliberation organization under the direct control of the Prime Minister, in order to conduct communications-policy discussions comprehensively.

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NICARAGUA

BRIEFS

RADIO, TV AGREEMENT WITH CUBA--Managua, Apr 7 (PL)--Cuba and Nicaragua signed here collaboration agreements in the fields of radio and television. The agreements were signed by the president of the Cuban Radio and Television Institute, Nivaldo Herrera, and the managing directors of the People's Radio Broadcasting Corporation and the Sandinista Television Network, Edwin Zablah and Ivan Garcia, respectively. The exchange of programs, facilities for journalistic and technical delegations and a broadening of mutual collaboration are mentioned in the documents. Herrera returned to Cuba accompanied by the delegation that accompanied him in the discussion of the agreements. [Text] [PA061952 Havana PRELA in English 1939 GMT 6 Apr 82]

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SEYCHELLES

BRIEFS

EXPANDED RADIO PROGRAMMING--Victoria, 14 Apr (SAP)--As from this month, Radio Seychelles is starting a new programme, "Indian Ocean: From One Island to Another," with the aim of giving more coverage on regional events. The weekly programme intends to provide the Seychellois listeners with more information on the political, economic, social and cultural life of Mauritius, Madagascar, Reunion and the Comoros. The new programme is meant to make up for some of the deficiencies left by the international news media which give less importance to regional events. [Pool item] [Text] [PS140427 Havana PRELA in English 2349 GMT 13 Apr 82]

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INTERNATIONAL AFFAIRS

ECS SATELLITE TO PROVIDE REGIONAL TV TRANSMISSION

Paris AIR ET COSMOS in French 30 Jan 82 p 36

[Text] Under the terms of a contract between Eutelsat Interimaire, the European satellite telecommunications organization--which has its headquarters in Paris and includes the telecommunications administrations of 20 European countries\*--and the EBU [European Broadcasting Union]--which includes 40 broadcasting organizations--Europe will have a regional satellite TV transmission system serving the members of the EBU.

The contract was signed on 20 January 1982 by Mr Louis Mexandeau, minister of Posts, Telecommunications and Television Broadcasting, acting for Eutelsat Interimaire, and Messrs Jean Auton and Vandebussche, president and vice president, respectively, of the EBU, in the presence of Mr Andrea Caruso, secretary general of Eutelsat Interimaire.

The contract provides for the full-time lease for a period of 10 years and on an exclusive basis, to the EBU, of two transponders in the space sector of Eutelsat's European ECS-satellite telecommunications system, to be used for the transmission of (Eurovision) TV signals among the members of the EBU via the earth stations of the Eutelsat signatories.

In exchange for the services provided by Eutelsat, the EBU will pay an annual lease fee which during the first 2 years of operation of the satellite system will be based on the number of earth stations put into service. Thereafter, the annual fee will be fixed for 5 years.

Service to the EBU will start as soon as the two ECS satellites (one in operation and one in reserve) are in place in operating condition and at least five earth stations are in operation. The first ECS satellite is scheduled to be launched by Ariane this summer, and the second in 1983.

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INTERNATIONAL AFFAIRS

BRIEFS

ASTROMETRY SATELLITE BY MATRA--The ESA [European Space Agency] has just, by unanimous choice, awarded the contract for a definitional study (Phase B) of the European astrometry satellite Hipparcos to the French firm MATRA [Mechanics, Aviation and Traction Company], leader of the European industrial consortium MESH which includes also the firms Aeritalia, British Aerospace, ERNO [Erno Raumfahrt-technik], Fokker, SAAB [Swedish airline] and INTA [National Institute for Aerospace Research (Spain)]. Other industrialists will be joining this group, notably Dornier. This 20-million-franc contract terminating in October 1982 is to be followed by the contract to build the satellite, estimated at 600 million francs. MATRA has also been chosen by the ESA as the prime contractor for the scientific work of the program. The ESA's choice of MATRA over AEROSPATIALE [National Industrial Aerospace Company (France)] (Cosmos Consortium) confirms MATRA's role as the European leader in space scientific instrumentation. The Hipparcos satellite (875 kg) is to be launched in 1986 by Ariane, with a rated life of 2 and 1/2 years. This European astrometry satellite will be the first to draw up a map of the skies based on observation of over 100,000 stars, with a precision of 0.002 seconds of arc. [By Pierre Langereux] [Text] [Paris AIR ET COSMOS in French 30 Jan 82] [COPYRIGHT: A. & C. 1982] 9238

CANADIAN, ARIANESPACE AGREEMENT--Telesat Canada has signed an agreement with Arianespace to reserve a launching slot at the end of 1985, for placing into geostationary orbit with Ariane 3, a Canadian telecommunications satellite of the Anik series. Arianespace has thus made 10 reservations, and 32 firm launches have been planned with Ariane. Three 16-channel Anik C satellites are built by Spar (Canada), and two 24-channel Anik D satellites will be built by Hughes Aircraft (USA) for Telesat Canada. [Text] [Paris AIR ET COSMOS in French 6 Mar 82 p 43] [COPYRIGHT: A. & C. 1982] 11,023



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FRANCE

NEW REPORT COMPARES AUTOMATION, PRODUCTIVITY, UNEMPLOYMENT

Paris ZERO UN INFORMATIQUE in French No 158 Mar 82 pp 66-71

Article by Claude Salzman, chief engineer at CEGOS General Commission on Scientific Organization: "The Computer and Unemployment, a Controversial Duality"

Text It is now admitted the computer is a productive tool or more generally, it is considered clear that additional automation increases the enterprise's productivity. But who has proved it?

There is also a tendency to regard the computer as partly responsible for current unemployment. What should we think about this old myth of the machine which destroys people?

Unemployment is one of the plagues of the modern world. It is a depressing topic and it is hard to speak objectively about a subject where emotions dominate. After having enjoyed strong economic growth without unemployment for 30 years, the developed world has experienced the opposite situation for 6 years: insignificant growth and mass unemployment. The rate of unemployment increases inexorably every month. Almost 10 percent of the working population will soon be unemployed. This is shocking and many ask who is responsible for this horror. The computer has been on trial for several years.

The Best of Worlds

It is striking to confirm that the computer is pictured simultaneously as a miracle machine which will make the world better tomorrow and as a diabolic machine which will enslave humanity, sooner or later. On one hand the dream, on the other, the nightmare.

This shows surprisingly that the computer is a completely ambivalent myth, as all machines have been since the 18th century, even the simplest ones: the loom, the steam engine, the train, the automobile have aroused, in turn, this same type of fear. The more the factory is filled with machines, the more people fear for their own future.

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The development of automation for 50 years has not ceased to convince people of the danger of these machines. The arrival of the computer at the beginning of the fifties and of robots more recently has only revived these already old fears.

## The Three Theses

Employment and the computer, what a beautiful subject for a dissertation, what a successful topic! But opinions are divided. Most opinions are pessimistic. They are summarized in a sentence: "If the computer makes gains in productivity possible, it consequently reduces employment." On the other hand, opinions differ on the rates of unemployment caused by the computer. The most pessimistic, such as Bruno Lussato, foresee a rate of 50 percent; Michel Bosquet thinks of 20 percent; Ulrich Briefs: 15 to 20 percent; Olivier Pastre predicts 210,000 additional unemployed in 1985. The range between the predictions is very significant: from 200,000 to 10,000,000, the rough estimate is for the smallest! It is observed that the pessimists are recruited especially among research workers, academicians and journalists. Few professionals in computer science are found among them.

On the contrary, the optimists affirm that: "The computer makes gains in productivity possible, consequently it creates 'jobs'." In fact, very few authors dare to defend this point of view. It actually requires a certain courage to declare that the computer not only does not eliminate jobs, but creates them, when there are 2 million unemployed. To our knowledge, only Jean-Jacques Servan-Schreiber has vigorously defended this thesis in "Le Defi Mondial" The World Challenge; we observe also that it is preferably the one our leaders support, in particular, the prime ministers, whether they are of the left or the right.

Between the two, we find the vacillating, the cautious and the neutralists. Perplexed, many professionals in computer science are falling in with this tendency. For that indeed is the basis of the problem. A great deal is written on this subject, but paradoxically, few objective facts are available. It is always the same figures which go from one of these three studies to the other, namely: the Siemens report (Buro 1990), which appeared in 1976, that of Sussex University (Barrow and Curnov, 1978) or the study of the Prognos Institute (FRG), which are pessimistic extrapolations of technological predictions.

## From One Prime Minister to Another

(Raymond Barre, 9 May 1980, at Honeywell Bull Company)

"Research in productivity can go hand in hand with the creation of jobs in the same society. By resorting to sizeable investments, by

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introducing innovative methods and by having a high quality staff, the tertiary sector can obtain gains in productivity which have nothing to begrudge with the strictly industrial sectors."

(Pierre Maurot, 15 September 1981 to the National Assembly).

"We must master the new technological revolution. For let us not be mistaken about it, one of the causes of unemployment is the inability to adapt our production apparatus, its methods of operation, estimating and training to this change imposed..."

"It is not a question of rejecting robotics or data-technology. It is a question of controlling this change with respect to man. Gains in productivity allowed by technical progress must benefit all of the national community."

A Promising Report

That is where we were until the recent appearance of a very interesting report: "Computer Processing and Employment, Threat or Change?" (which appeared in DOCUMENTATION FRANCAISE) attributed to a group of young economists in Paris 13, directed by Olivier Pastre and financed by the Computer Science Mission.

One went on the field for the first time, figures were sorted, analyses were made on the basis of which a middle term forecast was outlined. It is a work of quality, a treasure of ideas and information difficult to find elsewhere. This report resorts especially to an empirical approach by broad fields of applications, in particular:

- automation of operations;
- the machine tool with numerical control;
- computer assisted programming;
- word processing machines, etc.

Eight exciting papers to read which end up each time with a 5 year forecast of job elimination: 82,000 for word processing, 50,000 for automation, 50,000 for robotics, 13,000 for document reading and 11,000 for facsimilies. A total of 210,000 jobs will be eliminated between now and 1985.

The Facts are Stubborn

To understand well how Olivier Pastre arrived there, let us analyze, for example, the conclusion of the section devoted to word processing (pp 145 and 147). "We have observed that gains in productivity are about 50 percent. We have seen, moreover, that the number of secretarial jobs will be particularly affected. The 'secretarial staff' is traced again in item 610 of the study, 'Job Structure': We confirm

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that in 1974 this item involved 394,614 persons. In view of what has been said, if the utilization of word processing became general, we could assume that 116,000 jobs would be eliminated. In fact, taking into account market forecasts, job elimination could involve 82,000 positions between now and 1985."

There is the essence of the example developed by Olivier Pastre. Let us summarize the process: in 1985, 50 percent of secretaries will have a word processing machine. These machines will achieve gains in productivity of 50 percent. I multiply one by the other, I apply that to the number of secretaries and now then! I find 82,000 additional unemployed.

This example is at least questionable. Actually, gains in productivity have been made in all fields for years. Thus in the last 15 years, according to INSEE [National Institute of Statistics and Economic Studies], overall gains in productivity have been + 89.4 percent, or a little more than 4.3 percent per year. Now in 1965, the employed working population rose to 20,379,000 persons. According to Olivier Pastre's example, one should have confirmed the appearance of mass unemployment between 1965 and 1980, amounting to 9.6 million unemployed.

In fact, with the gains in productivity of + 89.4 percent, it would have been possible to produce with only 10.7 million persons, what was produced in 1965 with the work of 20.4 millions. The rest would have had to join the unemployed.

Now, the number of jobs not only did not drop, but it increased: There were 21,755,000 employed persons at the end of 1980, or an increase of the working population of more than 1.3 million persons, compared with 1965, in spite of the crisis, petroleum, the dollar and computers.

With all due respect for Olivier Pastre, during those 15 years, employment has not dropped, but, on the contrary, it increased at a rate of 0.4 percent per year. Consequently, this example is false and Olivier Pastre's predictions, which, moreover, are moderate, are not very credible.

## An Explanation

In fact, no precise figure would make it possible to demonstrate today that computers have eliminated jobs in the past. Perhaps, data processing will be a factor in unemployment in the future, but as for the past, observation shows that the economic sectors or the plant operations which have benefited fully from data processing have not experienced a drop in their employment level. This has not prevented the number of unemployed from rising in 15 years from 269,000 in 1965 to 1,455,000 in 1980.

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To explain this serious phenomenon, Alfred Sauvy, in his remarkable book "The Machine and Unemployment," Dunod 1980, attempts to develop a general model explaining the effects on unemployment of all technical progress and in particular of data processing. The center of the model is a mechanism which he calls projection. Every gain in productivity, of whatever nature it is, is expressed by a certain number of disturbances in the labor cycle, some are negative such as elimination of jobs, others are positive: creation of additional wealth, drop of relative prices, shifting of demand...which in turn causes other disturbances.

According to the organization of the economy, this phenomenon of propagation, which he calls projection, is more or less effective. There are many rigidities in the operation of the economy. Some are strangely due to unfortunate policies of "job protection" which rapidly backfire on the very ones which they aim to protect. The most serious error was the very fashionable idea of sharing employment by lowering the retirement age or by reducing the working week. Citing as an example, getting out of the economic crisis of 1929-1934, Alfred Sauvy shows that these policies had the opposite effect of what was intended.

We cannot summarize in a few lines Alfred Sauvy's main work. However let us mention the conclusion which is not lacking in interest: It is the predominance of dogmas, postulates and obliging images which frustrates society and prevents it from making up for its considerable arrears with its own technology and its social ideal. It behooves the economists to give up their abstractions somewhat, without fearing for their reputations."

## The Outline of a Model

Encouraged with this advice, we have taken up the problem again and looked for a clear explanation of the processes which create unemployment. Thus we have tested tens of hypotheses such as:

- the amount of investments;
- the reduction of working hours;
- the migratory wage
- ...

A single fact has become clear from all these analyses. Everything would take place, as if the variations in the number of unemployed from one year to the other, were due to a retardation of economic growth with respect to an objective value. Below this threshold, the number of unemployed increases, beyond this threshold, it drops.

According to our calculations, 1 percent of growth more or less represents 38,000 unemployed more or less and a zero rate of growth

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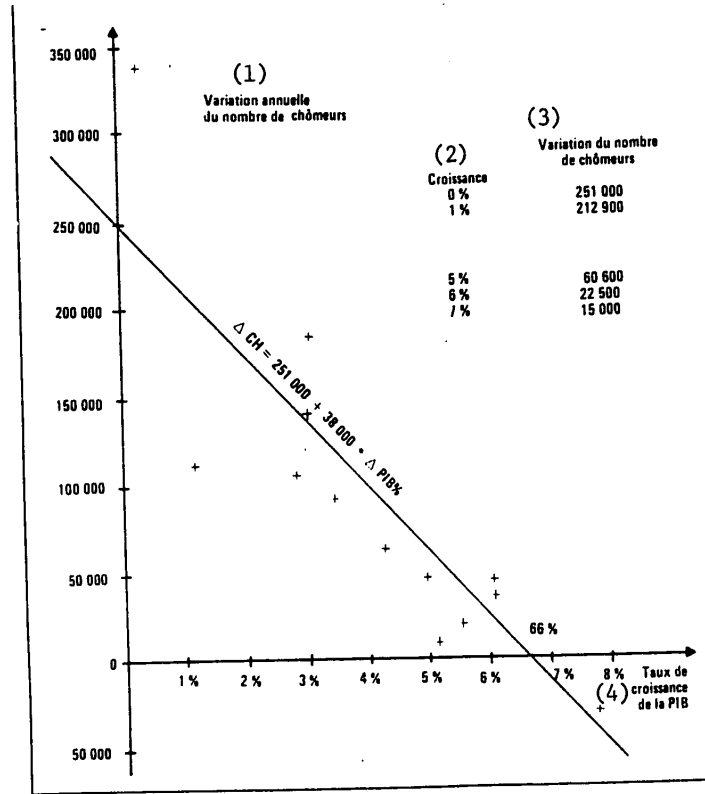
represents an additional 250,000 unemployed in the year. The coefficient of correlation between the rates of economic growth and the annual variation on the number of unemployed is high:  $R = - 0.84$ .

Table 1: Growth and Unemployment

<u>Year</u>	<u>Rate of growth of the PIB / Gross Domestic Production</u>	<u>Number of applications for employment not covered</u>	<u>Annual varia- tion in num- ber of jobs</u>
1965	+ 4.8%	142,100	--
1966	+ 5.2%	147,700	+ 5,600
1967	+ 5.0%	196,000	+ 48,300
1968	+ 4.3%	253,800	+ 57,800
1969	+ 7.7%	223,000	- 30,800
1970	+ 6.1%	262,100	+ 39,100
1971	+ 5.5%	338,200	+ 76,100
1972	+ 6.1%	380,300	+ 42,100
1973	+ 5.6%	394,100	+ 13,800
1974	+ 2.8%	497,800	+ 103,700
1975	+ 0.3%	839,700	+ 341,900
1976	+ 4.9%	933,500	+ 93,800
1977	+ 3.1%	1,072,800	+ 139,300
1978	+ 3.5%	1,166,900	+ 94,100
1979	+ 3.1%	1,349,900	+ 183,000
1980	+ 1.3%	1,450,600	+ 100,700

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Table 2. The Relation Between Growth and Unemployment



- Key: (1) Annual variation in number of unemployed  
 (2) Growth  
 (3) Variation in number of unemployed  
 (4) Rate of growth PIB

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To better understand the phenomenon, let us take an example. If in 1982, growth is + 3 percent, that means that we will have 137,000 more unemployed than in 1981. If instead of 3 percent, the rate of growth increases to 4 percent, the number of additional unemployed will not be more than 137,000, but 99,000. In order for there not to be additional unemployed, an annual rate of growth of 6.6 percent is necessary! This figure is particularly high and has only been reached once in the period studied, as table 1 indicates: in 1969 with + 7.7 percent. Moreover, it is the only year in the last 15 in which the number of unemployed has dropped.

Naturally, as table 2 shows, different phenomena can disturb the relationship. In particular, certain measures of certain types: early retirement system, 90 percent for economic dismissals, youth employment agreement, ... influence the annual number of new unemployed. But the tendency remains what it is. Generally, in the 15 years studied, the average rate of growth has been 4.3 percent per year and the annual increase in the number of unemployed has been 87,200 persons per year. In short, in each year, we have had a retardation of growth compared with the normal tendency of 2.3 percent per year.

## A Remedy for Unemployment, Growth

It is the retardation of growth which explains about 70 percent of the unemployment ascertained. Without it, we would not have 2 million unemployed today. And the only way to reduce it is to catch up with our retardation of growth which is about 40 to 45 percent of our country's normal condition of economic development. But is it possible? Is the production apparatus capable of such an effort? What are the structural economic measures which it is necessary to take to release growth and guarantee employment for all? There are the real problems and it does no good to complain interminably about the computer's threat to employment.

The only question, in fact, is to what extent, the computer, and more generally the new electronically based technologies, contribute to economic growth. If the answer is favorable, that means that we will find the lost full employment by accelerating the process of the development of these technologies. If, on the other hand, technology does not have or only has slight effects on growth, then we must invest its means and efforts elsewhere. All the rest is only empty talk and waste of time.

## Data Processing, A Factor in Growth

The study of the figures supplied by population censuses and those furnished by the investigation "Job Structure" shows that the following are the sectors where the most data processing has been used and the increase of employment has been the greatest:



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- Accounting: + 27 percent between 1968 and 1974
- Banking and Insurance: + 45 percent between 1968 and 1974
- Skilled administrative personnel: + 38 percent

Consequently data processing is one of the privileged methods of regaining full employment. But to reach it, we well know, a tremendous effort will be necessary. Only a mobilization of everybody will make it possible to regain the 40 percent of growth lost and our conviction is that data processing will make a major contribution, either directly through the development of the data processing industry, services,...or indirectly, by improving the ability of enterprises to create more added value per wage earner. The whole problem of growth is indeed there!

Let us remember that PIB is made up of the sum of all the added values of all French enterprises. For one confirms precisely that the level of added value per wage earner varies by 22 percent between the enterprises spending the most and those spending the least on data processing!

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ITALY

LAUNCHING OF 'ITALSAT' PLANNED FOR LATE 1987

Paris AIR ET COSMOS in French 27 Sep 81 pp 37-38

[Article by Pierre Langereux]

[Text] The Italian project for "Italsat," a domestic telecommunications satellite, was presented at the IAF [International Astronautical Federation] Aeronautics Congress by the representatives of the CNS [National Space Council], Telespazio, and Selenia, the three of whom were retained by the CRN [National Research Council] to draw up the project.

The preliminary study (Phase A), which was completed this summer, made it possible to define the configuration of the future pre-operational telecommunications satellite Italsat, the launching of which is currently planned for the fourth quarter of 1987 using an Ariane rocket or the Shuttle with a PAM-D upper stage. The satellite is to be placed in geostationary orbit at 13 degrees E, for a useful life of 5 years and is designed to provide the qualification in space of all the technologies that will be needed to build the future operational domestic telecommunications satellite which the Italian PTT [Posts, Telephones and Telegraph] administration is planning to put into service during the 1990's.

The decision to build the Italsat satellite should, in principle, be in place by the end of 1981. A Phase B of 16 months duration is planned, to be followed, in the third quarter of 1983, by a C/D Phase extending over a 4-year period.

The Italsat pre-operational satellite was dimensioned as a function of the weight and electrical power of the payload, and by the required antenna-pointing precision.

The final choice was a triaxially stabilized platform of intermediate size (180-200 kg) between the platform of the European ECS satellites and that of the L-SAT, yet of a sufficiently advanced design to offer the Italian space industry a challenge capable of bringing it up to international stature while suiting it to carrying out the missions of the future operational satellite.

The total launch weight of the satellite will be 1,131 kg with Ariane (in a double launching using the SYLDA [Ariane Double Launch System]) or 1,247 kg with

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the Shuttle PAM-D, requiring, respectively, 441 or 557 kg of propellants for injection into geostationary orbit and attitude control by means of a combined propulsion system (bipropellants).

This system comprises a 400-Newton jet (ISP [specific impulse]: 310 sec) as its apogee engine and 16 small jets whose thrust has yet to be specified (ISP: 285 sec). The weight of the satellite in orbit will thus be 690 kg at the start and around 600 kg at the end of its operational life (5 years), consisting of 412 kg for the service module and 192 kg for the payload. At launching, the satellite will occupy a volume of 2.0 x 2.2 x 2.6 m, and in orbit it will have a span of 13.8 m with its solar panels deployed. Its solar generator, with a power output of 1,370 W at the end of its operational life, will consist of eight 2.1 x 1.1-m panels covered with photovoltaic cells of low yield (4) but sufficient to power the payload and charge two nickel-hydrogen (25 amp-hr) batteries with a capacity of 760 W during eclipse. Heat control will be passive (without heat pipes), using finned-surface heaters and radiators (on north-south facings). The structure (92 kg) will use mainly conventional and composite materials for supports and antennas. The satellite will be pointed within  $\pm 0.05$  degrees about the north-south axis and within  $\pm 0.04$  degrees about the east-west axis by means of radio beacons associated with each telecommunications antenna.

## High Frequencies

The Italsat pre-operational satellite's payload will enable the carrying out of four missions:

--Telephone service at 20-30 GHz by means of two antennas (1.95 m in diameter) covering all of Italy with six "spots" (0.5 degrees) fed by six active transponders (20 W) providing digital links (SS-TDMA). The planned rate will be 120 Mbits/sec, with possibly a 360-Mbits/sec channel for point-to-point and multiple-access links. This configuration will weigh 145 kg and will consume 640 W;

--Specialized services at 20-30 GHz (data transmission, electronic mail, video-conference, etc) with a horn antenna (2 x 1 degree) covering all of Italy and three active transponders (30 W) for multiple-access links at 25-32 Mbits/sec (FH-TDMA). This equipment weighs 35 kg and consumes 320 W;

--A propagation experiment at 40-50 GHz (attenuation, depolarization, distortion, etc) with two horn antennas (3 x 3 degrees) covering Western Europe and possibly Greece, Ireland and Spain. These antennas will operate with circular polarization at 40 GHz and linear polarization at 50 GHz. This equipment weighs 12 kg and consumes 90 W. Its instrumentation will be compatible with that designed for the propagation experiments using the future European L-SAT satellite;

--A wideband (1 Gbits/sec) data transmission experiment with point-to-point links, although this mission does not appear to be fully confirmed.

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Italsat will thus be the first satellite to test propagation conditions in the 40-50 GHz frequency band, which is very well beyond the 20-30 GHz band in which experimentation is just now beginning. Italy, however, aims to specialize in high-frequency telecommunications. Following the tests at 11-18 GHz carried out with the Italian satellite Sirio 1, Italy is participating in the 20-30 GHz tests planned with the European satellite L-SAT, and is preparing the operational use of these frequencies and the tests at 40-50 GHz with Italsat. If these new operations are successful, Italy will then be one of the world's leading specialists in high-frequency telecommunications, enabling its industry to take a dominant position in this market during the 1990's.

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UNITED KINGDOM

HOME SECRETARY WHITELAW ANNOUNCES SATELLITE TV PLANS

PM211441 London THE TIMES in English 21 Apr 82 p 4

[Unattributed report of 20 April UK House of Commons session: "Satellite Channels by 1986"]

[Excerpt] The BBC will operate the first two direct broadcasting by satellite channels likely to be available by 1986 but three further channels could be made effective and when there was the demand, Mr William Whitelaw, the home secretary, said in opening a debate on satellite and cable broadcasting.

The government believed it vital, he went on, that industry should be in a position to reap the benefits of new technology on which the future economic health of the country depended in part. For that reason there was need to press ahead with proposals as quickly as possible so as not to miss the opportunity.

It would be possible with the right equipment to receive foreign services, and there was concern throughout Europe on the effect this might have on the arrangements of individual countries. Discussions were in progress within the Council of Europe and the government was represented on a working group examining the scope for international agreement on programme standards and advertising.

Programming costs could be between 10M pounds a year for a channel reliant on existing material to 100M pounds for one comparable in content to BBC 1 or ITV. The BBC believed its subscription service could be entirely self financing within about 4 years after which it would make a profit which would eventually benefit the licence fee payer. Cash might have to be borrowed to cover start up costs.

Various services such as teleshopping and telebanking became possible once the cable was there.

No one had yet suggested that it would be possible to reach anything like the 99 percent of the population who could now receive television. He believed they had a duty to the majority of people in the country who could continue to rely on BBC and IBA services for the foreseeable future. They were

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entitled to expect that the range and quality of those services should not be diminished by cable services syphoning off the best sport, best films and best entertainment.

With the BBC's satellite subscription service he was confident the general interests of the licence fee payer would remain paramount. With cable, there were as yet no natural safeguards and no natural mechanisms of accountability, and the government would need to consider in the light of the Hunt inquiry's report what safeguards and mechanisms of supervision and accountability there should be.

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