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RESEARCH AND DEVELOPMENT

No. 51

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WIDE

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WORLDWIDE AFFAIRS

SOVIET SCIENTIST IN INDIA COMMENTS ON SPACE COOPERATION

Moscow TASS in English 2110 GMT 26 May 78 LD

[Text] Delhi, 26 May, TASS--Aleksandr Nikolayev, a TASS correspondent, reports:

The Soviet Union completed all the preparatory work for the launching of India's second artificial satellite of the earth, Nikolay Novikov, vice chairman of the Intercosmos, said in an interview with a TASS correspondent. He is currently in India at the head of a delegation of Soviet scientists and specialists who took part in the engineering tests of a model of the new space laboratory at the space centre of India. A number of matters on the final improvement of the station by Indian specialists before its launching into orbit by a Soviet rocket were discussed during the consultations, Nikolay Novikov said.

Soviet-Indian cooperation in space research has still a short history, notwithstanding the fact it brought practical results, Nikolay Novikov emphasized. Due to the joint preparation and the launching of India's first artificial satellite "Aryashata," India got national scientific cadres. At present they independently handle a variety of complex scientific and technical tasks connected with space research. The joint programme to launch into orbit a special terrestrial observation satellite is intended for the solution of new important tasks in the interests of developing the country's economy and studying its mineral, water and timber resources.

Indian and Soviet scientists are confident in a successful accomplishment of the new experiment which, in their view, will serve to further strengthen cooperation between the two countries, Nikolay Novikov said in conclusion.

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WORLDWIDE AFFAIRS

INDIAN MINISTER SPEAKS ON TROPOSCATTER LINK WITH USSR

Bombay TIMES OF INDIA in English 27 May 78 p 9 BK

[Article by our staff correspondent]

[Excerpt] Srinagar, 26 May--The union minister for communications, Mr Brij Lal Varma, said here today that a troposcatter communications system receiving stations at Charar-i-Sharif in Kashmir and Dushanbe in the USSR would provide India a direct radio link with all countries of the communist bloc and in turn enable Russia to have straight radio access to Southeast Asia by October 1980.

Mr Varma told a press conference that work on setting up antenna at Charar-i-Sharif and Dushanbe, which were 680 km apart, had already begun.

The troposcatter communication system, which will not rely on satellites, will be of "crucial importance to both India and the USSR." It would enable Russia to gain communication advantages which it lacked at present by not being a member of the international telecommunications satellite organization.

The Charar-i-Sharif station would cost India Rs 40 million. The equipment would be indigenously produced. Even the antennae to be set up at Dushanbe were being supplied by India.

With the completion of this communication system direct radio and telephone links would be provided between India and Russia and between India and the East European countries.

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WORLDWIDE AFFAIRS

BRIEFS

AUSTRIAN-POLISH RADIO-TV PACT--Vienna, 4 Jun, PAP--A delegation of the Polish Committee of Radio and TV led by its chairman, Maciej Szczepanski, has paid an official visit to Vienna at the invitation of director general of the Austrian radio and TV. Both directors signed an agreement on cooperation between Polish and Austrian radio and TV which provides for the exchange of programmes on social, economic, technical, cultural and sports questions of both countries. [Text] [Warsaw PAP in English 0512 GMT 5 Jun 78 LD]

SUDANESE-UK COOPERATION--Mr Nasr al-Din Mustafa, minister of planning, received in his office this morning the British parliamentary delegation currently visiting the country. Economic and technical cooperation between the United Kingdom and the Sudan, particularly the aid being provided by the United Kingdom to the Sudan via the British Ministry of Overseas Development, were reviewed during the meeting. [Text] [Omdurman Domestic Service in Arabic 1500 GMT 8 Jun 78 LD/EA]

PAKISTAN OVERSEAS TELEPHONE CIRCUITS--Two additional overseas trunk circuits through satellite have been opened linking Karachi with Colombo and Lahore with Abu Dhabi. [Text] [Karachi Domestic Service in English 1700 GMT 12 Jun 78 BK]

IRAN-DPRK NEWS AGREEMENT--Pyongyang, 10 Jun--An agreement on cooperation between the Korean Central News Agency and the PARS news agency of Iran was signed in Pyongyang on 9 June. The agreement was signed by Kim Yang-son Youri N. Laouri, deputy managing director of the PARS news agency of Iran. [Text] [Pyongyang KCNA in English 0337 GMT 10 Jun 78 SK] Pyongyang, 10 Jun--

Vice President Kang Yang-uk on 9 June met and had a friendly talk with Youri N. Laouri, deputy managing director of the PARS news agency of Iran. Personage concerned Kim Yang-son was present. [Text] [Pyongyang KCNA in English 0339 GMT 10 Jun 78 SK]

CSSR-LAOS RADIO COOPERATION--An agreement on cooperation between the CSSR Radio and the Laos national radio was signed on Wednesday in Prague by Central Director of the CSSR Radio Jan Risko and Chaleun Vongsam-ang, director of the Laos national radio. [Text] [Prague RUDE PRAVO in Czech 15 Jun 78 p 2 AU]

CZECH-FINNISH RADIO PROTOCOL--Helsinki, 30 Jun, CETEKA--A working protocol on cooperation between the Czechoslovak and the Finnish radio in the 1978-1980 period was signed here yesterday by Central Director of the Czechoslovak Radio Jan Risko. Under the protocol, the two institutions will exchange programs on the occasion of the two countries' national days. Special attention will be paid to cooperation in the preparation of programs devoted to relations between the two countries in the sphere of economy, science, culture and sport. [Text] [Prague CTK in English 1719 GMT 30 Jun 78 LD]

JAPAN SUPPLIES NEWS TO BRAZIL--Tokyo, 28 Jun--KYODO news service announced 28 June the conclusion of a news supply agreement with the Sao Paulo SHINBUN, a leading Japanese-language newspaper in Brazil. The agreement allows the Sao Paulo SHINBUN to receive KYODO's facsimile tabloid newspaper, transmitted directly from Tokyo by radio, and use the KYODO news for its own pages. The Sao Paulo SHINBUN is the first Japanese-language newspaper in Latin America ever to subscribe to KYODO's Japanese news. The contract, effective 1 July, was signed by Mitsuto Mizumoto, president of the Sao Paulo SHINBUN, and his KYODO counterpart Takeji Watanabe. [Text] [Tokyo KYODO in English 0816 GMT 28 Jun 78 OW]

BANGLADESH CABLES TO USSR--Bangladesh is to supply telecommunication cables worth 2.7 million taka to the Soviet Union this year. An arrangement to this effect was signed between the two countries in Dacca yesterday. [Text] [Delhi General Overseas Service in English 1000 GMT 2 Jul 78 BK]

SOVIET-AUSTRALIAN BROADCAST AGREEMENT--Moscow, 13 Jul, TASS--An agreement on cooperation in the sphere of television and broadcasting was signed in Moscow today between the Soviet Committee for Television and Broadcasting and the Australian Broadcasting Commission. It provides for an exchange of television films and radio materials about the life of the peoples of the two countries, for mutual assistance in the filming of programmes on the most important events in the life of the USSR and Australia. [Text] [Moscow TASS in English 2051 GMT 13 Jul 78 LD]

MTI-WAFA COOPERATION AGREEMENT--Budapest, 13 Jul (MTI)--Following an invitation by the general director of the Hungarian news agency (MTI) Ziad Abdul Fattah, general director of the Palestinian news agency WAFA included in his European tour also Hungary. In Budapest he studied the Hungarian system of news broadcast and carried on talks with heads of MTI. After the negotiations the two parties signed a cooperation agreement between the Hungarian and the Palestinian news agencies. [Text] [Budapest MTI in English 1730 GMT 13 Jul 78 LD]

PORTUGUESE-GUINEAN NEWS COOPERATION--The Portuguese news agency and the Guinean news agency have signed a protocol in Bissau which calls for a mutual cooperation agreement in the short term. [Text] [Lisbon Domestic Service in Portuguese 0000 GMT 15 Jul 78 LD]

PAKISTAN COOPERATION WITH IRAQ--The Iraqi ambassador to Pakistan in a radio and television speech on the occasion of the 10th anniversary of the republic said the Pakistan-Iraq Joint Ministerial Level Commission will meet in the near future to hold talks on improving economic cooperation between the two countries. He said that bilateral trade between the two countries has increased and Pakistan is helping in various Iraqi development projects. [Karachi Overseas Service in Bengali 0115 GMT 18 Jul 78 BK]

PALESTINIAN-CZECHOSLOVAK NEWS AGREEMENT--The Palestinian news agency, WAFA, and the Czechoslovak news agency, CTK, reached an agreement in Prague the day before yesterday on cooperation in exchanging news reports and wire-photos. The agreement stipulates that WAFA and CTK will, to the best of their abilities, provide assistance to each other's permanent representatives in both Prague and Beirut. [Text] [Voice of Palestine (clandestine) in Arabic to the Arab World 1800 GMT 14 Jul 78 JN]

MONGOLIAN RADIO, SOVIET HELP--A new radio transmitting station has been completed in Ulaanbaatar. Soviet and Mongolian experts are now installing the latest equipment, received from the Soviet Union, and in September the radio station will become operational. Our correspondent, Sergey Pravdin, reports from Ulaanbaatar: [Pravdin] The Ulaanbaatar radio station is one of four now being built in Mongolia with Soviet help. All will be commissioned this year. At the same time, construction is underway on a radio relay line from Ulaanbaatar to (Vodealtay), which is one of the most important projects of the current Mongolian Five-Year Plan. Its completion together with the commissioning of the new radio stations, will help solve the task of bringing radio to the more remote regions of the country. The total length of the radio relay line will be about 1,200 kilometers. It will be built in the present Five-Year Plan. The line will also enable the MPR's radio and television network to reach several important industrial centers, including the town of Erdenet where a joint Soviet-Mongolian enterprise is being completed--a mining and enriching combine which will be one of the biggest in Asia. [Excerpt] [Moscow Domestic Service in Russian 1330 GMT 31 Jul 78 LD]

USSR-INDIA RADIO LINK--Delhi, 1 Aug, TASS--An official report was published here that the work to create direct multi-channel tropospheric radio line between India and the USSR is conducted ahead of schedule and will be concluded in 1980. The protocol on bilateral cooperation in this sphere envisages the construction of a complex of devices that will ensure a stable communication over the Himalayas. Large volume of equipment will be supplied by major Indian state enterprises. Under the protocol on establishing direct multi-channel tropospheric radioline, Indian specialists will undergo training in the USSR. The Indian press writes that cooperation in this important sphere attests to further development of friendly relations between the two countries. [Text] [Moscow TASS in English 1646 GMT 1 Aug 78 LD]

NONALIGNED COUNTRIES' BROADCASTING STRATEGY--New Delhi, Aug 8 (TANJUG)--At the next Conference of Broadcasting Organizations in Geneva in October, the nonaligned countries will urge a juster international distribution of radio frequencies. Such is the conclusion reached by a group of radio and telecommunications satellites experts at the close of their three-day meeting. The group of experts was named by the Committee for Cooperation of the Nonaligned Broadcasting Organizations. Representatives of Algeria, Cuba, Nigeria, the People's Democratic Republic of Korea, Guyana, Yugoslavia and India participated in the gathering, considering thirty or so technical documents mostly prepared in Yugoslavia and India on the future of the world's telecommunications. The group also decided to work out a concrete plan for exchanges of the nonaligned's TV and radio programs via Intelsat satellite system. [Text] [Belgrade TANJUG in English 1940 GMT 8 Aug 78 LD]

TAP-APA AGREEMENT--Vienna, 15 Jun--A cooperation agreement between the Austrian APA agency and the Tunisian TAP agency was signed in Vienna yesterday by Mr Andreas Berghold and Mr Mahmoud Triki, respectively director general of APA and president director general of TAP. This cooperation agreement, the first of its kind between the two agencies, allows for the exchange of news services of the two agencies, the exchange of experience and of journalists as well as of documents on the two countries. More particularly, the agreement provides that APA will undertake to transmit daily in German five news items which will be passed to it by TAP. This transmission will affect all the mass media which are partners of APA both inside and outside Austria. In return TAP undertakes to transmit every day five news items prepared by APA to all its partners inside and outside Tunisia, particularly in the Arab and African world. [Tunis TAP in French 1500 GMT 14 Jun 78 LD]

NAN IN YUGOSLAVIA--"Poll Item"--Lagos, 12 Jul (TANJUG)--The News Agency of Nigeria (NAN) has begun operation here. Its officials say the agency seeks cooperation with the nonaligned countries' news-agency pool and with the Yugoslav news agency TANJUG to speed the exchange of news on developments in Nigeria and Yugoslavia, as well as nonaligned countries in general. Officials here underline their interest in having the Nigerian news agency help decolonize the field of news and information and provide unbiased coverage of developments in Nigeria, its positions on current international and African problems, and its activity within the nonaligned movement. [Text] [Belgrade TANJUG in English 0904 GMT 12 Jul 78 LD]

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INTER-ASIAN AFFAIRS

PHILIPPINES LEASES INDONESIAN COMMUNICATIONS SATELLITE

Jakarta Domestic Service in Indonesian 1200 GMT 23 Jun 78 BK

[Text] Today the Philippines formally signed a lease contract on the use of the facilities of Palapa 2 domestic communications satellite for expanding communications to all areas in that country. The document was signed by the president-director of the telecommunications corporation, Wili Munandir Mangundiprodjo, and (Bonaficio Jose Afrika), representing the Philippine domestic satellite authority, DOMSATPHIL.

With the signing of the contract, the Philippines became the first ASEAN country which will use the facilities of Palapa 2 which so far has been used as a backup for Palapa 1. For this purpose the Philippines is building 11 earth stations located in Manila, Davao, Cagayan de Oro, Zamboanga, Cebu, Bacolod, Pauayan, Tacloban, Tuguegurao, (Herika) and Laoag. These stations will be operational early next year. While in the initial stage, four stations will begin operation in September.

According to the contract, the Philippines will lease 1 1/2 transponders for 5 years paying \$693,000 per transponder per year. One transponder will be used for television transmission while the one-half transponder is for telecommunications within the Philippines and along the Philippines-Indonesian border region connecting Davao and Zamboanga in the Philippines with Manado in Indonesia.

Both Wili Munandir and (Jose Afrika) pointed out that the leasing contract reflects the growing ASEAN spirit in efforts to mutually assist and promote all aspects of life among ASEAN nations.

Thailand is also exploring the possibility of using the facilities of the Palapa domestic communications satellite to expand and speed up its communications.

The director general of post and telecommunications, Suhardjono, and the ASEAN national secretary general, Umarjadi Njotowijono, attended the signing ceremony.

INTER-ASIAN AFFAIRS

BRIEFS

VIETNAM-LAOS RADIO COOPERATION--Hanoi VNA, 25 Jun--A plan for cooperation and mutual assistance in 1978 between Radio Voice of Vietnam and the Lao National Radio was signed here this afternoon. Signatories were Le Quy, vice chairman of the Vietnam Commission for Radio and Television and editor in chief of Radio Voice of Vietnam, and Chaleuan Vongsaymang, director of the Lao national radio. Present were Tran Lam, alternate Central Committee member of the Communist Party of Vietnam and chairman of the Commission for Radio and Television, and representatives of the Vietnamese Foreign Ministry and Commission for Cultural Relations with foreign countries. Also present was Lao Ambassador Khamta Douangthongla. [Text] [Hanoi VNA in English 1557 GMT 25 Jun 78 OW]

JAPAN-SRI LANKA TV SERVICE--The Japan-Sri Lanka television service would operate from November in a way to reach the general public at a lower cost. The headquarters would be in Colombo. The relay station would be in Pidurutalagala and the two substations, one in Jaffna and the other in Trincomalee. Television broadcasting equipment has already arrived. According to the Ministry of Information and Broadcasting they have received a large number of applications for television sets. The State Engineering Corporation and the Department of Irrigation, Power and Highways are already engaged in cutting a 10-mile roadway to the relaying station in Pidurutalagala. [Text] [Columbo WEEKEND in English 28 May 78 p 1 BK]

ASEAN SATELLITE COMMUNICATIONS COURSE--Bandung, 30 Jul (ANTARA)--Some 29 telecommunications officials from the ASEAN member countries are now attending a training course at the telecommunications training centre here to improve their skill in the domestic satellite communication system. Six telecommunications officials from Thailand, 9 from Malaysia, 2 from Singapore, 2 from the Philippines and 10 from Indonesia are taking part in the course organised by the Telecommunications Public Corporation. The course is held as the first step for the realization of cooperation in the telecommunications field among the ASEAN countries. The course is held from May to 1 August. [Text] [Jakarta ANTARA in English 0659 GMT 31 Jul 78 BK]

BANGLADESH

BRIEFS

SYLHET RADIO STATION--The minister for information and broadcasting, Mr Habibullah Khan, has said a 20-kilowatt transmitter on the Sylhet radio station will start operating by next October. Addressing the local journalists in Sylhet today he said the programs of both radio and television will be improved and reoriented to meet the hopes and aspirations of the people. The minister said talented artists will be picked up from the rural areas to make the programs of these two vital mass media more attractive and informative. [Text] [Dacca Domestic Service in English 1530 GMT 18 Jul 78 BK]

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BURMA

COMMUNICATION VIA SATELLITE BY 1979

Rangoon THE WORKING PEOPLE'S DAILY in English 31 Jul 78 p 1

[Text] Rangoon, 30 Jul--The satellite communications network being set up under the project for the development of Burma's communications system will be completed in about February 1979.

In order to carry out final implementation of the project, a Burmese delegation headed by Managing Director of the Posts and Telecommunications Corporation U Khin Maung Tun attended the International Satellite Communications Seminar held in Washington, during the second week of July.

Members of the delegation arrived back in Rangoon at 1400 hours today.

Under the project, Burma as a member of International Satellite Communications Organization will cooperate with other countries. U Khin Maung Tun and party visited India, England, Japan, Hong Kong and Singapore to observe and discuss their systems as Burma will have to cooperate with these countries which are members of the International Satellite Communications Organization.

With the successful establishment of satellite communications, Burma will be able to communicate with any country or any place at any time of the day via telegraph, telephone or telex. NAB.

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INDIA

INDIA TO EXPAND SATELLITE COMMUNICATION NETWORK

Delhi Domestic Service in English 0830 GMT 26 May 78 BK

[Text] Satellite circuits will link seven places, including five remote ones, to the national telecommunication network next year.

This was stated by the communications minister, Mr Brijlal Verma, in Srinagar today. The places are Delhi, Madras, Leh in Ladakh, Aizal in Mizoram and places in the Andaman, Nicobar and Lakshwadeep islands.

Mr Verma told newsmen that in the beginning the centers will be linked through the International Communication Satellite--INTELSAT.

India's second satellite is likely to be launched by the end of this year as scheduled. The engineering model has already been successfully test flown on a helicopter over the satellite tracking center at Sriharkota in Andhra Pradesh. The deputy chairman of the Soviet Intercosmos, Prof N. S. Novikov, who is leading a Soviet delegation of space scientists for discussion with the Indian counterpart, said the delegation is completely satisfied with the work done by the Indian scientists in forging the satellite engineering model.

The second satellite, Aryabhata II, is going to study the resources of the earth, the land mass, and the oceans.

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INDIA

INDIA'S REMOTE AREAS TO BE LINKED BY SATELLITE

Bombay TIMES OF INDIA in English 27 May 78 p 10 BK

[Text] Srinagar, 26 May--Five remote places of the country, including in Jammu and Kashmir, will be linked to the national telecommunication network through satellite circuits next year.

This was announced by the communications minister, Mr Brij Lal Varma, who is here in connection with a 2-day meeting of the consultative committee of members of Parliament attached to his ministry, at a press conference today.

Mr Varma said seven centres would be linked by satellite. They were the cities of Delhi and Madras, Leh in Ladakh, Aizawl in Mizoram and places in the Andaman, Nicobar and Lakshwadeep islands.

To begin with, the centres would be linked through the INTELSTAT international communications satellite. Later, India's own satellite, INSAT, expected to be launched in 1980, would provide the link.

Mr Varma said his ministry had plans to expand the network so that by 1980-1981 there would be 35 satellite-linked earth stations, including four mobile ones which could be transported by land or air to any spot in emergencies.

The Ministries of Communications and Information and Broadcasting and the meteorological departments would share the cost of the INSAT, estimated at Rs. 1.7 billion.

The 35 earth stations would cost his ministry about Rs. 350 million, he said. (UNI) [United News of India]

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INDIA

BRIEFS

DOMESTIC SATELLITE COMMUNICATIONS--Trial use of satellites for domestic communications has begun. The telephone users of Ahmedabad and Ajmer are now talking through a satellite for a few hours every day. The calls to these places are routed through the "Symphonie" satellite as part of the Satellite Telecommunications Experiment Project [STEP]. STEP, a joint project of the Indian Space Research Organization and the Post and Telegraph Department, completes 1 year of operation today. The experiment uses a Franco-German satellite, "Symphonie," which is being made available to India for 2 years. The satellite is at present located at 19 degrees over the equator. [Text] [Delhi Domestic Service in English 1230 GMT 31 May 78 BK]

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INDONESIA

SUHARTO INAUGURATES EAST TIMOR TV RELAY STATION 16 JULY

Jakarta Domestic Service in Indonesian 1200 GMT 16 Jul 78 BK

[Excerpt] At 1630 West Indonesia time or 1730 Central Indonesia time [0930 GMT] today, President Suharto pushed a button to inaugurate the Dili TVRI [Televisi Republik Indonesia] relay station. Immediately after a television program from the central TVRI in Jakarta was clearly received and watched by the people in the capital of the 27th province, East Timor.

The inauguration ceremony, which was held at the East Timor provincial governor's building, was marked by the signing of a document proclaiming the inauguration by the president and the cutting of the ribbon and strings of TVRI balloons by Mrs Tien Suharto.

Director General of Radio, Television and Film, Sumadi, reported that with the inauguration of the Dili TVRI relay station, which is located on (Marabia) hill, all 27 provinces in Indonesia can now receive television broadcasts. East Timor is now included in the Indonesian television network.

He said that the opening of the Dili TVRI relay station was in line with the government's development policy of equally distributing development achievements among all regions and people of Indonesia.

Sumadi said that it took only 3 months from when the surveys were conducted at the end of [word indistinct] 1978 to determine the site and construction of two television stations until their completion by Indonesian manpower at a cost of 150 million rupiah.

According to Sumadi, as of the end of the Second Five-Year Development Plan there are nine [as heard] television transmission stations in Indonesia-- Medan, Palembang, Jakarta, Yogyakarta, Surabaya, Denpasar, Ujungpandang and Manado--supported by 85 relay stations and other communications networks throughout the archipelago.

At present, about 78 million Indonesians can watch television broadcasts, 54 million in the rural areas and 24 million in the major cities.

Concluding his report, Sumadi said that the Denpasar TVRI transmission station will be inaugurated tonight, while the Manado TVRI transmission station will be inaugurated next September.

CSO: 5500

INDONESIA

BRIEFS

KRAWANG AUTOMATIC TELEPHONE EXCHANGE--The automatic telephone exchange at Krawang Regency, West Java, will be operational from 1 June. With the completion of the Krawang automatic exchange, there are now four automatic telephone exchanges in West Java--in East Bandung with 2,200 lines, in North Bandung with 2,800 lines and in West Bandung with 1,000 lines. [Jakarta Domestic Service in Indonesia 0700 GMT 31 May 78 BK]

NEW MICROWAVE NETWORK--The Eastern microwave system linking Bali-Nura Tenggara Barat-Nusatenggara Timur and Ujungpandang will shortly be opened at a ceremony in Ujungpandang, Mustafri Effendi, of Perum Telekomunikasi [PERUMTEL], said here Wednesday. This will enable isolated areas in eastern Indonesia--so far not in the domestic satellite communication system--to have microwave services. To the west, the eastern microwave system is connected with the Java-Bali line. The eastern microwave system has two routes: the major route linking Bali, Lombok, Sumbawa, Flores, Tanahjampea, Selayar and Sulawesi and the minor route linking Flores, Sumba and Timor. Effendi said the eastern microwave system has eight terminal and 11 repeater stations. Construction of the system, he said, started in 1974. The project became operational on 31 May this year although some minor plants will not be completed until the end of July. Up to the end of May, construction work has claimed RP. 5.2 billion. The funds are made available by the central government, PERUMTEL and a Japanese 2.4 billion yen loan. [Excerpt] [Jakarta INDONESIA TIMES in English 9 Jun 78 p 2 BK]

AUTOMATIC TELEPHONES--The telecommunications corporation is making preparations for the installation of 20,000 lines for 10 automatic telephone stations in central Java to replace the regular telephones. Automatic telephone centers are being set up in Pati, Kendal, Kebumen, Klaten, Salatiga, Kuos, Pekalongan, Tegal, Purwokerto and Cilacap. [Jakarta Domestic Service in Indonesian 2300 GMT 3 Jul 78 BK]

SPACELAB-1 PROGRAM--Jakarta, 30 Jul (ANTARA)--The National Space and Aeronautic Institute (LAPAN) has recently been invited by the European Space Agency to take advantage of photographic data on natural resources collected by the Spacelab-1 satellite to be launched in 1980. Maksum Ipsjam, head of Natural Resources Teledetection Project of the institute, told the press here Saturday [29 July] LAPAN accepted the invitation. The Spacelab-1 will be in orbit for a week to photograph the earth's surface. Parts of South Sumatra, West Java, Central Java, Kalimantan, Irian Jaya and East Nusatenggara will be covered by cameras on board the Spacelab-1. Maksum Irsjam said Indonesia will take advantage of the Spacelab-1 program to back up its national development program in the exploration of natural resources. [Jakarta ANTARA in English 0733 GMT 31 Jul 78 BK]

CSO: 5500

JAPAN

JCP'S SENAGA SCORES OKINAWA-TAIWAN SUBMARINE CABLE PROJECT

Naha OKINAWA TIMES in Japanese 29 Jun 78 Morning Edition p 1 OW

[Text] Kamejiro Senaga, chairman of the Japan Communist Party [JCP] Okinawa Prefectural Committee, has said that the Okinawa-Taiwan submarine cable construction plan, which got underway last year, is tantamount to laying "a 'semimilitary cable designed to give precedence to the U.S. forces, in accordance with the U.S. Asian strategy.'" Senaga made the remark when he met reporters in the prefectural assembly building on 28 June.

According to Senaga, the U.S. forces have been pressing Japan for early completion of the cable project to secure a reliable military communications network between Okinawa and Taiwan and they have asked for the allocation of 60 circuits, out of a total of 480, for their exclusive use when the project is completed. The JCP charges that this may constitute a violation of the wire communications law and plans to grill the government in the House of Councilors Cabinet Affairs Committee when it meets on 29 June.

The 620-kilometer submarine cable project got underway in July last year after the Posts and Telecommunications Ministry approved the establishment of a company, the "Japan Asia Submarine Cable Company," to undertake the project. The new company is funded in full by the Kokusai Denshin Denwa [International Telegraph and Telephone] Company, Ltd (KDD). The fact that the undertaking company is a dummy company, not KDD itself, was regarded as a measure giving due consideration to Japan-China relations since the cable would be laid on the Chinese continental shelf.

Senaga told reporters: "The existing U.S. military submarine cable (60 circuits) was severed in the deep sea and rendered unserviceable last year. I think that is why they are pressing us on this project." He stressed: "When this new cable is used by the U.S. forces, Okinawa's role as a strategic communications base of the U.S. forces will further gain in significance." He added that the use of a dummy company in the project may constitute a violation of the wire communications law.

The existing U.S. military submarine cable connects Chatan in Okinawa with Keelung in Taiwan.

Meanwhile, commenting on Senaga's remarks, Chosei Shikina, director of the KDD Okinawa International Communications Office, said: It is true that a 480-circuit submarine cable will be laid between Okinawa and Taiwan. But it is totally incorrect that the U.S. forces have asked for the allocation of 60 circuits. The U.S. forces have not asked for anything like that. We have proposed to the local fishermen to hold negotiations and, if possible, we would like to start the Minatogawa project this autumn. When completed, the cable will be operated by our company (KDD).

CSO: 5500

JAPAN

BRIEFS

TV SATELLITE EXPERIMENTS--Tokyo, 20 Jul (KYODO)--Japan's first experimental broadcasting satellite "Yuri" (lily) launched last April will undergo full-scale experiments in the future after winding up a wide variety of technical tests. The control over the medium-scale experimental satellite was handed over to the Posts and Telecommunications Ministry's radio research laboratory from the national space development agency Thursday. The satellite, launched by a U.S. rocket from Cape Canaveral on 8 April to help bring about an operational broadcast satellite system, reached its final position at the altitude of about 36,000 kilometers over the equator in western Borneo on 26 August. The satellite is designed to solve poor television reception problems in remote and urban areas in Japan and develop a larger domestic satellite system. The future experiments include TV reception to be beamed directly by way of the satellite into homes across the country. [Text]
[Tokyo KYODO in English 0405 GMT 20 Jul 78 OW]

SPACE COMMUNICATIONS PROGRAM--Tokyo, 27 Jun--The Posts and Telecommunications Ministry on 27 June launched a space development program which includes plans for the launching of Japan's first commercial broadcasting satellite. The program was submitted to the Space Development Commission presided over by Director-General Tasaburo Kumagai of the Science and Technology Agency, the nation's top decision-making agency concerning space development. Under the project, the ministry hopes to launch a communications satellite in fiscal 1982, a broadcasting satellite for practical use in fiscal 1983, and an ionosphere observation satellite around fiscal 1985. Also planned is the launching of an experimental satellite for testing the technology involved in satellite-to-satellite or satellite-to-ground communications. [Text]
[Tokyo KYODO in English 1247 GMT 27 Jun 78 OW]

NAVIGATION CONTROL SATELLITE--The Ministry of Transport (MOT) plans to start fabrication of airborne equipment in FY '80 for use with the AMES (air and marine engineering satellite) scheduled to be launched in mid-1984. The AMES program is a national project being carried out jointly by MOT, Ministry of Posts and Telecommunications, and the Science & Technology Agency. It is intended to develop a satellite system for traffic control of aircraft and ships. The system is expected to set up efficient, high precision and on-line radio communication between ground stations and aircraft flying over the sea via the satellite, enabling traffic control of aircraft as effective for aircraft flying over land. For flight tests of the airborne equipment, MOT will use flight-check planes as well as commercial aircraft. The equipment will undergo ground tests from mid-1981 for about a year. From mid-1982, it will undergo flight tests scheduled for completion by the spring of 1984. Ground facilities for the satellite system will be built between FY '81 and '83. [Text] [Tokyo JPE AVIATION REPORT-WEEKLY in English 2 Aug 78 pp 1-2]

CSO: 5500

SRI LANKA

BRIEFS

NEW NATIONAL NEWS AGENCY--"Pool" item--Colombo, 4 Aug (TANJUG)--Sri Lanka's first national news agency Lanka Puwath has been formed here by a decision of the associated newspaper publishers and with government participation. As reported, the new agency will have as its chairman Edmound Wickremasinghe, a prominent journalist and publicist, member of the inner leadership of the ruling United National Party. [Text] [Belgrade TANJUG in English 0910 GMT 4 Aug 78 LD]

CSO: 5500

THAILAND

'VOPT' SCORES USE OF SATELLITES IN COMMUNIST SUPPRESSION

Voice of the People of Thailand [clandestine] in Thai to Thailand 1000 GMT
22 Jun 78 BK

[Text] The reactionary Kriangsak government is making an all-out effort to offset its defeats and cope with the repeated attacks of the Thai people's liberation forces in various parts of the country. It has assigned the National Research Committee to study communist suppression methods. The committee recently came up with a new proposal: suppression through the use of satellites. It will cost as much as 60 million baht to set up a ground station to receive information via satellite. The committee notes that U.S. satellite No 4 [dao thiam duang mai duang thi si] is capable of providing data on small areas and therefore will be able to give information on the types and locations of communist camps in the deep jungle. Forces will then be immediately dispatched to eliminate them.

This bizarre project, after it was revealed by the National Research Committee, came under strong opposition and attacks by people in various circles. A newspaper said the project to suppress communists through the use of satellites has caused laughter everywhere. It has caused a discomforting feeling, because who knows how the innocent people living in the deep jungle will be able to survive communist suppression operations via satellite. The newspaper fears that, if this method is really carried out, anybody living in the deep jungle, including the hilltribes people, will become a victim. No one sighted in the deep jungle will escape the suppression operations. The newspaper remarked that, since there is barely anyone living in the forests now, since nearly all of them have been denuded, where are they going to find their targets? It also suggested that it would be better to spend the 60 million baht to buy lunches for the poor municipal school-children.

CSO: 5500

VIETNAM

TELECOMMUNICATIONS POOR BETWEEN HANOI, REST OF WORLD

Paris AFP in English 1047 GMT 29 Jun 78 OW

[Article by Jean Thoraval]

[Text] Hanoi, 29 Jun (AFP)--Whether as a result of Sino-Vietnamese tension or because telecommunication links with Moscow are too unsophisticated, it is now more difficult in Hanoi to make an international telephone call than it was even at the height of the American bombing. And telex links which took news from Vietnam to Paris in an hour now sometimes take 3 days.

In the past when telecommunication links between Hanoi and Moscow closed down at 2200 hours it was possible to speak to the capitals of Western Europe via Peking. Recently this has proved an impossible and frustrating exercise.

After trying for 8 hours without success to get through to Western Europe this correspondent decided to telephone colleagues in Peking. The line was good, but the call was passed from one wrong Peking number to another, something that had not happened before in 5 years.

Perhaps the Vietnamese operator wanted to show that cooperation between Vietnam and China was a dead letter, perhaps the switchboards were falling apart through old age.

One thing seems clear, as the media and diplomatic war rages. A little battle is taking place on the telecommunications front with the result that Hanoi can be cut off for hours on end from the outside world.

CSO: 5500

VIETNAM

BRIEFS

THANH HOA POST, TELEGRAPH DEVELOPMENT--The post and telegraph sector of Thanh Hoa Province is striving to consolidate and expand the communications network in the mountainous and coastal areas. The province now has 262 km of telephone lines and 6 telegraph stations specifically designed to serve the mountainous and coastal areas. [Hanoi Domestic Service in Vietnamese 0400 GMT 14 Jul 78 BK]

CSO: 5500

INTERNATIONAL AFFAIRS

BRIEFS

'ADN-'AGERPRES' COOPERATION AGREEMENT--ADN Director General Guenter Poetschke visited Romania on 28-29 June. A cooperation agreement was signed on this occasion between ADN and AGERPRES. At the end of his visit, the guest was received by Comrade Dumitru Popescu, member of the Executive Political Committee and secretary of the RCP Central Committee. The meeting was attended by AGERPRES Director General Ion Cumanasu. The sides discussed the development of press cooperation between the two countries. [Text] [Bucharest SCINTEIA in Romanian 30 Jun 78 p 4 AU]

'ADN'-'MTI' COOPERATION AGREEMENT--Berlin--A working agreement on cooperation between the news agencies of the GDR and Hungary was signed in Budapest at the weekend by the directors general of ADN and MTI Guenter Poetschke and Sandor Baros. The director general of ADN was received by Laszlo Fodor, deputy head of the MSZMP Department for Agitation and Propaganda, and State Secretary Dr Petr Varkonyi, head of the Press Office of the Hungarian Council of Ministers for friendly talks. [Text] [East Berlin International Service in German 1029 GMT 1 Jul 78 LD]

CZECH-GDR TELEVISION AGREEMENT--A long-term agreement was signed in Berlin yesterday on mutual cooperation between the television of the GDR and the Czechoslovak Socialist Republic. The agreement was signed by Heinz Adameck, chairman of the State Committee for Television, and Jan Zelenka, central director of Czechoslovak Television. [Text] [Prague Domestic Television Service in Czech and Slovak 1800 GMT 2 Jul 78 LD]

CSO: 5500

YUGOSLAVIA

BRIEFS

NEW COASTAL RADIO STATION--A new coastal maritime radio station, Dubrovnik Radio, was put into operation at Gorica on 25 July. It will operate as part of a unified system of maritime radio communications in the area of the central and southern Adriatic. It will carry out the international service of radio navigation at sea and it will supply the necessary information to domestic and foreign ships on the weather situation and dangers at sea. [Belgrade BORBA in Serbo-Croatian 26 Jul 78 p 6 AU]

CSO: 5500

INTER-AMERICAN AFFAIRS

BRIEFS

BRAZIL-PARAGUAY TV--Miguel Fustagno, representative of the Brazilian "Globo Network" has arrived here to present a plan to President Stroessner to install a new television station in Paraguay, with Brazilian capital and technology. The "Globo Network" is the largest communications industry in Brazil and the ninth largest in the world. [Asuncion ULTIMA HORA in Spanish 5 Jul 78 p 7 PY]

CSO: 5500

ARGENTINA

BRIEFS

RADIO RETURN TO PRIVATE OWNERS--"Most" of Argentina's radio and TV stations will be returned to private hands if the executive approves a draft law submitted by the public information department, the department head said yesterday. Public information secretary Rear Admiral Ruben Franco also revealed that TV Channel 7 and Argentina TV Color would merge and set up at the new Figueroa Alcorta and Tagle facility. He also announced colour TV for Argentina by 1980 "if presidential approval is forthcoming." He said that Channel 7 would completely evacuate their present facility in the Alas building, Leandro Alem and Viamonte. Rear Admiral Franco said that "a minimum" of radio and TV stations would remain in government hands and would be used for the "traditional" government radio and TV service. "The rest of the stations, I would say the great majority, will be denationalized," Franco said. He also said that litigation pending over other facilities, like Channel 13, would be continued out of court when possible. [Text] [Buenos Aires HERALD in English 29 Jul 78 p 11 PY]

ADDITIONAL TELEX SERVICES--Buenos Aires, 17 Jul--The National Telecommunications Company[ENTEL] has announced that 45 telex stations will be completed this year to cover the great demand for service. By the end of the 2-year period ending in 1979, all 6,446 lines of the new system will be operating. [Buenos Aires TELAM in Spanish 0330 GMT 18 Jul 78 PY]

CSO: 5500

PERU

BRIEFS

COMMUNICATIONS PLANS--Peruvian Transportation and Communications Minister Gen Elivio Vannini Chumpitazi announced here yesterday that by the end of this year Peru will be among the top-ranking nations in telecommunications in Latin America. He explained the development plan of his sector, saying that the jungle departments are being given priority in order to achieve better integration of the Amazon region. He said the rural telecommunications program is being backed by Hungary, Japan, Holland and Germany, among other nations. [Lima Diplomatic Information Service in Spanish 0013 GMT 21 Jul 78 PA]

CSO: 5500

URUGUAY

BRIEFS

SATELLITE STATION--The National Administration of Telecommunications [ANTEL] today dedicated a satellite earth station in Hanga. The ceremony was attended by Defense Minister Walter Ravenna and other high-ranking officials. [Montevideo Radio Cadena de Oro del Interior in Spanish 1600 GMT 1 Jun 78 PY]

CSO: 5500

INTER-ARAB AFFAIRS

BRIEFS

SAUDI-UAE TELEVISION AGREEMENT--Jidda--The Kingdom and United Arab Emirates today ratified the agreement to set up the gulf television authority. It was ratified by Foreign Undersecretary 'Abd ar-Rahman al-Mansuri, for Saudi Arabia, and Shaykh Ahmad Muhammad Abu Rahimah, ambassador of the UAE, for his country. The agreement, which was signed on 8 February 1977 and includes the Kingdom, Iraq, UAE, Qatar, Kuwait, Oman and Bahrain names Riyadh as the headquarters of the authority. The agreement aims at coordinating cooperation between the television services of the region, developing the television potentials of member states--and the exchange of television news and programs and working for the realization of the objectives of the Arab Broadcasting Union. At its Baghdad meeting in March 1978, the Third Conference of the Ministers of Information of the Gulf States decided that Dr Muhammad Abdul Yamani, Saudi information minister, and Dr Khujah should serve as board chairman and director general of the authority respectively during the current year. It also allocated 3 million riyals for its budget. [Text] [Riyadh SNA in Arabic 1930 GMT 4 Jul 78 LD]

APS-INA COOPERATION AGREEMENT--Algiers--An agreement on cooperation and the exchange of news was signed in Algiers yesterday between APS and INA. The agreement was signed by the directors general of the two agencies. Muhammad Munaf Yasin, director general of INA, had arrived in Algiers yesterday at the start of a 1-week visit. Today he will visit western Algeria. [Text] [Algiers APS in Arabic 0600 GMT 3 Aug 78 LD]

CSO: 5500

ALGERIA

BRIEFS

TELEX NETWORK--APS, Algiers--Mohamed Zerguini, minister of posts and telecommunications, on Tuesday morning inaugurated the national telex network at the offices of the network main office in Algiers. The ceremony was followed by a visit to the technical installations of the center. [Algiers APS in French 0900 GMT 7 Jun 78 LD]

CSO: 5500

IRAN

BRIEFS

ADVANCED TECHNOLOGY ENTERPRISE--An agreement to set up Iran's Advanced Technology Enterprise was signed this morning between the National Iranian Oil Company, NICO, the Omran Bank, the Imperial Armed Forces College of Science and Technology and the Organization for Industrial Development and Renovation of Iran, on the one hand, and the FRG's Messerschmitt-Boelkow-Blohm Enterprises. The Iran Advanced Technology Enterprise has been formed to transfer various forms of foreign advanced technology to Iran. One of its important tasks will be planning for higher standard of research, training an extensive range of Iranian specialists and researchers at the highest international standards, and providing technical and consultant services. [Tehran Domestic Service in Persian 0900 GMT 14 Jun 78 LD]

CSO: 5500

RADIO JORDAN ANNOUNCES EXPANSION OF FACILITIES

Amman JORDAN TIMES in English 14 Jul 78 p 3 JN

[Article by Alan Martiny]

[Excerpts] Amman, Jul [as published]--Special to the JORDAN TIMES--Radio Jordan is preparing for a major expansion in the next 12 months, Mr Nasuh al-Majali, director general of the Hashemite Broadcasting Service, told the JORDAN TIMES in a recent interview.

The station is installing a new powerful transmitter near Ajlun which will be operational next May or June. The broadcasting station will then have a combined transmission power of 2 megawatts, one of the largest in the Middle East.

"The entire project is part of the Five-Year Plan invisioned for the radio," Mr al-Majali noted.

The government has made an agreement with the firm Continental for the installation of the transmitting station at a cost of \$4.5 million.

Mr al-Majali mentioned that as a result of the increased transmission capacity Radio Jordan will be extending its services. The present Arabic service will become Radio 1, as it has been temporarily named. With broad coverage and a variety of programmes, Radio 1 will reach the the entire Middle East, North Africa and parts of Europe.

Radio 2, however, will be a local station which will include special programmes for farmers and soldiers along with educational programmes. This station will be geared toward local listeners.

The English service will also be extended, Mr al-Majali said. The service will have two separate programmes. The present English section will continue on the medium wave and the second programme will be broadcast on FM.

At the moment FM is carrying the same medium wave English 1 kw. But, according to Mr al-Majali, within 6 to 8 months the FM station will be operating at around 20 kw's, carrying a separate programme. There will also be a short wave service in English which will carry still another separate programme. But this will not be ready by next year.

Mr al-Majali has just returned from a visit to London where he held talks with the British Broadcasting Corporation (BBC) world service. He said that lately Radio Jordan and the BBC have had good but irregular, relations. "The purpose of my trip was to put our relations on a more regular standing," he said.

Mr al-Majali said that the head of the BBC training centre has been invited to Jordan to discuss Radio Jordan's needs and see how the BBC can help fulfill them.

The talks with the BBC are still in the initial stages, Mr al-Majali stressed, but "they have indicated that they are ready to help us."

Mr al-Majali regards London as a regular base for training Jordanian radio personnel. It is expected that a number of Jordanian engineers will go to Britain soon for training.

CSO: 5500

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

BRIEFS

'ADEN NEWS AGENCY,' 'TASS'--Salih Hasan Muhammad, candidate member of the Political Bureau and secretary of the Central Committee Culture and Information Department, this morning received Comrade Sergey Losev, deputy director general of the Soviet news agency, TASS. During the meeting, which was attended by 'Abd al-Wasi Qasim, director general of the Aden News Agency, cooperation between the Aden News Agency and TASS was discussed. A supplementary agreement on cooperation between the Aden News Agency and TASS was signed yesterday. [Summary] [Aden Domestic Service in Arabic 1232 GMT 25 May 78 LD]

ALGERIA FINANCES EOS, LIBYAN VISIT--Mahmud 'Abdallah 'Ushaysh, minister of communications, returned to Aden today from visits to Algeria and Libya. The minister said he had held talks with Algerian officials resulting in agreement by Algeria to finance the construction of an earth satellite station in the PDRY. In Libya the minister delivered to Colonel al-Qadhafi a message from 'Abd al-Fattah Isma' il, secretary general of the Unified Political Organization--National Front Central Committee. Minister 'Ushaysh has disclosed that a Libyan delegation will visit the PDRY at the beginning of June to discuss matters of bilateral interest. [Summary] [Aden Domestic Service in Arabic 1230 GMT 24 May 78 LD/EA]

CSO: 5500

SYRIA

BRIEFS

NEW RADIO STATION--Information Minister Ahmad Iskandar Ahmad this evening inaugurated a new radio station in Dayr az-Zawr [northern Syria]. The minister made a speech on the occasion in which he explained the reasons for installing this station which will carry the voice of pan-Arab Syria to the Arab homeland and reflect the pan-Arab stands of our party. This radio station will carry the principles of our policy across the artificial borders separating the regions of our Arab nation. [Excerpt] [Damascus Domestic Service in Arabic 2115 GMT 29 Jul 78 JN]

CSO: 5500

TUNISIA

BRIEFS

'TAP' ENGLISH SERVICE--Mustapha Masm Udi, secretary of state for information, this morning inaugurated at TAP headquarters the English information section of the agency and a daily national news bulletin in English beamed to English-speaking countries. The ceremony was attended by Mahmud at-Turayki, chairman and managing director of TAP. Thus the agency enters a new phase of its diversified information activity. The Voice of Tunisia can now be conveyed to the countries of Africa, Europe and the Middle East without any third party. The transmission of this new service will last 1 hour a day for a period of 3 months, after which it will be increased to 2 hours.
[Tunis Domestic Service in Arabic 1300 GMT 27 Jul 78 LD]

CSO: 5500

CHAD

BRIEFS

TELECOMMUNICATIONS STATION INAUGURATED--Ndjamena, 15 Jun (AFP)--A land station for telecommunications by satellite was inaugurated on Thursday morning in Ndjamena with Chadian vice president [as received] Col Mamari Djime and the diplomatic corps accredited in Chad in attendance. The ceremony was marked by a television broadcast and a telephone conversation between Maj Zakaria Wawa Dahab, Chadian minister of mines and geology, and Norbert Segard, French secretary of state for posts and telecommunications. The Ndjamena land station is one of the economic projects which the Superior Military Council and the Provisional Government included in the 1978-88 Development Plan. Financed by the aid and cooperation fund and the Central Bank of Economic Cooperation, the station is an example of French-Chadian cooperation developed through the Chadian Society of International Telecommunications [Societe des Telecommunications Internationales du Tchad--TIT]. The station, which cost 750 million CFA francs, uses an Intelsat IV -A-type satellite in an orbit over the Atlantic and Indian oceans. [Sentence as received] Chad has been a member of the Intelsat international organization since June 1977. [Text] [Paris AFP in French 1702 GMT 15 Jun 78 PA]

CSO: 5500

BENIN

BRIEFS

BENIN BROADCASTING SERVICE--In Benin an edict formally establishing the Bendel Broadcasting Service has been promulgated by the state government. The edict, which took effect from 1 April this year, provides for the appointment of the board of directors for the radio station. The board, which comprises nine members, is headed by a chairman, while each member will hold office for 3 years. It will be responsible for the appointment, promotion and discipline of its workers. The radio station, which was formerly an arm of the Nigerian Broadcasting Corporation, will be identified as Radio Bendel, Benin City. The station was handed over to the Bendel State Government recently, following the restructuring of radio broadcasting in the country. And in Kano, an 11-member Board of Governors has been appointed for the Kano State Broadcasting Service. The board is headed by the former chairman of the Broadcasting Company of Northern Nigeria [word indistinct], (Alhaji Vandaji Dankaka). This was announced in Kano by the state commissioner for home affairs and information, Alhaji Muhammadu Maude, shortly after a meeting of the State Executive Council. [Text] [Lagos International Service in English 2100 GMT 13 Jul 78 LD]

CSO: 5500

KENYA

BRIEFS

NEW SATELLITE STATION--Power and Communications Minister Daniel Mutinda, today launched a construction work of Kenya's second satellite earth station next to the old one at Longonot in the Rift valley. The construction of a new satellite earth station has been necessary because the old one is nearly completing its life time of 10 years. The new station will take about 18 months to construct and will cost about 35 million shillings. It is being built by an Italian company. [Nairobi Domestic Service in English 1600 GMT 26 Jul 78 LD]

CSO· 5500

NAMIBIA

BRIEFS

NEW BROADCASTING CONTROL BOARD--Windhoek--The administrator-general of South-West Africa/Namibia, Mr Justice M. T. Steyn, yesterday announced the formation of a multiracial provisional board to control broadcasting in South-West Africa/Namibia in the period before independence. In a statement, Mr Steyn said the board had been established in cooperation with the South African Broadcasting Corporation to deal with the planning and establishment of an independent radio service for South-West Africa/Namibia after independence. The board would also deal with all matters concerning broadcasting in the interim period before independence. Two members of the board, under the chairmanship of Mr P. J. Venter, are black. [Text] [Pretoria Department of Information in English 1027 GMT 4 Jul 78 LD]

CSO: 5500

DEPARTMENT'S TELECOMMUNICATIONS SYSTEM DESCRIBED

Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Apr--Jun 78 pp 52-54

[Excerpt] What Is the Status of Telecommunications?

With regard to the connection of local networks making it possible to connect subscribers to their exchange, the telecommunications administration has set up two zones corresponding to the two administrative subdivisions of the island. Each one is both a "zone with independent routing control" and a "charge area." Connection between the switchboards is accomplished, therefore, around the Saint Denis junction center for the northern zone and the Saint Pierre junction center for the southern zone. Any communication for or coming from the island passes necessarily through the Saint Denis center.

Although this connection of local networks requires very traditional routing rules, it also requires transmission carriers, groups of wire along which the physical routing of electromagnetic currents and waves takes place. For this purpose, the island's network includes two groups of interurban circuits between Saint Denis and Saint Pierre. One uses a group of high frequency (HF) circuits by cable from Saint Denis to Saint Benoit, which extends a similar microwave link between Saint Benoit and Saint Pierre. The other one involves a cable group, equipped with digital systems and which extends a digital microwave system between La Saline and Saint Pierre.

This diversity of carriers and routes is, as was seen in the article previously devoted to Martinique (23 April 1977 issue), a necessary precaution against the danger of cyclones, characteristic of those tropical countries. This entails especially high costs, because the expenses for installing and expanding equipment are in advance of the normal investment dates calculated only on an increase in traffic. Therefore, the unit cost of the circuits is higher.

Finally, the local circuits connecting the "sector centers" with their "independent routing center" are sometimes by HF cable, sometimes by cable with coded pulse modulation devices (MIC), sometimes by analog or digital microwave link.

This whole infrastructure was set up gradually, on the one hand within the framework of reconstruction of the telephone network after hurricane Jenny, and on the other hand with a view to automating the network. It is now completed. Reunion is ~~the~~ the first overseas department to have achieved complete automation, owing ~~the~~ the effort made by the telecommunications administration, of course, but also owing to active financial assistance by the General Council. That is to say, because of the department's reimbursable advances.

With regard to the connection of subscribers and telephone density (that is to say, the number of telephones per 100 inhabitants), the last 8 years have probably been marked by a decrease in the way in which Reunion lagged behind the metropolis. With regard to automation, the gap during that same period has been completely filled in.

Service With the Outside

Finally, concerning the intercontinental and international network, the infrastructure includes ~~the~~ the following:

The space telecommunication ground station at Riviere des Pluies, near Saint Denis, placed in operation in 1974 and equipped with a 60-channel carrier wave, making it possible to establish circuits with the metropolis. Because of this good quality circuit capacity it was recently possible to automate telephone service with the metropolis and to prepare, at present, for automation of the telex network.

The microwave link between Mauritius and Saint Benoit, extended by cable as far as Saint Denis.

The Bel Air transmission center and the Riviere des Pluies receiving center, on the 10-meter band, handling connection between Saint Denis and Madagascar on the one hand, and Mayotte on the other hand, after making service with Paris possible before 1974.

Plans and Expectations

Of course, there is still much to be done, but the trends can already be specified.

First of all, the island's local networks have to be changed so that they can handle reliably the increase in subscribers and in traffic, because the number of subscribers is to triple in a few years.

This operation, which must be performed without confusion by grafting the future structure on the present one, will take several years. It will be accomplished progressively with growth and with obsolescence of the first-generation equipment:

Reorganization of the junction centers, that is to say the traffic exchanges, both between subscriber exchanges in the same zone and between the northern and southern exchanges and between the island exchanges and the rest of the world.

Reorganization of subscriber exchanges.

New guidance plan for the transmission cables.

Service to the island's various inhabited regions by means of an appropriate line network.

The capacity of the overhead cables on poles will not make it possible to handle this tripling of the number of subscribers. Therefore, there will be more cables in underground conduits. In addition, a good number of subscribers are going to be located on the "Heights" of Reunion and it is unrealistic to try to link them by cable to their automatic switchboard. Therefore, it is necessary to devise modern solutions using an appropriate radio relay method, in the knowledge that certain frequency bands are reaching saturation.

This desire by the telecommunications administration to modernize the Reunion network can be observed by the man in the street in the construction jobs in progress or about to be started: work on the Le Port switchboard, on expansion of the present building in Saint Denis, on the building in Sainte Clotilde, forthcoming extension of the present telephone center at Saint Pierre, construction of the future building at Saint Benoit. The maximum capacity of the buildings for exchanges will be increased from 33,000 items of switching equipment as of the end of 1976 to 65,000 items of equipment by the end of 1978.

Moreover, the junction centers for this new structure and the automatic switchboards have already been ordered or are included in approved budgets. The equipment, much of which is going to be installed in the buildings now being completed, is almost all being manufactured in the plants. Thus, by the end of next year, the traffic flow capacity will have doubled.

What remains to be done pertains at the same time to the quantity, quality and extent of the zones served:

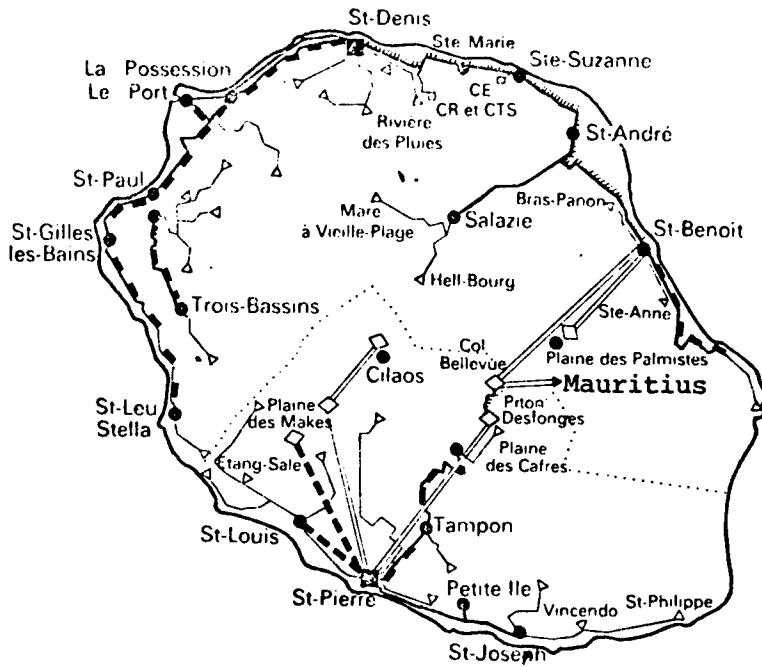
To quantity, because a network structure will have to be prepared that will then make it possible to implement the connection program.

To quality of subscriber lines, that is to say to the portion of line connecting the subscriber to his automatic switchboard. This quality must be pursued vigorously.

Finally, to extent, because the tripling of the number of subscribers must correspond, in part, to an increase in telephone density on the "Heights" whose scattered inhabitants and difficult access create a special technical and financial problem for serving them.

The General Council, just as it had done for automation, and the Regional Council, established more recently, have decided to collaborate actively in carrying out this very ambitious network development and renovation program.

In French telecommunications, the realist is the daring person, in the southern hemisphere also.



- | | |
|---|--------------------------------------|
| (1) Centre à autonomie d'acheminement | (4) Système numérisé (MIC) |
| (2) Centre de secteur et, le cas échéant, sous-centre de secteur | (5) Faisceaux hertziens analogiques |
| (3) Supports HF par câble | (6) Faisceaux hertziens numériques |

Key: 1. Independent routing center; 2. Sector center and, if necessary, sector subcenter; 3. HF supports by cable; 4. Digitized link system (coded pulse modulation); 5. Analog microwave link; 6. Digital microwave link.

10,042
CSO: 5500

SOUTH AFRICA

BRIEFS

MILITARY COMMUNICATIONS SYSTEM--The South African Defence Force headquarters has announced the establishment of a military area radio system in certain regions of South Africa. It is to be called the (MARS) system and will be used for command and control by the commandos. It will also be used as emergency communication to pass information to a control system which will be manned 24 hours a day. The system will operate in the western and northern Transvaal, Natal and the northwestern Cape Province. A similar system is being planned for the Free State Province and the eastern Cape at a later date. [Text] [Johannesburg International Service in English 1600 GMT 15 Jul 78 LD]

CSO: 5500

TANZANIA

BRIEFS

EARTH SATELLITE PROJECT--Tanzania is to have its own earth satellite next year at a cost of 23 million shillings. Contracts for the provision of the satellite were signed yesterday by the director general of the Tanzania Posts and Telecommunication, Ndugu (Maida), for the corporation [as heard] and a representative of Japan's Nippon Electric Company. The project will end Tanzania's dependence on Kenya for external telecommunication services. [Excerpt] [Dar es Salaam in English to Central and Southern Africa 0400 GMT 13 Jul 78 LD/EA]

SATELLITE CONTRACT--Dar es Salaam--13 Jul (AFP)--The Tanzania Posts and Telecommunications Corporation has signed a contract with the Nippon Electric Company, of Japan, to deliver and install an earth satellite worth \$2.9 million. J. Maeda, director general of the corporation, said that the satellite station would be in service in the second quarter of next year. He added that the corporation would sign another contract for the manufacture, delivery and installation of \$1,150,000 international telex exchange expected to be operational by the end of next year. [Paris AFP in English 0443 GMT 14 Jul 78 PA]

CSO: 5500

USSR

BRIEFS

USTYURT SETTLEMENTS' TV PROGRAMS--From TRUD-TASS news roundup: "In a Few Lines"--Nukus--Television screens have lit up in settlements situated along the railroad and gas pipelines crossing the Ustyurt desert plateau between central Asia and the center. A retransmission line has been laid down here 1 year ahead of schedule. [Text] [Moscow TRUD in Russian 6 Aug 78 LD]

CSO: 5500

'TELESYSTEMES' COMPANY'S ACTIVITIES DESCRIBED

Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jul-Sep 78 pp 33-39

[Article by Jacques Treves: "'Telesystemes'"]

[Text] "Telesystemes" was established in 1969, when France Cables and Radio, a subsidiary of the French Telecommunications Administration, decided to diversify the activities of its group by entering the data-processing field full of future. It is now one of the largest French data-processing service companies and its sphere of action is quite varied.

Its turnover was 80 million francs in 1975, 103 in 1976 and 133.5 in 1977. As of 1 April 1978, its personnel strength was 530 persons.

The activities of Telesystemes are located primarily in five areas that we are going to examine in turn:

Network services.

Management of computers for Telecommunications.

Processing of bank checks.

Digital multiplexing.

Teleprocessing systems.

Network Services

Network services were the reason for the establishment of Telesystemes, at first in the form of time-sharing. These services consist of making one or several computers available to clients, by means of terminals placed in their premises and connected remotely to the computer center. Each one "talks" with the computer as if he had sole use of it.

The company bought one, and then two, XDS-940 computers, specializing in this kind of services and manufactured by Xerox Data System. Since this company had no maintenance capability in France, Telesystemes had to acquire, at the

start, great competence in matters of installation and maintenance of computers and of terminals, in addition to the management of teleprocessing networks.

Since the clientele was increasing, Telesystemes concluded an agreement with the COMSHARE company giving it access to COMSHARE's network, equipped with Xerox Sigma-9 computers, through its center in London.

Since these material means have become inadequate in view of the commercial success of the network services, Telesystemes has just installed a 66/20 computer manufactured by the French CII-HB [International Data Processing Company-Honeywell Bull] company. The company had previously acquired exclusive license for an especially well-performing DTSS time-shared software from Dartmouth College, a famous American university in Hanover (New Hampshire). The new tool will make possible a rapid increase in its activity in the field of time sharing.

Control Data Cyber-73 machines, well-suited for "lot processing," have been added to the time-shared computers.

While in time-shared operation the user talks constantly with the computer and demands of it work requiring a low or medium power computation, lot processing generally requires a must higher power of the machine. The jobs demanded are entered by large amounts, as the term "lot processing" indicates. After a job on the machine that may take a long time, the results are put out on a printer.

The clientele of the network services of Telesystemes is on the order of 150 units. Curiously, most of those clients are not small-sized or medium-sized enterprises that have no computer, but, rather, administrations or enterprises already equipped with computers. They call on the network services either for special applications, or for avoiding congestion of their own computer center.

Presentation of network services to the clients takes on two different aspects:

On the one hand, "office service" in which the clients are received, leave their jobs at a window and return later to pick up the results.

On the other hand, "teleprocessing." A terminal is installed in the client's office, connected to the computer by the converted telephone network, by the telex network or, possibly, the Caducee network. The forthcoming Transpac network will certainly be used in the future.

With regard to applications, several cases occur. Many clients, including Telecommunications, use the service to process their own programs. Others, a very frequent case for time sharing, use ready-made programs, that is to say existing programs that Telesystemes has created or acquired.

The most successful ready-made programs are for the following fields: financial estimates, analysis of investigations, interrogation of data bases, applications in mechanics (primarily calculations of structures).

Finally, the company is in a position to provide "delivered" applications. In this case, the client states a requirement, which is studied and assigned to analysis-programing teams that set up the necessary programs. In every case, assistance is guaranteed to the clients, in order to enable their associates to make use of access to the computer.

Telesystemes is going to add an important service in the interest of the nation to the traditional network services. The company has just been entrusted by the Ministry of Industry and Research (National Bureau of Scientific and Technical Data) with the creation of large scientific data bases. They will be installed in an IRIS-80 biprocessor computer and will be accessible to public and private research centers by means of public converted networks.

Management of Computers for Telecommunications

The competence acquired by Telesystemes in connection with network services have led the Directorate General of Telecommunications (DGT) to commission the company with installing and operating computers devoted almost entirely to performing data-processing jobs for the Telecommunications services. The applications are processed under the responsibility of the DGT.

The following were the computers as of 1 April 1978: six Control Data/Cyber-73 installed in Massy (2), Rungis, Nancy, Nantes and Marseilles; one CII/IRIS-60 at Arceuil and one CII/IRIS-80 at Orleans; two Siemens-4004A at Montrouge.

A number of applications are processed on the Contral Data machines. The main ones are telephone billing, preparation of yearbooks, administrative management, applications concerning service quality, various commercial and technical management applications, including some with data bases.

The Siemens computer at Montrouge is used for photocomposition of the telephone directory; the IRIS-80, for handling requests for telephone service and the IRIS-60, for managing supplies and contracts.

In addition to making machines and operating personnel available, the service provided by Telesystemes to Telecommunications includes a number of other performances.

The first one is the installation of computer centers itself. The company has specialists in installation of computers, fitting out premises, power installation, air-conditioning. In addition, it has occasion to execute, in this field, contracts emanating from other clients, especially from a university.

We shall mention the following, among other performances of service:

Assistance, within the framework of specific studies leading to guidance plans and to specifications. In particular, the company has a recognized specialty in computer metrology. It has developed measurement procedures that make it possible to evaluate the performance of a computer in addition to the consumption of main and peripheral means required for each application.

Assistance to users, especially in outside services.

Maintenance of software. Thus, it has been possible to have a strict uniformity of basic systems between the various computer centers.

Creation of utilitarian software. Telesystemes has set up, for Telecommunications, a whole series of software aiding in programing and processing.

Acquisition and improvement of data base software and conversational systems (Socrate, Systeme-2000, Total, Tribu, Strategie), in the field of data bases. In particular, one of the company engineers was selected as president of an international working group.

Telesystemes has also developed ready-made programs, like DEESSES for the interpretation of statistics and several items of software for application to telephone traffic.

Another specialty of Telesystemes from which Telecommunications benefited is its experience in teleprocessing. The company has developed competence concerning dialog between remote users and the computers, both with regard to terminals and to minicomputers used as frontals or concentrators. This assistance is extended to minicomputers operating independently and to microcomputers.

A number of Telecommunications services are linked to Telesystemes computers by terminals operated remotely. As of 1 April 1978, the following links were counted: 43 1,200 bits per second specialized links, 3 2,400 bits per second links, 92 4,800 bits per second, 6 9,600 bits per second, 7 19,200 bits per second, 15 48,000 bits per second.

Telesystemes is also specialized in connecting between computers from different manufacturers. Thus, the MITSIM and MITIMP products were developed to connect CII-Mitra-15 minicomputers to Control Data computers. This product was sold recently to the Academy for Space Sciences of the Soviet Union.

Check Processing Centers

The competence demonstrated in the management of data-processing centers attracted the attention of a large banking group that commissioned Telesystemes to install and manage a bank check processing center for it.

This activity was entrusted to the European Company for Processing Banking Data (SETIB), a subsidiary owned 100 percent by Telesystemes.

Since checks have to be submitted every day to the other banks in the clearing-house, they are sent in the evening of the day before to the processing center equipped with two Burroughs 3700 computers and three sorters by the same manufacturer. There, they proceed to verify and postmark them (printing the handwritten indications in optical characters). They are then inserted in the sorters, which classifies them by destination bank. The computer guides these sorters and draws up a list of the checks as well as statistics. The center verifies correctness of the lists and statements and proceeds to make any adjustments necessary.

Four other banks, to which the original client was added, have requested the company to set up a second check processing center for them. Its data-processing equipment is similar to the equipment of the first one, but its organization of processing is more complex, owing to the number of clients.

Digital Multiplexing

In 1973, the Directorate General of Telecommunications commissioned Telesystemes with initiating the Transplex Digital Multiplexing Service.

This multiplexing makes it possible to lease to the clientele relatively low-speed (50 to 1,200 bauds) transmission channels, obtained on the basis of superior quality "4-wire" telephone circuits. This method represents a saving both for the client and for the administration making the sharing of circuits possible among a variable number of users.

As of 1 April 1978, there were 69 multiplexers, 40 network access junctions, 506 channels leased to the clientele (banks, insurance companies, airlines, press and travel agencies).

There, too, this activity has made it possible to develop a technical competence. Several private companies, including a large insurance company and a heating engineering company, have commissioned Telesystemes to install digital multiplexing networks.

A more important fact: the PTT [Postal, Telephone and Telegraph Service] administration of the Republic of Ivory Coast has entrusted it with the installation of a network called Sytran, similar to Transplex, in that country. Several administration and companies in that African country have installed computers in the capital, Abidjan, and want to use them on the basis of terminals installed in the provinces. This was impossible to do with the traditional methods, but it can be done with digital multiplexing.

Teleprocessing Systems

The experience acquired by Telesystemes in teleprocessing, owing to the developments of its own time-sharing network and to the links made for Telecommunications, has enabled it to propose its services to organizations wanting to equip themselves with that kind of networks by supplying them with systems all ready to go.

Those systems are produced either by the company alone, or in collaboration with industrial companies, in three main areas: message switching, switching by packages, large transactional networks.

Differently from circuit switching (telex network, for example), in which the users have to be put in communication before beginning to transmit, message switching enables the user to send his message (telegram or data) without being concerned about the availability of the recipient or of the circuits. The center handles storage and can connect users who are utilizing equipment with a different speed and code. Telesystemes specializes in centers in which processing of messages or texts is added to pure communication. Thus, it has been entrusted with the message processing center of the Ministry of Foreign Affairs and the international telex center in Abidjan. For less important users, especially large-sized and medium-sized telex users, it has developed a product called Comete.

Another product called Frantex enables a computer to be connected automatically to the telex network and to send the results of data processing to pre-recorded addressees.

Switching by packages, derived from message switching, has been the subject of a number of articles concerning the Transpac network primarily. Telesystemes has made, in this field, a study, for the Commission of the European Communities, of the specifications for the terminal intended to be used on the EURONET European network.

Previously, it had made some studies concerning the measurement center of the Cyclades network, some computer connections by means of the RCP [Switching by Packages Network] experimental network and a study on connecting terminals to Transpac.

Telesystemes has just been retained, together with three partners, to set up the transactional network for a large public service. In its final phase, it will include 10,000 terminals for which Telesystemes will produce most of the software.

Telesystemes, a young, vigorous company, that makes its variety of competence in most of the fields of data-processing available to its clientele, with Telecommunications in the first place.

Measurements of Computer Performance

The overall designing and production of performance measurement tools developed within Telesystemes made it possible to obtain results concerning the load, capacity and saturation of all kinds of data-processing systems.

Load Followup

The determination and development by Telesystemes of a synthetic, stable unit of computer resources (Kilo Unit of Resources) established a relation between an application or a field of applications and measurement of data-processing energy consumed. Adoption of this unit by Telesystemes has made it possible, for example, to note that a subscriber's billing represented 1.2 resource unit per month or that entry and moves in the telephone directory corresponded to 0.22 resource unit per subscriber.

Expression of work done for applications by data-processing systems in terms of unit of resources is used as follows:

For planning needs, by following up on flow and statistics (monthly report) at the level of each computer center.

For followups on existing applications, estimates of loads due to new applications by persons responsible for applications.

For consolidating statistics, transfers of loads and comparison from center to center, regardless of whether or not provided with similar equipment, at the central level.

Capacity

Data-processing systems are calibrated, in order to determine a reference power, function of the type of computer, of its configuration and of its load profile. Thus, for a monthly operation of 320 hours, a CII-HB 7740 is evaluated at 2,500 KUR [Kilo Units of Resources], and IRIS-80 mono at 3,000 KUR, a CDC CYBER-73 at 3,750 KUR, a CII-HB 64/60 at 3,250 KUR.

The reference power is used as follows:

For estimated adaptation of existing configurations to new applications.

For estimated knowledge of the overall saturation of data-processing systems in operation.

For specifications for new computers.

For estimating the capacity of a new item of equipment.

For drawing up data-processing plans.

Partial Saturation

The synthetic nature of the unit of resources does not make it possible to determine the causes of partial saturation at the time of evolution of the load on a system with sufficient capacity. CYBER computers have been equipped by Telesystemes with a CAMERA software measuring device used by heads of centers for balancing configurations and for determining desirable evolutions.

Comete

Comete, which is intended for large-sized and medium-sized telex users, is a product developed by Telesystemes. It is an automatic message switching system using a SOLAR 16/40 minicomputer manufactured by SEMS [expansion unknown].

It makes it possible to avoid delays in the flow of messages between telex equipment and the departments of a company by distributing within the company data acquisition-receiving sets using screen-keyboards with or without a printer.

Comete solves all problems connected with the transmission of messages on public (telex) or private (specialized telegraph lines) networks. It differs, however, from the traditional message switching systems by features that make it a more flexible and more powerful product.

Advantages

With regard to outgoing messages, Comete provides either composition of texts with every facility for editing and modifying, or use of prerecorded models, which, moreover, can be modified for each dispatch.

Owing to its resources, the computer brings about a saving in telex lines, because it sends a message as soon as a line is free. The number of operating sets is independent of the number of telex lines.

The machine is capable of sending any message to as many addresses as demanded of it by means of a distribution list. It is no longer necessary to acquire the message each time, as it is in the traditional telex system. The distribution list itself can be modified for each dispatch.

Search for and redistribution of messages sent or received are made possible owing to their storage on a magnetic disk. Storage also makes it possible to pull out detailed traffic statistics. This makes it possible to apportion expenses between departments.

The computer makes it possible to differ sending messages, that is, to send them during off-hours or to take time-zone differences into account.

The basic system provides very broad capabilities and can be adapted to each user's operating restrictions.

Budgetary Model-Building for Administrations: Example of Use of Network Services

Telesystemes offers its clients, on its computers, "budgetary model-building" services and "models and financial tables."

Regardless of whether it is a question of overall statistical tables, budgets, flow charts, profitability rates, amortizement rates, the computer makes it possible to draw up tables, charts and to make calculations on the basis of data supplied to it.

The advantages of this kind of computerization are many:

Elimination of manual tasks, making it possible to save time.

Decrease in sources of error.

Necessity for the users to formalize the data that they use, in addition to their calculation procedures.

Finally, the capability of consecutive simulations with a variety of hypotheses, performed in a very short period of time. Five minutes suffice to obtain new results on the basis of modified hypotheses. The user no longer loses his time on long, wearisome computations. This is especially valuable at the time of drawing up a draft budget.

The models and financial tables of Telesystemes are not definitely fixed. The user himself decides.

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CSO: 5500

CHASSIEU TELEPHONE TRANSMISSION TOWER DESCRIBED

Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jul-Sep 78 p 32

[Text] The new microwave tower just put in operation by the French Telecommunications Service, east of Lyons, has a capacity in excess of 400,000 simultaneous telephone communications. It is 90 meters high and over 7 meters in diameter, white and red on a sky-blue background.

There already was a junction station located at Saint Cyr au Mont d'Or for handling interurban telephone communications in the Lyons region, but it was running the risk of no longer being sufficient. It was decided to build another one.

The choice of a location for a microwave tower is always critical, for technical and also environmental reasons. The site of the future station must be on a line of sight with the paired towers and with no risk of interference with links ending at Saint Cyr au Mont d'Or. Proximity of the Lyons-Satolas Airport and of various urban development projects also had to be taken into account.

A first site, in the Decines-Charpieu Commune, had to be abandoned, because construction of that kind of tower would have jeopardized a project for a "planned development zone." After a meeting between representatives of Telecommunications, of the urban community and of the equipment department, it was decided to install the tower on the territory of Chassieu, in a place called "Les Bouttieres."

Construction work that started on 1 September 1975 was completed in January 1977.

On the upper part, four jutting platforms are for receiving the antennas. Four ring-shaped rooms make it possible to arrange the transmitter-receivers as close as possible to those antennas and to use high frequencies (10-15 gigahertz at present).

At the base of the tower, a building with a useful area of 420 square meters comprises technical facilities, including an auxiliary power plant and the living quarters of the head of the center.

The Chassieu microwave station is going to become rapidly one of the important junctions in the French interurban network. It is also intended for serving as a support for a number of regional and local links.

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CSO: 5500

SWEDEN

BRIEF

SWEDISH RADIO REORGANIZATION--This afternoon the Riksdag approved by 163 votes to 153 the government's proposal for a reorganization of Radio Sweden. The proposal means that Radio Sweden will be divided into four companies--television, radio, local radio and educational radio--with a joint umbrella company in charge of the administration. [Text] [Stockholm Domestic Service in Swedish 1700 GMT 24 May 78 LD]

CSO: 5500

TURKEY

BRIEFS

NEW RADIO TRANSMITTERS--Two radio transmitters of 250 kilowatts output, established to insure that Turkish Radio and Television Administration [TRT] transmissions beamed abroad can be heard over a wider area, will go into service in Friday, 7 July. The transmitters are located at Cakirlar Station near Ankara and will enable TRT transmissions to be heard better in Balkan and Middle East countries as well as in certain areas in Africa, Europe and Asia. The antenna and frequency change facilities of these transmitters are completely automatic and will enable TRT's transmissions beamed abroad to be received better and with greater intelligibility. According to the TRT technical authorities, these transmitters were ordered toward the end of 1973 and have cost nearly 63 million liras. [Text] [Ankara International Service in Turkish 1700 GMT 5 Jul 78 LD]

CSO: 5500

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