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TRANSLATIONS ON TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

No. 18

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TRANSLATIONS ON TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

No. 18

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INTERNATIONAL

VENEZUELA, SPAIN INAUGURATE SUBMARINE COMMUNICATION CABLE

Caracas Radio Continente Network in Spanish 0300 GMT 13 Oct 77 PA

[Text] President Carlos Andres Perez and King Juan Carlos of Spain had a telephone conversation to inaugurate one of the world's longest submarine communications cables. The Columbus, as the cable is called, will link Venezuela and Europe through the Canary Islands.

This means of communication will greatly contribute to the continuation of the irreversible rapprochement that we Latin Americans have initiated with Spain, President Perez told King Juan Carlos from Miraflores Palace.

From the Canary Islands, the Spanish king responded: The understanding between our countries is very important. I repeat to you my invitation to visit Spain.

The phone conversation between President Carlos Andres Perez and King Juan Carlos lasted 5 minutes, 27 seconds and was broadcast this morning in Venezuela on a television network.

With the laying of the Columbus cable on the bottom of the Atlantic Ocean over a distance of some 6,000 km, it will be possible to make 1,840 simultaneous telephone calls. From the Canary Islands, communications lines branch to Spain through the [name indistinct] III cable.

The cost of this project has been estimated at about \$160 million, 70 percent of which was covered by the National Autonomous Telephone Company of Venezuela.

CSO: 5500

INTERNATIONAL

SUBMARINE CABLE FROM VENEZUELA TO SPAIN INAUGURATED

PA131200Y Caracas Radio Continente Network in Spanish 1300 GMT 13 Oct 77 PA

[Text] President Carlos Andres Perez and King Juan Carlos of Spain had a telephone conversation to inaugurate one of the world's longest submarine communications cables. The Columbus, as the cable is called, will link Venezuela and Europe through the Canary Islands. This means of communication will greatly contribute to the continuation of the irreversible rapprochement that we Latin Americans have initiated with Spain, President Perez told King Juan Carlos from Miraflores Palace.

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CSO: 5500

INTERNATIONAL

IRAQ, IRAN TALKS ON ESTABLISHING TELEPHONE NETWORK

JN131137Y Baghdad INA in Arabic 1100 GMT 13 Oct 77 JN

[Text] Baghdad, 13 October--Hamid Sa'id, technical adviser at the Communications Ministry, returned to Baghdad today after leading a technical delegation on a 1-week visit to Iran. During the visit the delegation held talks with Iranian officials on linking the two countries by a telephone network capable of transmitting 600 simultaneous telephone calls. This will meet the increasing requirements over the coming 20 years. Such a network will also provide a number of countries in the area with links to Iran and Afghanistan via Iraq.

CSO: 5500

INTERNATIONAL

BRIEFS

MENA, ANTARA AGENCIES SIGN AGREEMENT--Cairo, 12 Oct--An agreement was signed today in Cairo for cooperation in the field of journalism between MENA and ANTARA. The agreement calls for the exchange of news transmissions and expertise between the two agencies. The agreement was signed on behalf of Egypt by Muhammad 'Abd al-Jawad, chairman of the MENA Board of Directors, and by Isma'il Salih, general director of ANTARA, on behalf of the Indonesian side. [Excerpt] [Cairo MENA in Arabic 1550 GMT 12 Oct 77 NC]

SOVIET, JAPANESE TV AGREEMENT--The Soviet State Committee for Television and Radio Broadcasting and Japan's Asahi Television Station have signed a new cooperation agreement. Under this agreement, Asahi now holds an exclusive right to telecast live from the Spartakiad Athletic Meet to be held in the Soviet Union in 1979. The Spartakiad is one of the final preparatory steps to be taken by Soviet athletes before the Moscow Olympics scheduled for 1980. The agreement was signed yesterday by Deputy Chairman of the State Committee for Television and Radio Broadcasting Khenrikas Yushkevichus and Managing Director of Asahi (Miura). [Text] [Moscow Radio in Japanese to Japan 1200 GMT 13 Oct 77 OW]

CSO: 5500

INTER-ASIAN AFFAIRS

BRIEFS

JAPANESE PARTS TO CHINA--Tokyo, 12 Oct (KYODO)--Japanese interests are negotiating with the China National Technical Import Corp to sell cathode ray tube and man-made leather plants and technology. Three teams--C. Itoh and Co and Hitachi Ltd; Sumitomo Shoji Kaisha Ltd and Matsushita Electric Industrial Co; and Nichimen Co and Tokyo Shibaura Electric Co--are negotiating the export of a set of plant equipment and technology for manufacturing cathode ray tubes for color television sets to China. Also negotiating with the Chinese corporation for the export of cathode ray tube equipment and technology are Zenith Radio Corp, Radio Corporation of America and Westinghouse Electric. Nippon Electric Co and four other electric manufacturers are separately negotiating the export of cathode ray tubes for black-and-white TV sets. [Excerpts] [Tokyo KYODO in English 0934 GMT 12 Oct 77 OW]

CSO: 5500

PROS, CONS OF COMPUTERIZED TELEPHONE SERVICE WEIGHED

Brisbane THE COURIER MAIL in English 15 Sep 77 p 4

[Article by Nicholas Maher]

[Text]

**A**USTRALIAN telephone subscribers will be the "guinea pigs" in a new computerised telephone system that will cost Telecom \$500 million to introduce.

Queensland Branch Secretary of the Australian Telecommunication Employees Association (Mr. Alan Muir) says Australia will be the first country in the world to fully test the ARE II system.

He said there were only about 100,000 on this system operating in Europe.



The advantages for the business men will be numerous, but, say some critics, the majority of subscribers could be subjected to a threat of Big Brother and other social implications.

A Swedish company has been awarded the \$500 million contract to install the new system, to be introduced in the 1980s.

Mr. Muir said there were dangers in the system that Telecom employees and the public should be made aware of.

A forum at the Ridge Motel tonight, sponsored by his union, will highlight the situation.

New or improved services the new system will provide include:

- Subscribers, at an additional cost, will be able to have a priority call service. This service will guarantee

these subscribers a direct line ahead of people who have dialled before. This service will operate on every phone call made from the particular phone.

This system will in effect create a first and second class telephone subscriber.

- An abbreviated dialling system, again at an extra cost to the subscriber, allows him faster access to a number he frequently uses. This can be done by pressing a two or three digit code which the computer will recognise and connect through to the number.

- The computer system will be able to trace instantly any telephone call at the subscriber's request. The feature of this service is that obscene or annoying phone calls will be able to be traced immediately.

If a subscriber is a victim of annoying phone calls he can contact Telecom and they will install some special equipment on the telephone. This allows a telecom technician at an exchange to listen to the call and trace it if he thinks it is an annoying or obscene telephone call.



The subscriber will be aware that the technician is listening to every phone call.

- The system will offer a 'hotline' service at a cheaper rate. This service allows a subscriber to pick up the phone and be connected directly to one number with-

out dialling or pressing buttons.

- When a subscriber makes an international call he or she will pay for exactly the amount of time they have spoken for. In the present system a subscriber may pay in three minute instalments, even though they may speak for 30 seconds in that three minutes.

- A push button dialling service.

Mr. Muir agrees that there are advantages in the system. But he said if the system were misused the social implications could be wide and far-reaching.

He said there were dangers in offering telephone subscribers first and second class services.

"The priority call service can be misused by people who use it to make calls that are not urgent," Mr. Muir said.

"A businessmen may ring up his wife on the priority call service to ask what is for dinner, thus making someone wait who is trying to make an emergency call to a doctor or fire brigade.

"The priority service will mean a degeneration of the overall service to subscribers."

He said the other danger of the system was the ease with which telephones could be tapped.

"In the present system, it is obvious if an employee at an exchange is tapping a telephone line," Mr. Muir said.

"With computers an operator can sit at the Visual Display Unit (V.D.U.) and direct the computer to tap a line

without anybody realising what is being done.

"The operator may also plug in a third party to tap the call. The potential for industrial espionage, blackmail, and other crimes is frightening."

He said the misuse of the computers depended on the honesty of the Telecom operators.

Mr. Muir said the operator would be the only person who knew the code to operate the computer.

"An operator's past will be obviously researched but even if he has a perfect record, he may still be capable of performing illegalities with the system," he said.

Mr. Muir said telephone exchanges would be operated from exchange maintenance centres. These centres would have control over 200,000 subscriber lines.

A National Support Centre in Melbourne is expected to have access to 90 per cent of the telephones in Australia's metropolitan area.

Mr. Muir said it was possible for an operator at this centre to "wipe out" the entire telephone communications in Australia.

"Once these communications were turned off, it would be very difficult to restore them," he said.

Mr. Muir said it would be possible for any future government to tap every telephone in Australia.

"Naturally Telecom denies that this could ever happen," he said.

Being a trade unionist, Mr. Muir is naturally worried about the employment situation when computers are introduced.

"Telecom is the largest employer in Australia, but it now finds itself in the position where it will not be able to recruit school leavers in the future," he said.



Mr. Muir said Telecom had said there would be no retrenchment of staff, and present employees would be retrained.

"As well as fewer Telecom technicians in the future, there will be significant reductions in staff in the clerical and manufacturing divisions," he said.

"The only solution to the situation is that there will be a reduction in working hours and a voluntary early retirement."

"We must reach a situation where the advances of technology should benefit everyone in the form of increased leisure time."

CSO: 5500

DATA PRIVACY AN ISSUE IN NATIONAL COMPUTER NETWORK

Canberra THE AUSTRALIAN in English 14 Sep 77 p 9

[Text]

THE Commonwealth Public Service Board says it is paying particular attention to the problem of privacy in the computer system it is developing called Mandata.

The Mandata system, approved by the Government in 1974, will set up an Australia-wide computer network to provide a more efficient system of keeping records on the personnel and establishments of Commonwealth departments.

It also will provide information necessary in the management of all departments with

a staff of more than 158,000 and a wage bill of more than \$1500 million.

The parliamentary public accounts committee was told of the precautions yesterday at the first hearing of an inquiry into the use of automatic data processing in the Public Service and Commonwealth statutory authorities.

A first assistant commissioner of the Public Service Board, Mr Peter Moran, said the board had been keeping in touch with the Law Reform Commission about precautions

to safeguard data in automatic data processing systems.

"I think it is fair to say the facilities built into Mandata will provide very good security of information," he said.

Privacy was mentioned again in discussion of the rationalisation of computer services in the Public Service.

A member of the committee, NSW Liberal backbencher Mr Don Dobie, said the question of privacy came up if information given to a department for one purpose was used by another department for another purpose.

CSO: 5500

TELECOM COMPUTER CONTRACT GOES TO SWEDISH COMPANY

Brisbane THE COURIER MAIL in English 14 Sep 77 p 14

[Text]

**CANBERRA.— A Swedish company has been awarded a \$500 million contract by the Federal Government to convert Australia's telephone network to computer control.**

The decision by the Government sparked an angry reaction from its own backbenchers — and by S.T.C. (Australia) Pty. Ltd. which had been angling for the contract.

The Post and Telecommunications Minister (Mr. Robinson) said the Government had accepted a recommendation from Telecom that the contract should go to L. M. Ericsson Australia.

He said the agreement with L. M. Ericsson would provide for manufacture under licence.

At least 80 per cent Australian content would be achieved eventually.

Previously S.T.C., a subsidiary of the American giant I.T. and T., had warned the Government it might have to cut back its Sydney operations if it did not get the contract.

The company's chairman (Mr. A. T. Deegan), said yesterday he was most disappointed with the decision.

"On the one hand we hear Government calling upon business to help solve employment problems, to invest in the future of the country and to develop the technology to move Australia forward," he said.

"On the other hand, we face a situation where a decision is made to go in a direction that runs contrary to all of these very worthwhile aspirations."

**"Woolly"**

He said, that over the years, S.T.C. had made enormous investments in plant, equipment and training of skilled workers.

Government backbencher, Mr. W. Wentworth, called on Mr. Robinson to make a statement in Parliament setting out the Australian content in the main tenders.

He described Mr. Robinson's statement as "woolly."

Mr. Robinson said the new system would be introduced in the 1980s

It would offer substantial savings and economies to telecommun-

ications users in the future.

He said the first of the new local exchanges would not be installed until 1980, and it would not be until 1983 before substantial deliveries would occur.

Until then, manufacturers would continue to supply existing types of equipment to meet needs.

A senior engineer with Telecom said last night work on the new system, called Stored Programme Control (SPC) would begin late next year.

He said the first model would be built in Melbourne, and within three years it would be built with 80 per cent Australian content — labor and components.

In Melbourne, Telecom said yesterday that Australians made 4340 million telephone calls in the last financial year.

This was about 6 per cent more calls than in the 1975-76 financial year.

INDIA

INFORMATION MINISTER SPEAKS ON STATUS OF AIR, SAMACHAR

Delhi General Overseas Service in English 1000 GMT 8 Oct 77 BK

[Text] The union minister for information and broadcasting, Mr L.K. Advani, has said that the Janata Government is committed to convert All-India Radio [AIR] and television into an autonomous body. Speaking to newsmen in the northeastern state of Assam, Mr Advani said a subcommittee of the cabinet is processing the question of the further setup of Samachar. He also said the official mass media has been asked to give balanced coverage to all events following Mrs Gandhi's arrest, and this policy has been strictly adhered to. All political parties had been allowed to make election broadcasts on air and television for the first time in the 30 years of independence.

Speaking at another press conference, the minister said the utterances, demeanor and postures of Mrs Gandhi during the 2 months have made it quite clear that what she did during the emergency was not an aberration. He said it was very much her character and reflects the values she stands for.

CSO: 5500

NEW ZEALAND

BRIEFS

INMARSAT CONVENTION ACCEPTED--New Zealand has become the second nation to accept the convention on the establishment of an international maritime satellite system. The convention was signed, without reservation as to ratification, by Sir Douglas Carter, New Zealand's High Commissioner in London, recently. The convention was adopted last year at a conference called by IMCO, which also adopted an operating agreement dealing with the establishment and running of the International Maritime Satellite Organisation (INMARSAT), which agreement New Zealand has also signed. Kuwait was the first nation to accept the operating agreement and convention, the latter coming into force 60 days after countries owning 95 percent of the investment shares have accepted it, the final date for its realisation being 3 September 1979. INMARSAT will be an independent organisation headquartered in London, whose aim is to improve maritime communications. [Text] [Canberra THE AUSTRALIAN in English 12 Sep 77 p 11]

CSO: 5500

PAKISTAN

BRIEFS

JAPANESE TELECOMMUNICATIONS TEAM--An 8-member team of Japanese telecommunications experts arrived in Islamabad on 9 October. It will discuss with officials of the Ministry of Communications priorities of technical equipment for the telecommunication research center in Islamabad for which Japan has provided a grant of \$8 million. [Karachi Domestic Service in Urdu 1500 GMT 9 Oct 77 BK]

CSO: 5500

PEOPLE'S REPUBLIC OF CHINA

NCNA ON CHINA'S ACCOMPLISHMENTS IN TELECOMMUNICATIONS

Peking NCNA in English 0700 GMT 10 Oct 77 OW

[Text] Peking, 10 October, 1977 (HSINHUA)--A nation-wide telecommunications network is under construction in China, making use of microwave radio beams and of the other latest technological developments in telecommunications. A coaxial cable 1,800-channel carrier communications trunk line linking Peking with Shanghai and Hangchow was completed last year, as was a 960-channel microwave communications trunk line linking Peking and more than 20 provinces, municipalities and autonomous regions. All this marks the steps China is taking to modernize its telecommunications.

The newly completed microwave communications trunk line now transmits black-and-white and colour television, telephoto, telegraph and telephone from Peking to many parts of the country. Editions of the JEN-MIN JIH-PAO are transmitted by facsimile apparatus through this line so that readers in remote areas can receive the paper on the day of issue. The satellite ground stations built in Peking and Shanghai in 1974 have enabled China to transmit telegraph, telephone, telephoto and television to other countries through satellites over the Indian and Pacific Oceans. The submarine cable linking China and Japan has been put into operation.

China has designed and made code deciphering machines for use in Chinese language telegraph, storing 10,000 Chinese characters. The machine can automatically decipher groups of four Arabic numerals into Chinese. It is now in use in many cities. Peking, Shanghai, Tientsin, Nanking and four other major cities have adopted the automatic dialing system for part of their long-distance telephone calls.

Ninety percent of the telecommunications equipment in China is domestically made. In addition to the big state factories every province, municipality or autonomous region has its own factories making telecommunications equipment. Way back in 1958, during the mass technical innovations movement, China started making carrier equipment for cable communications. During the Great Proletarian Cultural Revolution, Chinese workers succeeded in making such long-distance telephone equipment as the coded crossbar toll automatic switching system and automatic message accounting devices.

The country's posts and telecommunications departments have set up special scientific research institutes, colleges and schools. The number of post and telegraph offices across the land in 1976 was 15.7 times that of the early post-liberation period.

CSO: 5500

NATIONAL NEWS AGENCY EXPANDS SERVICES

Bangkok BANGKOK POST in English 17 Oct 77 p 5 BK

[Text] The NATIONAL NEWS AGENCY (NNA) under the Mass Communications Organisation of Thailand is expanding its services to present news and facts to media throughout the country and abroad and is expected to hit full strength within three years, sources close to management said Saturday.

The NNA is part of the Mass Media Organisation [MMO] complex that consists of Radio Thailand, Thai Television Channel 9 and the news agency. The three news agencies [as published] were established only last June by law and more or less streamline the news gathering and news distribution under the organisation of the office of the prime minister.

To head this young agency, a young and extremely active man has been appointed as its director and he is eminently qualified, having obtained a masters degree in public administration from the University of Syracuse in New York.

Mr Bundit Kaeolun, 37, NNA director told the BANGKOK POST that the agency is at present "like a toddler or a creeper; we don't even have a place to call home yet, having to rent this Phaya Thai Road office," Bundit said good humouredly.

Bundit said he hoped the agency would be able to retain as much freedom and independence as possible within the content of the overall policy for security and safety of the society.

Bundit is convinced that the one "must" of a national news agency was winning the confidence of the media. "News and information that we send out of this agency must be completely reliable so that it may be accurately reported to the people."

"We cannot go all the way with the news to the people, but we can go half of the way with the most accurate and timely reporting that's available to us. They (the media) will pick it up from there and take it the rest of

the way. That is why I place such emphasis on the accuracy and timeliness of anything that goes out of this agency. We must earn the confidence of the media," Bundit said.

Another point that the director made was that an efficiently operating news agency can contribute toward the distribution of news and data into the provincial areas.

He said that the present major goals of the agency was to find news reports and other articles and items of interest to "'feed' to Radio Thailand and to Television Channel (9)... But we will expand this to include all media in the near future. We also plan to film events and take photographs in establishing a regular daily news service for all subscribers," Bundit said.

The NNA presently consists of 20 reporters, 10 photographers and administrators and other staffers, totalling about 70 persons. The products of the agency thus far are press releases delivered to subscribers 4 times a day at 0930, 1200, 1530 and 2000.

Releases include local, regional and foreign news and cost subscribers 500 baht per month, the director explained.

"I cannot say our programmes are complete or even approaching anything like being complete," Bundit said, "but all our reporters, writers and photographers are working at full speed to improve the service and the agency."

Bundit said his budget came from the mass communications media budget which was initially granted 10 million baht to commence operations in June when the Thai Television Company was disbanded and the MMO organised in its place...

Bundit makes a distinction between the Public Relations Department work and those of his agency, saying: "The Public Relations Department distributes news and information from the Government directly to the people while the NNA obtains the news through the media to the people."

The director said the distinction was very important since he feels that the NNA "can therefore act much more independently than the Public Relations Department... In a situation in which the NNA is forced into reporting something it doesn't agree with, we can object. What we want to do the most is tell the truth," Bundit concluded.

CSO: 5500

VIETNAM

BRIEFS

DAC LAC WIRED RADIO NETWORK--Dac Lac Province recently completed setting up 12 wired radio stations in various new economic areas and land reclamation work sites to support local production activities. [Text] [Ho Chi Minh City Domestic Service in Vietnamese 0500 GMT 9 Oct 77 BK]

CSO: 5500

BULGARIA

BRIEFS

NEW TELEVISION TOWER--A new television tower is being built on the highest site near the city of Tolbukahin by a highly specialized team of outstanding technical workers. The tower will be 130 meters high, 90 of which are to be build according to the monolithic method, while 40 meters will be of iron construction. Relay stations for broadcasting the first and second Bulgarian television programs in color will be assembled on this tower, and a radio relay station for automatic telephone dialing will also be built. The station will contribute to a considerable increase of telephone connections in Tolbukhin okrug and in other okrugs of the country. [Sofia RABOTNICHESKO DELO in Bulgarian 4 Oct 77 p 4]

CSO: 5500

## ARGENTINA

### ARMY SEIZES SUBVERSIVE EQUIPMENT FOR JAMMING WORLD GAMES BROADCASTS

Buenos Aires LA PRENSA in Spanish 17 Sep 77 p 22

[Text] On the afternoon of 16 September 1977, at the headquarters of First Artillery Group, Ciudadela district, Buenos Aires province, an exhibit was held of devices confiscated from a group of subversive criminals who were planning to jam world games radio and television broadcasts in 1978.

It was revealed that the equipment is worth about 10 million dollars and was found in a raid of a home in the Villa Tessei area of Buenos Aires province.

At that site there was an electronics workshop which, according to estimates, may be the largest in production capacity of any discovered to date.

The electronics assembly plant operated in a garage behind the house and was set up for assembling communications equipment; it had consoles for testing and measurement as well as tools for making electrical chassis and circuits.

#### Technical Potential

According to an initial analysis by official technicians, the shop was able to assemble and put into service 30 transmitters for the so-called "liberation radio" in order to jam television channels 2,7,9,11 and 13.

Television channel 2 was jammed in La plata during the broadcast of an international soccer match and subversive propaganda was aired instead.

It was pointed out that jamming television broadcasts can be done using equipment which the subversive Montoneros criminal group were planning to prepare; the units are effective within a radius of about five to ten blocks and are designed to operate from a car, and have the appearance of a car stereo.

#### Explosions by Remote Control

The same equipment could be used to set up explosions and detonate explosive charges by remote control.

Other possibilities included interfering with the audio function of radios operated by the military or by the police as well as setting up linear radio amplifiers from 25 to 150 watts through remote control.

Documentation captured includes an abundant technical bibliography regarding the so-called "liberation radio," a communications training manual and a plan for construction of 40 sets for the subversive broadcast operation.

Also there was a "national plan" and "communications doctrine," as well as photocopies of a smear campaign of international proportions which the subversive Montoneros criminals are developing in Spain, through newspapers and magazines such as EL PAIS, DIARIO 16, REVISTA CAMBIO, and others, containing interviews with the subversive criminal Mario Firmenich and his conversations with leftist Spanish politicians.

Authorities have concluded from their analysis that the raid brought great harm to this subversive group, and it is noted that the Montoneros' intensive activity leads to the conclusion that the action planned for the near future is in the area of propaganda and mass persuasion for the most part, replacing armed action with propaganda and psychological devices.

11,989  
CSO: 5500

## ARGENTINA

### TELECOMMUNICATIONS NETWORK PROJECTED FOR 1983

Buenos Aires LA NACION in Spanish 17 Sep 77 p 22

[Text] Projects already under way and planned for the next few years will give Argentina a telecommunications system with large capacity and an area coverage which will make it one of the most important networks in the world.

The accompanying map shows the extent of the network as of 1983, with the radio connections and coaxial cables being installed or planned by the present directors of the national telecommunications company.

#### A Little History

In recent years technological advances have pushed telecommunications ahead rapidly. In Argentina before 1960, the inter-urban network consisted basically of physical circuits, with trunk routes backed up by the application of the carrier wave system, which allowed for simultaneous sending of 1, 3 or 12 communications.

During the sixties there was a beginning of installation of coaxial cables which made it possible to send about 1000 communications through every cable; these were installed between the large centers of Buenos Aires, Rosario, Chivilcoy and Mar del Plata.

Coaxial cables were the key for less than 10 years, because as of the beginning of the present decade, intercity communication began to use another new method, radio hookups.

This system uses antennas about 50 kilometers apart in flat areas and equals the capacity of coaxial systems with the advantage of less cost.

One of the most important projects accomplished this year was the radio hookup between Mendoza and Las Cuevas, which allows for connections with Santiago de Chile. Installed at 4,000 meters altitude, it has 600 telephone circuits and one for color television, besides one as a reserve.

## Work In Progress

Meanwhile, there are various projects which are being hurried so they will be ready for the world games.

For example there is the microwave connection between Posadas and Puerto Iguazu via Overa, between Puerto Rico and El Dorado, with an alternative route toward Brazil, through Foz do Iguazu and the enlarged radio connection between Buenos Aires and Campo Duran, with connections to Bolivia through Tarija. This last project, which like the previous one will raise to 960 the number of phone circuits as well as incorporating the circuits for color television, will allow Tucuman, Salta and Jujuy to receive the images of the world soccer championship matches.

Also worth noting are the hookups under construction between Buenos Aires and Mar del Plata via microwave, with connections through Tandil to Tres Arroyos and Bahia Blanca.

This project will provide 3600 phone circuits, 2 color television channels, telex lines and a reserve system. Like the previously mentioned projects, it is scheduled for completion in April 1978.

Finally, as always regarding intercity communications, the plan will be complemented with the enlargement of radio hookups presently connecting Cordoba and Mendoza, the construction of another between Rosario and Santa Fe, and the enlargement of the system between Santa Fe and Goya, Monte Caseros, Posadas, Reconquista, Resistencia and Roque Saenz Pena. Coaxial cables are being used to amplify the system between Rosario and Buenos Aires and the one which will connect Mar del Plata, Buenos Aires and Rosario. Scheduled for 1981 is a radio connection between this coaxial system from Dolores to the bathing resorts located in the Ajo beach area.

The world games provide motivation for completing all these projects, but the meaning of the communications projects goes far beyond this circumstance, since in Argentina, as Eduardo Oscar Corrado, the national telephone company's director, said recently, "it was impossible to delay these projects if we were to avoid being behind in such an important field as telecommunications."

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CSO: 5500

## BRAZIL

### TELECOMMUNICATIONS EQUIPMENT MAY BE SUPPLIED TO ARGENTINA

Rio de Janeiro O GLOBO in Portuguese 28 Sep 77 p 25

[Text] The possible participation of Brazilian industry in supplying equipment for the Argentine telecommunications system expansion programs in which about \$1 billion will be invested by 1982 was examined during a meeting held yesterday by the president of the National Telecommunications Company (Entel), General Oscar Corrado with the president of the Brazilian Telecommunications Company (Embratel), Haroldo Correa de Mattos, who explained the growth of the Brazilian telecommunications sector.

General Oscar Corrado observed at the end of the meeting that "the data presented by Embratel show that telecommunications development in Brazil and Argentina is similar, taking into account the distances to be covered and the technological stage of the two countries." In his opinion, the problems and needs of the two countries are also similar.

Before leaving the meeting for a visit to the Embratel TV center and the Standard Electric factory in Vicente Carvalho, the president of Entel revealed that one of the reasons for his trip to Brazil was to "visit the Brazilian telecommunications companies in order to ascertain their level of development and make comparisons with Argentine industry with a view to complementing Argentina's industrial capacity for equipment."

He explained at that time that Entel is going to quintuple the Argentine telecommunications system in an effort to overcome the problems in that sector, which has been lagging behind the country's needs for several years.

Observing that Entel's activity is similar to Embratel's work in recent years, General Corrado said that by December he is going to initiate talks with the Brazilian company to coordinate the joint exploitation of the bilateral services which will show a great growth beginning in 1978 with the linking of the ground systems of both countries.

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## CUBAN TECHNICIAN EXPLAINS SINGLE SIDEBAND CONTRIBUTION

Havana BOHEMIA in Spanish 26 Aug 77 pp 90-91

[Text] An observation worth thinking about is that made by the Canadian composer R. Murray Schafer some 3 years ago when he said that the importance we have heretofore attached to the sense of sight as a reflector and compiler of the world around us is based fundamentally on our capacity to read, and since the written word is now "in a period of decadence," the ear will recover the great significance it had in other ages.

Certainly the transmission of sound has come to constitute an increasingly social and now planetary phenomenon, thanks to an advanced technology which multiplies and spreads almost boundlessly.

One of the most impressive and at the same time most recent examples is the television complex being built in Ostankino, not far from Moscow, from which the Soviet Union will broadcast the 22nd Olympiad live in 1980. These broadcasts will be heard and seen by more than 2 billion people throughout the world.

In fact, sounds are a very important part of our world (remember that the ear is, perhaps, the only one of the senses which never tires and which is capable of capturing the slightest sound or that same sound multiplied a million times.) The acoustical apparatus has been an object of the most diverse research. (Musicologists, sociologists, psychologists, psychiatrists, technicians from different fields, and even archaeologists who believe we can again hear the voices and many other sounds of the past.)

What, then, is sound? Physics tells us that it is the physiological impression produced on the ear by the elastic vibrations of bodies. These vibrations arrive at our ears through intermediary bodies which may be solid. We know that in the great majority of cases, the medium which transmits sound to us is air. However, sounds are propagated for greater distances in denser and more elastic media; for example, it is best propagated in solids, better than gases. It is not propagated in a vacuum. And now a fact that many people know: the velocity of sound in air is 340 meters per second. (At normal pressure and at a temperature of 15 degrees [centigrade].)

But, as we well know, we still have not been able to overcome, to a desirable extent, the obstacles that distance places in the way of sound transmission. (Regarding the use of the word "sound" we should make it clear that when we refer to it, we do not include ultrasound nor the more recently studied infrasound. By sound, in and of itself, we understand noise, music and speech. The first of these, about which there is certainly enough to say, we will leave for another occasion.)

And why do we say there are problems in long-distance audio transmission? Because, among other things, that transmission is carried out through and by means of the atmosphere, and in the atmosphere--the ionosphere as well as the troposphere--certain factors exist which frequently disturb communications. Sometimes it is a question of the varying distribution of electrical charges in different atmospheric strata (as a result of sun spots, cloud accumulations, etc.), or because of humidity, temperature and other atmospheric factors.

The problem these factors can cause, and which, certainly, turns out to be the most frequent and serious audio transmission problem, is what the technicians call "frequency drift." This can also occur because of the normal aging of the transmitter's oscillator, and the seriousness of the problem depends in any case on the type of transmission being made.

The three best-known types of radio-signal transmission (including radio, television audio, telegraphy, wireless telephony, etc.) are:

1. Amplitude modulation or modulated amplitude (AM). This is the kind most used until now. We all know it, because our house radios are of this type. It utilizes the middle-frequency band; that is, the band used for national broadcasting. In this type of transmission, what is modulated is the amplitude of the transmitted signal (the amplitude is the size of that signal and it is within it that useful information is found).

2. Frequency modulation (FM). In this type of transmission, useful information is not found in the amplitude, but rather in the frequency. Here the amplitude is always the same. This kind of transmission offers high quality, and for that reason it is used for television audio, and for special radio music.

3. Single sideband (SSB). In this type of transmission, we work with only one of the bands, and to clarify this, let us review briefly: when we transmit by amplitude modulation (AM) and we make that transmission at a certain frequency range, we understand there is a so-called "carrier," and, at its sides, two bands. That is, with AM transmission, we work with a "carrier" and, in addition, two bands. In SSB transmission, only one of these bands is used, and the "carrier," as well as the other band, is discarded.

Technicians always wanted to take advantage of this last kind of transmission because of its valuable properties, but certain problems could not be overcome. Then suddenly we heard that young Olivera had been able to overcome the worst of them.

Since Olivera gives classes at the ISPJAE [Jose Antonio Echeverria Advanced Politechnic Institute], we visited him at this institution of higher learning and, not without effort, got him to tell us about his accomplishment. We already knew that he had earned the degree of Master of Science at University College, Swansea, England, specializing in electronic instrumentation, and we asked him if these studies had helped him formulate his idea.

"Yes," he answered, "they were really the beginning of everything." My thesis director was William Gosling, who was then vice-rector and head of the Department of Electrical Engineering at the University of Swansea, and vice president of the Institute of Electronic and Radio Engineering of Great Britain. Since 1974, Gosling has been chairman of the Electronics Department of the University of Bath. When I graduated, Prof Gosling asked me for an abstract of my thesis for publication in the review published by the Institute of Electrical and Radio Engineers of Great Britain. It was done, and the work was evaluated in 1975. It was approved, and published in February of last year.

We know that the institute to which Olivera refers enjoys international prestige and that all the specialists in that branch of science in Great Britain belong to it. (And, by invitation, those of other countries.) We also know that it offers several prizes, but that which was given to Olivera was special; the "Clerk Maxeel" [as printed] prize, which is given to the most important work. We asked Olivera what impression the awarding of this prize had made on him:

"It was a surprise for me!" he answered. "I couldn't have hoped for so much...Many specialists from all over the world, including the best from England, publish their works in that review." ("The Radio and Electronic Engineer")

What does Olivera's invention consist of? So that we could comprehend such a complicated piece of technology, the young professor gave us a simple explanation.

"When sounds are transmitted on AM, let us say the human voice, you always have to transmit the 'carrier' and the two adjacent bands: that is, there are three elements. When you transmit on only one of the two bands, you save a lot of power (you don't have to 'energize' the carrier or the other band) so that to reach a determined distance, less power is required, or, conversely, you can reach a greater distance with the same power. Also the apparatus required is smaller than when we use amplitude modulation (AM)."

"But," Olivera continues, "transmission by single sideband (SSB) has the disadvantage that, in it, the effects of frequency drift are worse."

"Our idea," Olivera adds, "consists of applying a filter to the transmitter so that it will produce an absence of information, which, when it arrives at the receiver (which will also have another system of filters) will indicate if there is drift. If in the receiver they receive information where there

should be absence of information, then there is drift. The filters are composed of electronic circuits which have operational amplifiers, transistors, semiconductor diodes (for those not familiar with electronics there is a simple explanation: diodes are elements which let the current pass in only one direction, and not in the other), resistors and capacitors."

"From my point of view, the interesting thing was that mathematically, we could show that if we use an absence of signals on a specific frequency we can take this absence of signals as a reference point to make corrections of drift without the intelligibility of the signal being appreciably affected."

"The principle was applied in practice, and it worked adequately."

"This frequency correction principle can be applied in other areas not related to communications; in industry, for example, in the field of general electronics, etc."

And so we left young Olivera, who went back to working his electronic equipment. The prize will be awarded at a general meeting of the entire English scientific center next 13 October. It will consist of a certificate of award and a sum of money which Olivera has donated to the "Jose A. Echeverria" Advanced Polytechnic Institute.

#### PHOTO CAPTIONS

1. p 90. Left: It is well known that voice communication (radio, television audio, telegraphy, wireless telephony, etc.) represent one of the activities of most far-reaching importance. However, we have still not conquered all the problems it presents. To get around many of them, a young Cuban technician has come up with an ingenious system.
2. p 90. Right: A young Cuban professor, Jesus Rene Olivera Reyes, an electronic engineer specializing in telecommunications who 3 years ago received his Master of Science degree specializing in electronic instrumentation from University College, Swansea, England, won the "Clerk [as printed] Maxwell prize for his work "An automatic clarifire [as printed] for s.s.b. speech [as printed] communication [as printed]." Olivera, whom we see crossing (first photo, above) the wide lobby of the Jose A. Echeverria Advanced Polytechnic Institute [ISPJAE] which was closed down for its annual vacation, hence the empty hall, received us in his laboratory (left). Above, a diagram which expresses his idea, and which we will discuss on these pages.

VENEZUELA

CANTV OPENS 1,000 NEW INTERNATIONAL TELEPHONE LINES

Caracas EL UNIVERSAL in Spanish 10 Aug 77 pp 1-14

[Text] September 1977 will see the inauguration of 1,000 new direct dialing international phone lines, and 80,000 subscribers will have the service by the end of the year.

This announcement was made yesterday by Dr Enrique Narciso G., president of CANTV [National Autonomous Telephone Company of Venezuela], in the course of a press conference.

The president of the state telephone company said that not all subscribers will have access to international direct dialing.

He said, "We are going to begin by slowly making hookups center by center; the first to be in operation will be Los Caobos, Maderero, Las Mercedes and La Florida. Priority for receiving this service will be given to banks, insurance companies, travel agencies, including airlines, the hotels (the Tamanaco, Caracas Hilton and Macuto Sheraton, among other most important facilities), financial institutions, industries like Sidor, the petrochemical industry, public CANTV offices, oil firms and the nation's important media of social communication. That is to say, we are going to inaugurate direct international dialing for those subscribers who are making the largest and most frequent use of this system at this time. I want to emphasize this because there is an almost generalized opinion that all subscribers will have access to this service and this is not true."

What will subscribers do if they must call abroad and do not have direct dialing from their phone at home?

He answered, "Three public offices of CANTV will have access to this system. That is, I am not referring to government offices but to company offices in which subscribers will be able to make international calls directly."

### 3-minute Limit for Coin Telephones

Another announcement made by the CANTV president will be quite well received by the public because of its social significance. This was that conversations at public or coin telephones will be limited to 3 minutes in order to end frequent abuses by many users who show no consideration for others and use the coin telephones as if they were their own private phones.

### The Columbus Cable

Dr Enrique Narciso stated that on 12 October 1977 the Columbus Cable, with 1,800 channels, will begin operation. Its cost is on the order of 350 million bolivares and unites Europe with Venezuela. Connections are made at the Canary Islands and from there to Spain and the rest of Europe. In Venezuela we will have communication with the Caribbean nations, the Andean area and the rest of Latin America.

He noted, "I would like to mention that we are negotiating with the United States for a second St Thomas Cable to connect Venezuela with Miami. With this we hope to have the best communications system of any developing nation."

### Two Basic Problems

The CANTV president said that the firm has two basic problems, first the fact that supply is 47 percent behind demand, the result basically of urban growth and enlarging industry with increasing buying power for Venezuelans, which now brings on a crisis because telephone service is already considered a basic necessity, which was not true 5 years ago.

He continued that this unsatisfied demand has brought logical consequences such as saturation of domestic and foreign long distance nets. The company grew enormously in local communications, but this growth was not matched in the areas of domestic and foreign long distance calls. This situation produces congested lines. What are we doing to improve the quality of service? CANTV has undertaken a vigorous financing plan to acquire mobile units and domestic and foreign long distance calling centers.

### "Truly Criminal"

A newsman asked regarding how much is lost yearly through damage to public phones. "We do not have this figure, but the losses in that regard are significant. It is truly criminal behavior to destroy coin telephones."

Dr Enrique Narciso pointed out that Venezuelans may be one of the peoples who are most destructive about public property and that in this case the telephone is one of the commonest victims of rage and vandalism. He cited the example of nations with less economic wealth who show more respect and take good care of public telephones. He praised the behavior of Colombians in this regard.

NEW EARTHQUAKE MONITORING SYSTEM USES COMPUTERS, SATELLITES

Caracas EL NACIONAL in Spanish 28 Jul 77 p D-1

[Text] Within not more than 3 years, Venezuela will be able to register seismic movements of any intensity, using the technology of transmissions via satellite.

The system, called Resvac, for Venezuelan Continental Seismic Network, is one of the most advanced of its type in Latin America. It will use computers to detect the geographical center, time and intensity of any earthquake in the Caribbean area or a large part of South America; it will allow for initial evaluation of possible damage also.

Dr Enrique Gajardo, general secretary of the workshop on geological risk taking place in the Venezuelan Engineering College, explained the structure, operations and importance of the new system.

Referring to the origins of Resvac, he said that the quake which shook Caracas in 1967 proved the need for an in-depth study of earthquake risks in Venezuela, and demonstrated the lack of connection at that time among studies by engineers, geologists and seismologists on the subject of geological risks.

Gajardo said, "The Caracas quake changed the way of looking at seismological problems, even at the worldwide level."

"What was the cause for this change of approach?"

Gajardo responded, "In Caracas we saw the problem of enlarging the effect of the quake because of sedimentary structure of the earth. Stated in another way, the quake was only of moderate magnitude, but it was amplified by the sedimentary structure of the ground, which in some parts of the capital is not suited for high buildings."

Dr Enrique Gajardo noted also that as of 1967 the need was recognized for deeper study of the Venezuelan quake problem, and 1972 saw the creation of Funvisis, or the Venezuelan Foundation for Seismological Study, which prepared a basic plan for study and action regarding earthquakes.

## The Seismological Network

Gajardo said, "The basic work plan of Funvisis required an inventory of information on geological risks, seismology and earthquake-resistant engineering existing in Venezuela. Then we saw the need to package this useful information in language suited to planners, engineers and urbanists through the development of zonification and microzonification maps showing seismic descriptions of the cities. The maps would show types of soil, geology and what kind of buildings can be built.

However, we did not have enough data to do this, owing to the lack of specialized institutes or equipment, and this led to the creation of Resvac, the Venezuelan Continental Seismic Network."

Dr Enrique Gajardo explained that the system builds on the latest information on earthquakes. It is sensitive enough to collect a maximum of information in very short periods of time, and is as versatile and flexible as possible, as well as economical and easy to operate. Also it is the best kind of system for Venezuelan conditions because it requires a minimum of technically trained staff who are so hard to find.

The network departs from the classic notion of seismographic stations which need staff and equipment for each area of the country. It consists of one large central station in Caracas which will receive signals sent by 50 automatic sensors scattered throughout Venezuela.

Using the method of transmission via satellite, the automatic sensors will detect all movements of the earth's crust and convert them into signals for the Caracas center. There a computer will receive the information from the sensors and indicate the time of the quake, its location, strength and duration.

With this information, the specialists at the Caracas center will be able to make a preliminary estimate of possible damages and transmit the news to the competent agencies. This represents a great advantage, Gajardo said, since in most cases the extent of damages can be learned only after a certain period, because of media and transportation breakdowns associated with quakes of a certain intensity which make it difficult to help the affected region.

## Network To Cost 28 Million Bolivares

Plans for Resvac are ready, and only financing is needed for it to begin operations within 3 years. Total cost is estimated at 28 million bolivares.

Dr Enrique Gajardo stated that this expense is justified because the network will not only monitor earthquakes but also in the long run will yield detailed knowledge about geological formations and incidence of quakes in Venezuela.

The earthquake specialist noted that the permanent record transmitted by the network will reveal frequency and magnitude of movements of the earth's crust in each area of Venezuela. Thus it will be possible to draw zonification and microzonification maps which will set codes or rules for earthquake resistant building methods as necessary.

Gajardo said that these studies are vitally important for Venezuela: while it is true that Venezuela has less quake activity than other parts of the world, it is true also that more than 70 percent of the people, industries and transportation routes in the country are situated in the zone of greatest quake activity, the coast mountain area.

This indicates the damage that a future quake in this area could bring to the economy of the nation and the life of its people, especially if we remember that until now there has been no planning to take account of geological risks.

It should be noted that the technology to be used in setting up the network for monitoring quakes comes from Mexico and will be assembled in the laboratories of IVIC [Venezuelan Institute for Scientific Investigation], under the auspices of the Organization of American States and Funvisis.

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MOROCCO

BRIEFS

MAP BECOMES 'PUBLIC INSTITUTION'--Rabat--Official Bulletin No 3387 of 28 September 1977 carries a decree-law turning the Maghreb-Arabe-Presse [MAP] Agency into "a public institution having legal status and financial autonomy and placed under the government official in charge of information." Organizationally the decree-law stipulates that "the agency is administered by a board of administration and a management committee and managed by a director." The board of administration, chaired by the government official in charge of information, includes representatives of the royal cabinet, the prime minister, the government officials in charge of foreign affairs and finance, the Ministry of the Interior, the General Secretariat of the Government, the Ministry of Public Works and Communications, and the agency's journalist and nonjournalist staff. [Text] [Rabat MAP in French 1530 GMT 7 Oct 77 LD]

CSO: 5500

INTER-AFRICAN AFFAIRS

ALGERIA AIDS NIGER, MALI IN TELECOMMUNICATIONS FIELD

Telephone Exchanges To Be Built

Algiers EL MOUDJAHID in French 21 Sep 77 p 3

[Text] A new stage in the development of inter-African cooperation is being launched by the visit being paid to Mali and Niger by Mr Mohamed Zerguini, Algerian minister of posts and telecommunications. In fact, it is not a question of the development of multilateral relations with these two countries alone, for Algeria is planning to make a very important future technical contribution to Mali and to Niger in connection with the development of their relations in the telecommunications sector.

This very day Mr Mohamed Zerguini will attend the commissioning of a land station in Bamako, and on 24 September, the commissioning of that in Niamey. These two achievements, made possible thanks to the contribution of Algeria, will give Mali and Niger access to the space telecommunications network and will enable them to communicate speedily with various countries. These operations will be made possible by the Intelsat network and will be handled by the space telecommunications complex in Lakhdaria, in the wilaya of Bouira, in Algeria.

In addition, Algerian technical aid extends to the transmission by our country of telecasts to Mali and Niger.

Another aspect of this cooperation has to do with the modernization of the telecommunications network in Mali, with Algeria contributing in particular to the building of a telephone exchange with a capacity of 1,000 lines in Bamako, and another with a capacity of 500 lines in Sikasso.

A similar effort is being made with regard to Niger, involving the building of a 1,000-line telephone exchange in Niamey and one with a 500-line capacity in Agades.

The Bamako exchange, on which work has been begun, will be commissioned when Mr Mohamed Zerguini pays his visit to that country.

There can be no doubt that with these major achievements, inter-African relations will take on a special characteristic and should serve as an example for the other sectors of cooperation among the countries on the continent.

#### Earth Station in Mali Commissioned

Algiers EL MOUDJAHID in French 22 Sep 77 pp 1, 3

[Text] Lt Col Amadou Diara, vice president of the Military National Liberation Committee in Mali presided over the commissioning yesterday of an earth station for satellite telecommunications in Bamako. The station is a gift from Algeria to Mali.

The commissioning ceremony took place at the station itself, which is located in Souleyman-Bougou, a dozen kilometers from Bamako. Those present included Mohamed Zerguini, Algerian minister of posts and telecommunications, Yaya Bagayoko, minister of information and telecommunications in Mali, Mustapha Benamar, the Algerian ambassador in Bamako, and a number of other leading personalities.

Two addresses were delivered in connection with this ceremony. The first speaker was Mr Yaya Bagayoko, who stressed the desire of Algeria and Mali to implement fruitful cooperation, since both countries and both governments are aware of the joint destiny of the two peoples and the identity of their aspirations.

The Malian minister, who offered this achievement as a concrete illustration of the solidarity between Algeria and Mali, also referred to the main functions of this telecommunications station, which will help Mali break out of this isolation and allow the country to enter into the era of modern telecommunications technology.

The second address was delivered by Mr Mohamed Zerguini, who analyzed the joint cooperation activities of Mali and Algeria in all sectors, which he described as symbolizing an active solidarity between African and Third World countries. Mr Zerguini also referred to the advantage offered by this station, which will enable Mali to establish relations with all countries in the zone covering the area between the United Kingdom and Japan, direct relations which will not therefore have to be handled through capitals outside Africa. In Mr Zerguini's view, this example of cooperation will be followed by others, in particular, in the realm of highway transportation, with the creation of a mixed Algerian-Malian company. Finally, he mentioned the impact which the Trans Sahara Highway will have on the trade between the two neighboring countries. The building of this highway will be an additional contribution to freeing Mali from its isolation.

Following these two speeches, those present watched a retransmission via the RTA [Algerian Radio and Television] network of a film on the second biennial celebration in Mali, followed by a program on Algerian folklore. The perfect visual reception and the quality of the sound bore witness to the technological excellence of the equipment installed at this station.

Following the telecast, the vice president of the Military National Liberation Committee in Mali unveiled a commemorative plaque, thus officially commissioning the earth station. He then visited the station facilities with Malian and Algerian engineers as his guides.

In another ceremony, Lt Col Amadou Baba Diara officiated at the commissioning of a new 1,000-line telephone exchange in Bamako.

Mr Mohamed Zerguini, Algerian minister of posts and telecommunications, and his Malian counterpart, Mr Yaya Bagayoko, participated in this ceremony, which included among other things a visit to the facilities of this exchange, which is a gift from Algeria to the sister republic of Mali.

The exchange is equipped with the crossbar system and can be used for inter-urban communications. It constitutes an extension of the existing 3000-line exchange and includes a miniaturized line distributor and an electronically controlled power generating system. The expansion project took 8 months. An exchange which is identical but smaller in size (500 lines) is currently being installed in Sikassou, about 300 kilometers from Bamako. It will be completed by the end of this year.

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INTER-AFRICAN AFFAIRS

BRIEFS

WEST AFRICAN BROADCASTING MEETING--The meeting of the West Africa Group of the Commonwealth Broadcasting Association has ended in Lagos. It lasted 5 days. Delegates came from Ghana, Gambia, Sierra Leone and Nigeria. In a communique issued at the end of the meeting, the delegates reaffirmed their belief in the use of the radio and television to promote social interaction among the people. They also agreed to enhance regional cooperation through a monthly exchange of radio programs on culture as well as on social progress and developments in the region. [Text] [Lagos International Service in English 0630 GMT 15 Oct 77 LD]

CSO: 5500

MAURITANIA

REGIONAL RADIO NETWORK INAUGURATED

Paris AFP in French 1627 GMT 10 Oct 77 PA

[Text] Nouakchott, 10 Oct--The first regional network of the Mauritanian Radiobroadcasting Office was inaugurated Saturday in Dakhla, capital of the province of Tiris el Gharbia (formerly Rio de Oro), in northwestern Mauritania, by Mohamed el Hafed Ould Enahoui, minister of information and telecommunications.

On this occasion, Mr Enahoui stated that this station has been established "within the framework of an overall effort by the National Directorate to expedite the complete and genuine integration of the province of Tires el Gharbia in Mauritania." Mr Enahoui said that the authorities in Nouakchott had decided to invest 300 million Francs in various development projects in Tiris el Gharbia which, they said, is "6 years behind the development of the rest of the country." "The new regional station," the minister added, "should be an effective means for publicizing the decisions of the Mauritanian People's Party and its revolutionary charter."

Finally, Mr Enahoui gave assurances that "other stations in other regional capital cities will be created more or less in the near future." "Our objective," he said, "is to permit our news media to make a greater contribution toward cementing our national unity, raising our level of awareness and educating the mass of our people."

CSO: 5500

EDITORIAL VIEWS ARUA SATELLITE STATION AS HUGE SUCCESS

Kampala VOICE OF UGANDA in English 5 Oct 77 p 4

[Editorial in "VOICE Periscope" column" "Earth Station Project Sets an Example for Others"]

[Text]

**THE** Arua Earth Satellite Station Standard 'B' has been completed. It is relieving to note that this huge national project was carried out and completed within the envisaged record time.

Naturally, we regard its successful completion within the specified time as a big score for the Government of Uganda, President Idi Amin in particular, and all those people who were involved in its construction since it was started.

The speed with which the Arua Earth Station was erected, the cooperation which it received from all sectors of the government and the contractors, will go down as a shining example for others to follow.

Ideally, this is how all developmental projects should be handled. Costs permitting, projects initiated to advance a developing country's modernisation process should receive every form of assistance in terms of personnel, material, and transport, so that it is completed within a desirably short time.

What was considered by the pessimistic-minded as a wild dream today stands as a reality in Arua, all set to serve the communications needs of the people of this country.

**It is now up to the parent ministry, the Ministry of Transport, Communications, and Works to which it has been handed over, to look after it in every possible way so as to extract maximum benefit from it.**

**As it had been indicated by the President that the Station would be available to any of our neighbours who would require its services, the appropriate ministry should follow this up.**

**Because of the inevitable enormous cost which such a project necessitates, it is important to ensure that it is manned by the right calibre of technical and engineering personnel to avoid breakdowns which could result in more costs to the country.**

**It is particularly because of this that the station should continue to train more and more and update its personnel and their training at the Station.**

**By allowing the station to be used by other countries neighbouring Uganda, it will help in recovering some of the foreign exchange which went into its construction.**

**As it stands now, and according to the announcements made during the handing over, the Arua Station has brought high quality television signals to the people of Arua and the surrounding region.**

**Similarly, telephone communication between Arua and Kampala City, as well as other points will be speeded up now.**

**The credit extended by the President to the representative of the contracting corporation from America is well deserved. Let us hope that the corporation will keep its promise to discharge its responsibility in manning the station until the Ugandans chosen and trained to man the station are fully qualified to maintain and service it on their own.**

**There are still the other remaining phases of the satellite network system to be completed at Kapchorwa, Fort Portal, Mbarara, and Kitgum: let the contracting corporation work on these projects with the same zeal as for Arua, so as to assist Uganda to bring the world nearer the masses of this country.**

UGANDA

BRIEFS

EIGHT INTERNATIONAL CIRCUITS--Uganda has now eight international circuits, two from Arua and six from Kampala to Tunhilly which are already commissioned. In the past, we used to have only six circuits to outside the country when we were still using the Longo'not Earth Satellite Station in Kenya. [Text] [Kampala VOICE OF UGANDA in English 4 Oct 77 p 1]

CSO: 5500

RADIO FREE EUROPE, RADIO LIBERTY DISCUSSED

Moscow RADIO in Russian No 8, Aug 77 pp 62-63

[Article by Kh. Yanbukhtin, journalist: "Unburied Remnants of the Cold War"]

[Text] It is no secret that the American government intends to expand its international radio broadcasting. To achieve this end, an authoritative report on the subject, with a letter of endorsement from President Carter, has been submitted to the U. S. Congress for deliberation.

What do the American analysts conclude in their report? After studying the state of American broadcasting abroad and to other countries and regions of the world, they conclude that existing resources and facilities are inadequate to satisfy the requirements of the new administration. Supposedly, there are not enough transmitters to carry U. S. propaganda to the world. Nor are there any transmitters that could be leased from Nato bloc countries—the BBC, German Broadcasting, Radio Netherlands, and other stations broadcast at capacity round-the-clock. The only out—build additional transmitters. Thus, the authors of the report propose the immediate construction of 16 radio transmitters in Europe to boost radio broadcasts to the Soviet Union and other socialist countries of Eastern Europe and the erection of 12 transmitters in other parts of the globe. In sum, 28 250 kilowatt transmitters are to be built at a cost of 40 million dollars.

This is the price the U. S. is ready to pay, supposedly, to fulfill the Helsinki accords, especially those in the third basket of the Final Act of the All-European Conference on Security and Cooperation in Europe, which states that "the signatory states note the increasing dissemination of radio information and hope that this process will continue in the interests of mutual understanding between nations and the goals outlined by this Conference."

One could understand the actions of the U. S. government, if it really were motivated by a desire to fulfill this accord, if the expansion of international broadcasting by America were intended to strengthen mutual understanding between peoples.

But, in fact, that is not the real objective; something quite different is being bought. In view of the fact that the American administration is concerned about bolstering facilities for broadcasting to the Soviet Union and other socialist countries (of the 16 planned transmitters, 11 are earmarked for the consolidated broadcasting station Radio Free Europe—Radio Liberty), it is obvious that the sums requested from Congress represent a new injection of dollars into a psychological war against socialist countries—i.e., appropriations for new launch pads on the ideological front of the radio broadcasting variety. In other parts of the globe as well—in Africa and Asia—American radio broadcasting completely ignores the successes of those developing countries that have embraced socialism, and instead, attempts to discredit their achievements.

Returning to American broadcasting directed against our nation, let it be said that our ideological enemies are using phrases on the need to expand an exchange of information to conceal their real goal of undermining socialism.

But take away the "sugar coating" from the new programs to increase broadcast time and look at why those who plan increased broadcasting, prefer to act dumb on the issue of what Radio Liberty and Radio Free Europe really are. A candid discussion of whether or not the activities of these stations are compatible with the principles on the relations between states, set forth in the Final Act of the All-European Conference, would, in the meantime, address this issue.

Radio Free Europe (RFE) and Radio Liberty (RL) appeared at the height of the "cold war"; they were its offspring. Their broadcasts hit the airwaves shortly after the usual declaration of a "crusade" against Communism. Radio Free Europe began broadcasting in East European languages in the summer of 1950, while Radio Liberty began broadcasting in Russian and in other national languages of the Soviet Union in March of 1953. They described themselves in international radio broadcasting references as "private" organizations, whose broadcasts were managed by "former citizens of East European countries and the Soviet Union," financially supported by the "American public." The reference books also stated that the headquarters of both stations were in Munich, and their transmitters, which expanded every year, were in FRG, Spain, Portugal, and even Taiwan.

The ordinary American, for example, or West German would not find it easy to see through the deception: somekind of emigrant radio station, supposedly paid for by the "American public," operates for some reason in the FRG. All this was puzzling, all the more, since in the U. S. and Western Europe everything was done to conceal the real mission of these "information centers," those with whom they were connected, and their real owners.

Today it is no longer a secret. According to reports of the U. S. press and U. S. senators, numerous documents and facts, brought to light by intelligence officers of socialist countries, upon their return home (the Pole Andzhey Chekhovich, the Bulgarian Khrisan Khristov, the Czech Pavel Minarzhik, et al.), there is incontrovertible proof that both stations belong to the U. S. Central Intelligence Agency, and are engaged in collecting and processing covert intelligence, interrogating those who have fled to the West from socialist countries, and in broadcasting subversive material. As before they have remained true to the goals, given to them as early as 1951 at a meeting of the administrators of Radio Free Europe in Munich by a Mr. Jackson, an advisor of then President Dwight Eisenhower: "Radio Free Europe is a tool of psychological warfare," said Jackson. "This station was created for the purpose of inciting internal disorders and disturbances in the countries it broadcasts to."

There is also evidence that the station employs, besides experienced CIA agents, traitors, former Nazi accomplices, spokesmen of fascist emigrant organizations, renegades, recently expelled from socialist countries, about whom it may be said in the words of Victor Hugo: "To defame one's homeland is to betray it."

Nowhere in the world could one find an organization which housed so many traitors and spokesmen for fascist emigrant groups, as in the editorial and "research" departments of RFE-RL. Here are some of them.

A one Garanin—former "public procurator" in the Vlasov gang. On his orders Soviet citizens were executed; he is responsible for the massacre of Jews. Now the same fanatic is trying to discuss "The Jewish Plight in the USSR."

Another traitor—Levon Mkrtchan, alias Kartash'yan—is a member of the Armenian editorial staff of Radio Liberty. A former teacher from Armenia, he surrendered to the Nazis in 1942 and was shortly thereafter trained in the Nazi spy school "Zeppelin." He was made a non-commissioned officer, sent to France, and took part in the execution of members of the French Resistance. At the end of the war he was captured by the Americans and, with papers identifying him as Levon Mkrtchan, was sent to Radio Liberty.

The list includes Shigal Nigmatullin, alias Aksan Yozefoglu, author of short antisoviet and antisemitic articles in the fascist tabloid IDEL'-URAL, and later a member of the Tatar-Bashkir department of Radio Liberty, who in moments of frankness often admits that in the event of war he would "slay his countrymen."

The 53-year-old Sultan Garip was recently appointed director of this department of the CIA. His real name is Sultanov Garif. At the front in 1942 he went over to the Nazis and helped the fascists by spreading propaganda among the Tartars and Bashkirs. Because of his denunciations many patriots were seized and executed, including the legendary Musa Dzhahil' and his band of patriotic fighters.

After the war Sultanov joined the American intelligence service and later appeared at Radio Liberty.

"The spokesman of Belorussian aspirations" at Radio Liberty is a certain Tsvirka, a former Nazi collaborator. A "colorful" figure in this gang is also the traveling reporter of Radio Liberty, Oleg Krasovskiy, who also came to the station by way of treason. Deserting to the Nazis during the war, Oleg Krasovskiy took his training from Vlasov and his ilk; after the war he worked for the antisoviet emigrant organization NTS. In 1956 he traveled to Hungary to organize subversive activities; visited Vietnam, where he justified American aggression in his reports. In the opinion of his colleagues he is a loathsome, money-grubbing, morally bankrupt individual. And such a person dares to tell the Soviet people how to live!

In recent years new faces have been added to this "band" of select traitors. The American managers have been picking personnel from the turncoats, recently expelled from socialist countries. It is easier for them to pass themselves off as "spokesmen of the aspirations" of a national intelligentsia, the young, ethnic minorities in the Soviet Union and other socialist countries. The journalist Yu. Marin wrote about them after working at Radio Liberty.

"Imagine, the 'technical expert' Levin proves that Soviet airplanes are unsuitable for flying. An employee of the London department of Radio Liberty, Finkel'shteyn (alias Vladimirov) is writing a book under the pithy title 'The Soviet Space Bluff,' although he knows less about space technology, than he does about Chinese hieroglyphics."

One could continue the list of "newsmen," who prefer to hide under "pseudonyms," because their real names are identified with barbarity, criminality, collaboration with the Nazis, treason. But this list makes it clear what kind of people these are. Knowledge of their activities

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and that of the notorious radio stations, in general, is enough to undermine the attempts of their real masters to present the sole purpose of RFE-RL to supposedly "encourage a constructive dialogue with the peoples of the USSR and Eastern Europe."

A dialogue between the peoples building socialism and communism and these anticommunist, spy organizations, this band of traitors and scoundrels is out of the question.

Today these radio saboteurs have intensified their abuse of the airwaves. However, the filthy subversive activity of RFE-RL is incompatible with the easing of international tensions, the understandings achieved at Helsinki. As early as 1972, the American, Senator Fulbright, who is hardly sympathetic to socialism, wrote about these stations: "I believe that the time has come to lay these stations to rest among the other remnants of the cold war."

There have been many protests in the FRG and other countries against the activities of RFE-RL. The Soviet public also vigorously demands an end to these stations in their present form.

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## CONSTRUCTION OF NEW TV-RADIO TOWER BEGINS IN ALMA-ATA

Moscow TASS in English 0727 GMT 13 Oct 77 LD

[Text] Moscow, 13 Oct (TASS)--The construction of a radio and television tower has been started near Alma-Ata, the capital of Kazakhstan. Experts determined its height--360 metres--newspaper PRAVDA reports.

A site for the tower has been selected at the summit of Mount Kok-Tyube in Trans-Ili Alatau. Therefore it will rise almost a thousand metres above the city.

Designers envisaged an unusually small base for the tower with a diameter of only 18.5 metres--there is no larger site on the mountain. In order to secure the stability of the tower and enhance its capacity to resist strong winds and earthquakes, the designers offered dynamic dampers. These will be installed at benchmarks 244 and 360 metres. The shock absorbers, in the shape of concrete rings moving on special spheres, will make it possible to reduce the amplitude of oscillations. For greater reliability the designers clothed the tower in an original jacket made of aluminium alloys. An aerodynamic shape will cut by half the wind drag.

The metal body of the tower resembles an extended transistor-radio antenna. Each section seemingly slides out of another, a larger one. Thus, the tower will be built up telescopically. The design allows block mounting.

At benchmark 248, the tower body will join antennas. There will be two-storey premises below to house technical services of the republic's radio and television center. An observation deck with fast elevators will be farther below.

The structure models undergo aerodynamic tests. The tower is to be commissioned in 1980. It will enable Kazakhstan people to watch the colour programmes of the central and the republic television networks.

CSO: 5500

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USSR

BRIEFS

NEW TELEVISION RELAY TOWER--Construction has started on a radio-relay station on the outskirts of Leninogorsk to insure good reception of television programs on two channels, including color television transmissions. The station will include a 200-meter high tower. [Alma-Ata Domestic Service in Russian 0205 GMT 14 Oct 77 AU]

CSO: 5500

CYPRUS

CYPRUS TO ACQUIRE SATELLITE STATION

Nicosia TA NEA in Greek 16 Sep 77 p 1

[Text] Cyprus will acquire a ground satellite station in 1979-1980, stated the general director of the RIK [Cyprus Broadcasting Corporation], A. Khristofidis, in speaking the day before yesterday at a press conference on the activities of this corporation for 1976.

This station, he stated, will receive programs directly from abroad.

The construction of the satellite station, added Mr Khristofidis, will be done in cooperation with the Telecommunications Authority.

During the conference, L. Petridis, president of the RIK, referred to the achievements of the RIK during 1976 and to the legislative bill on radio and television duties.

In 1976 this corporation showed a budget deficit of 442,000 Cyprus pounds, said Mr Petridis, and he added that in 1977 this deficit will assuredly increase.

In order to fill the gap which has been created by the occupation of the Kandara station, 2 substations will be ready in November out of the 21 which are to be built. The cost for these substations will be 600,000 pounds.

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CSO: 4808

FRANCE

SEGARD SAYS DEFICIT TO BE ABSORBED

Paris MESSAGES DES POSTES ET TELECOMMUNICATIONS in French Jul 77 p 19

[Text] To benefit from all the funds collected through postal checks at a stable and sufficiently profitable rate, and to aggregate intermediate term savings for the benefit of the appended budget, are the two fundamental measures which Mr Norbert Segard, secretary of state for mails and telecommunications, announced to the High Council of the PTT (Mails, Telegraphs, and Telecommunications) meeting on 9 June to discuss the 1978 budget.

Noting the difficult economic circumstances under which the 1978 budget was prepared this year, Segard announced to the High Council of the PTT the important decisions which the government has taken, following his proposal, about the financing of the appended PTT budget.

"I promised to find a solution to the problem of the deficit in the financial services of the mail, a problem which has weighed upon the proper operation of these services for several years. I am therefore happy to have kept my promise."

Rate of Return: 6.5 Percent

The minister pointed out that the rate decided upon by the government to pay back at term the funds deposited in postal savings and placed at the disposal of the treasury, is the same as the one offered to depositors of the National Savings Bank (CNE), which is 6.5 percent at present; this rate was chosen because it is stable and sufficiently profitable to attain financial balance in the corresponding services of the postal system. As of this year, the rate will be reduced to 5.7 percent and will apply to 1977 and 1978.

The State Secretariat is also authorized to place on the market PTT Savings Bonds whose characteristics will be identical to those of progressive interest Treasury Savings Bonds. The issue will begin on 1 September on a quarterly allocation, and will be a new and significant source of financing for the appended PTT budget.

As to the 1978 forecast, Segard provided the High Council with indications about the predictable large sums in the budget devoted to investments, these figures reflecting the continuation of the modernization program which has been undertaken both for the postal service and for telecommunications.

#### 14,600 Jobs

Concerning personnel, the minister said that "the 1978 PTT budget will create 14,600 jobs--7,600 in telecommunications and 7,000 in the postal service--3,000 of which will be in the form of time credit to meet the temporary need in replacing absent employees; I will only point out that this figure has never yet been reached in any previous budget of this administration.

These figures are independent of the means which I was able to obtain as a result of the Prime Minister's decision to recruit immediately into the civil service 20,000 young job seekers: the group assigned to PTT will ultimately reach 7,000 persons and their recruiting will begin on 1 July."

Four measures were taken with respect to wages and [worker] categories:

Postmasters and center chiefs will receive statutory raises in 1978;

For general services, category C jobs will be changed to category B; added for these services will be a revaluation of hourly pay for mixed offices, and of technical pay for financial centers;

Bonuses for good performance and for efficiency in categories B, C, and D, will be increased, and the lowest pay rate will be raised by 20 percent;

As part of the plan for confirming the employment of 45,000 persons, the 1978 budget includes steps for providing 10,500 auxiliary jobs, which will bring to 37,000 the number of budgetary openings made available since the beginning of the plan.

"I have a very special personal interest" stressed Segard, "in the personnel situation of our administration. And that is so because I believe them to be the major wealth and motive force of the great public service for which we are responsible, and because I feel that the significant progress achieved in telecommunications and the postal service could not exist without the collaboration and loyalty of all our employees, who are also its beneficiaries."

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PTT ADMINISTRATIVE FUNCTIONS CHARTED

Paris MESSAGES DES POSTES ET TELECOMMUNICATIONS [Supplement] in French Jul 77  
pp 1-6

[Text] The PTT [Mails, Telegraphs, and Telecommunications] administration is a separate ministerial department whose organs fall within three categories: central services, outside administrative services, and operating services.

Central Services

In addition to the Office of the Cabinet and the Information and Public Relations Department, the central administration includes:

The General Directorate of the Post Office, which includes the Directorate for Commercial Activities, the Directorate for Postal Services, the Directorate for Financial Centers and Information Processing, the Directorate for Equipment and Transportation, the Budget, Planning, and Accounting Department, the Personnel Department, the International Affairs Department, and the Delegation for the Ile-de-France Region.

The director general of the Post Office is responsible for all postal and financial departments. He defines their general policy and determines the means necessary for their operation. He formulates the budget of the Post Office, and proposes suitable means of financing; he assures the execution of the budget. He has authority over the heads of outside departments of the Post Office.

The General Directorate for Telecommunications includes the Directorate for Production, the Directorate for Commercial Affairs, the Directorate for Industrial and International Affairs, the Programs and Financial Affairs Department, and the Personnel Department.

The director general of Telecommunications is responsible for all Telecommunications departments. He defines the general policy for Telecommunications and determines the means necessary for operations. He formulates the budget for Telecommunications and proposes suitable means of financing; he

assures the execution of the budget. He prepares the industrial policy and supervises its progress. He has authority over the heads of outside departments of Telecommunications;

The Directorate for Personnel and Personnel Relations includes the Personnel Relations Department.

The director of personnel and personnel relations is responsible for personnel policy (statutes, recruitment, promotion, wages, working conditions, discipline, pensions) and for personnel and medical affairs.

The Directorate for the Budget and Accounting

The director of the budget and accounting assures the preparation of budget documents submitted to the Parliament. He manages the procedures for formulating the finance law draft, and prepares the regulatory decisions necessary to execute the approved budget. He has authority over the central accounting administrator and regional accounting administrators.

The General Inspectorate

The General Inspectorate is directly responsible to the authority of the minister. It is charged with a general mission of providing information to the minister, and is entrusted by him with missions of control, investigation, study, or representation. The General Inspectorate can also be assigned missions of investigation and control by directors general, the director of personnel and personnel relations, and the director of the budget and accounting.

The Committee for Higher Education

The Committee for Higher Education has the responsibility of defining the general orientation of PTT higher education, and of establishing its goals. He examines budget proposals and education programs.

Outside Administrative Services

The structure of the outside administrative services includes regional directorates, departmental Post Office directorates, special services, and the directorates of overseas departments.

Regional Directorates

The metropolitan territory is divided into 19 regions: the Ile-de-France region, as well as 18 provincial regions headquartered in Amiens, Bordeaux, Chalons-sur-Marne, Clermont-Ferrand, Dijon, Lille, Limoges, Lyon, Marseille, Montpellier, Nancy, Nantes, Orleans, Poitiers, Rennes, Kouen, Strasbourg, and Toulouse.

The provincial regional services include:

The Post Office Directorate (DRP), under the authority of a regional post office director;

The Telecommunications Directorate (DRT), under the authority of a regional telecommunications director.

The regional directors are secondary directors. Delegated echelons, called operational directorates (DOP), are created within large regional directorates.

There are currently four DOPs (the Marseille and Nice DDPs of the Marseille DRP, and the Lyon and Grenoble DOPs of the Lyon DRP); as well as six DOTs (telecommunications operational directorates) (the Nice, Marseille Littoral, and Provence-Alpes DOTs of the Marseille DRT, and the Grenoble, Lyon Intra-Muros, and Lyon Extra-Muros DOTs of the Lyon DRT).

The Ile-de-France region has a special organization. The services of this region include:

The postal services of the Ile-de-France region: the Paris Post Office Directorate; the Paris Region Post Office Directorate (extra-muros); the Directorate for Mobile Services (this directorate is responsible for mail distribution through the mobile offices operating on SNCF [National Railways]; the directorates for mobile offices on north and east, southeast, and southwest lines; as well as the Directorate for Specialized Sorting Centers and of Mobile Offices for the West, which are attached to it; and the Directorate for the Paris Regional Centers (this directorate manages the postal check and National Savings Bank centers of Paris, as well as the Post Office Regional Center for Information Processing).

The telecommunications services of the Ile-de-France region: the Telecommunications Delegation of the Ile-de-France Region, the Paris Telecommunications Directorate, and the Paris Region Telecommunications Directorate (Suburban). The Paris Telecommunications Directorate has two DOTs named Paris-Sud and Paris-Nord-Est; the Paris Region Telecommunications Directorate (Suburban) has the three DOTs of Evry, Melun, and St-Quentin en Yvelines.

The Directorate for Means of Transportation. This directorate manages the automotive service for the Paris region, and for the territory as a whole, is responsible for post office railway rolling stock, for supervising manufacturing in plants, and for receiving road transportation equipment.

The Directorate for Joint Personnel Services.

The Departmental Post Office Directorates. Under the authority of the regional post office director, a director is installed at the head of each department. This director has broad initiative in directing all bureaus and postal services of the department.

Special Services. In addition to the special services of the Ile-de-France region (Directorate of Mobile Services; Directorate of Regional Centers; Directorate for Means of Transportation; Directorate for Joint Personnel Services), the outside administrative services include the nation-wide special services described below:

The National Center for Telecommunication Studies (CNET). Acting on behalf of various interested ministerial departments, it is responsible for scientific research and general application studies concerning primarily telecommunications.

The Department for Technical Control of Telecommunications. This department is responsible for the technical control of telecommunications equipment throughout the territory, and for approving the receipt of this equipment from plants and at work sites.

The Directorate for Supply and for Telecommunications Shops. This directorate is responsible for the supply, manufacture, repair, and installation of the material required for activities falling under the jurisdiction of the General Directorate for Telecommunications.

The Directorate for Post Office Supply. This directorate is responsible for supplying and distributing the materials and supplies required on one hand by the General Directorate of the Post Office, and on the other hand by all its departments, in the form of forms and envelopes, and clothing items.

The Directorate for Stamp Printing. Its responsibility is to manufacture stamps and of fiduciary instruments; it works for both French and foreign administrations.

The Directorate for the National Network of Telecommunications. It manages the operations and maintenance centers of the national network of telecommunications.

The Directorate for the International Network of Telecommunications. This directorate is responsible for the flow of international telecommunications traffic.

The National Department for the Publication of Telecommunications Directories. This department is responsible for the writing, publication, and distribution of directories of subscribers to the services offered by telecommunications.

The Pension Administration Department. Its responsibility is to apply the legislation and regulations concerning retirement pensions and disability payment.

The Department for Industrial Psychology. Its responsibility is to organize psychological tests for personnel selection and professional orientation.

The Department for Motion Pictures and Exhibits. This department is responsible for producing motion pictures and exhibits relating to the activities of the Post Office and Telecommunications.

The Directorate for Higher Administrative Education. Its mission is to provide the initial and continued training of high administrators and of category A personnel, other than those with a technical vocation. It combines the Higher National PTT School and the National Institute for Administrative Personnel.

The Directorate for Higher Technical Education. Its mission is to provide the initial and continued training of high level personnel with a technical background. It combines the Higher National Telecommunications School, the Bretagne Higher National Telecommunications School, and the National Institute for Technical Personnel.

The heads of special departments are secondary directors.

#### The Overseas Departments

The directors in charge of the overseas departments (Guadeloupe, Guyane, Martinique, Reunion) are attached directly to the central administration and are secondary directors.

#### Operational Departments

The operational departments are attached either to regional directorates, or departmental post office directorates, or to special departments. They include:

The collection from normal post office operations and from secondary establishments attached to them (branch collections, collection-distribution, postal agencies, postal correspondents).

Commercial telecommunications agencies.

Specialized centers among which are the mail sorting centers, the postal checks centers, the centers for money order control, the National Savings Bank centers, the principal centers for telecommunications operations, the subdivisions of telecommunications lines, the operating centers of the National Network of Telecommunications, the radio-electric centers, the maritime radio centers, the centers for space telecommunications, the cable ships, the centers for underwater telecommunications, the regional accounting agencies, the regional centers for post office information processing, and the regional centers for telecommunications information processing.

## Organization Chart of the PTT Administration

Prepared by SIRP (Information and Public Relations Department), 20 Avenue de Segur, 75700, Paris, Tel. (1)566.22.22, Telex 25310

1. The Secretary of State and his cabinet
2. Bureau of the Cabinet
- 2A. Information and Public Relations Department
3. General Directorate of the Post Office
4. Directorate for Commercial Activities
5. Directorate for Postal Services
6. Directorate for Financial Centers and Information Processing
7. Directorate for Equipment and Transportation
8. Budget, Planning, and Accounting Department
9. Personnel Department
10. International Affairs Department
11. Directorate for Personnel and Personnel Relations
12. Personnel Relations Department
13. Committee for Higher Education
14. Directorate for the Budget and Accounting
15. Central Accounting Agency
16. General Directorate for Telecommunications
17. Directorate for Production
18. Directorate for Commercial Affairs
19. Directorate for Industrial and International Affairs
20. Programs and Financial Affairs Department
21. Personnel Department
22. General Inspectorate
23. Delegation for the Ile-de-France Region
24. Directorate for Higher Administrative Education
25. Directorate for Higher Technical Education
26. Directorate for Paris Post Office
27. Directorate for Paris Post Offices (Suburban)
28. Directorate for Paris Regional Centers (2)
29. Directorate for Mobile Services
30. Directorate for Means of Transportation
31. Directorate for Stamp Printing
32. National Security Inspection Service
33. Directorate for Post Office Supply
35. Pension Administration Department
36. Directorate for Joint Personnel Services (3)
37. Department for Work Psychology
38. Delegation to the Ile-de-France Telecommunications
39. Directorate for Paris Telecommunications (1)
40. Directorate for Paris Telecommunications (Suburban) (1)
41. Directorate for Supply and for Telecommunications Shops
42. Directorate for the National Telecommunications Network
43. National Center for Telecommunication Studies
44. Department of Technical Services for Telecommunications
45. National Department for the Publication of Telecommunications Directories
46. Directorate for the International Network of Telecommunications

47. Department for Motion Pictures and Exhibits
48. Regional directorates for provincial post offices (1)
49. Regional directorates for provincial telecommunications (1)
50. Directorates for mobile offices
51. Departmental Post Office directorates
52. Transportation centers and shops for the Ile-de-France region
53. Sorting centers attached to mobile offices
54. Mobile offices
55. Post Office collections
56. Sorting centers not attached to mobile offices
57. Road mobile offices
58. Transportation Department centers and shops
59. Regional centers for Post Office Education
60. Provincial postal checks centers
61. Money order control centers
62. Provincial CNE (National Savings Bank) centers
63. Transportation Department regional centers
64. Work psychology centers
65. Regional centers for Post Office information processing
66. Regional accounting agencies
67. Regional centers for Telecommunications information processing
68. Commercial agencies for Telecommunications
69. Principal operations centers
70. Lines subdivisions
71. Telecommunications education centers
72. Maintenance centers for cables of the national network
73. Operation centers of the national network
74. Regional Center for Telecommunications Information Processing
75. Centers for underwater telecommunications and cable ships
76. Centers for radio, maritime radio, and space telecommunications
77. [Illegible in text]
78. Secondary establishments

- (1) DOPs and DOTs, delegated echelons of regional directorates, have been created in some regions (only?) [illegible in text]
- (2) The Directorate of the Paris Regional Centers manages the postal checks and CNE centers of Paris, as well as the Regional Center for Post Office Information Processing
- (3) The Directorate for Joint Personnel Services manages the personnel services of the Ile-de-France region
- (4) The responsibility for the Regional Center for Post Office Information Processing is entrusted to the Regional Accounting Agent

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CSO: 5500

FRANCE

BRIEFS

POWER INCREASE AUTHORIZATION--The [French] Government is preparing to authorize Sud-Radio [broadcasting station] and Radio Monte-Carlo to increase considerably the power of their transmitter. [Text] [Paris LE POINT in French 10 Oct 77 p 55]

CSO: 3100

END