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TELECOMMUNICATIONS POLICY,
RESEARCH AND DEVELOPMENT

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WORLDWIDE REPORT
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 280

CONTENTS

ASIA

BRUNEI

New Earth Satellite Station Has Transmission Capability
(BORNEO BULLETIN, 11 Jun 83) 1

INDONESIA

Second Generation Satellite Placed in Orbit
(NEW STRAITS TIMES, 21 Jun 83) 2

KAMPUCHEA

Briefs
KPNLF Radio Station 3

NEW ZEALAND

New Maritime Satellite Links Ship to Shore
(THE EVENING POST, 24 May 83) 4

PEOPLE'S REPUBLIC OF CHINA

China Develops International Communication
(Gao Xinzong; DIANXIN JISHU [TELECOMMUNICATION TECHNOLOGY],
No 5, 1983) 5

Anhui Holds Meeting, Runs Center on Radio-TV Work
(Editorial Report; Hefei Anhui Provincial Service,
2 Jul 83) 13

Hubei Radio on Broadcasting, Television Tasks
(Hubei Provincial Service, 24 Jun 83) 15

Quizhou Radio, Television Work Meeting Concludes (Guizhou Provincial Service, 1 Jul 83)	16
Briefs	
Radio Broadcasting Meeting	17
Liaoning Semiautomatic Dialing	17
Communications in Shanghai	18
THAILAND	
Briefs	
Television Relay Station	19
VIETNAM	
Vung Tau-Con Dao Broadcasting Station Begins Transmission (QUAN DOI NHAN DAN, 16 May 83)	20
LATIN AMERICA	
BOLIVIA	
Briefs	
Concern Over Radio Station	21
BRAZIL	
Economic Crisis Will Not Affect Domestic Satellite Project (Eliana Lucena; O ESTADO DE SAO PAULO, 19 Jun 83).....	22
JAMAICA	
Improved Radio Links for Emergency Situations Studied (THE DAILY GLEANER, 14 Jun 83)	24
NEAR EAST/SOUTH ASIA	
INDIA	
Program for World Communications Year Told (THE TIMES OF INDIA, 18 May 83)	25
Briefs	
Doordarshan Television Aid	26
ISRAEL	
IDF Radio Expands Military Programming (MA'ARIV, 31 May 83)	27

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

Briefs	
TASS-ANA Telex Line	28

SUB-SAHARAN AFRICA

NIGERIA

Briefs	
Gongola State TV Transmitters	29

SOUTH AFRICA

Nation's Role in Technological Revolution Explored (David Canning; THE DAILY NEWS, 7 Jun 83)	30
Future Development of Television Discussed (Lawrence McCarney; SUNDAY TIMES, 5 Jun 83)	32
Rosy Future Predicted for Electronics (Simon Willson; RAND DAILY MAIL, 7 Jun 83)	34
Development of Videotext Information Services Planned (Duncan Collings; THE STAR, 29 Jun 83)	35
Television Transmission Time To Be Extended (Zanne Greyvensteyn; THE CITIZEN, 8 Jul 83)	37
Briefs	
SPK Systems	38
Volkskas Buys IBM Gear	38
HKC Switches to CPM	39
Plug-Compatible Manufacturer	39
TV One's Colored Announcer	39
Micro Computer Market Explosion	40

ZIMBABWE

Briefs	
Contracts With TASS, ADN, BTA	41
Microwave Electronic Equipment	41

WEST EUROPE

EUROPEAN AFFAIRS

Nordic Ministers Meet To Discuss Telecommunications Issues (Mauritz Edstrom; DAGENS NYHETER, 23 Jun 83)	42
--	----

Briefs		
Norway, Austria Join EUTELSAT		44
FINLAND		
Cable Television, Tele-X Satellite Are Major Policy Issues		
(Hannele Tulonen; HELSINGIN SANOMAT, 13 Jun 83).....		45
FRANCE		
Briefs		
Fiber Optics Research		52
Data Transfer Device Developed		52

NEW EARTH SATELLITE STATION HAS TRANSMISSION CAPABILITY

Kuala Belait BORNEO BULLETIN in English 11 Jun 83 p 15

[Text]

BRUNEI is now able to project its image across the world — via a new earth satellite station at Telisai.

The \$14.6 million station, which came into service recently, will enable the state's independence celebrations, scheduled to begin on February 2 next year, to be transmitted to overseas television networks.

It would have been hard to have found a more fitting time for the new station to become operational.

The system opened on May 17, a date observed throughout the world as World Telecommunications Day, commemorating the foundation of the International Telecommunications Union. The union is a United Nations body which makes recommendations on all matters concerning international communications.

And this year has been nominated by the United

Nations as World Communications Year.

Brunei's new station has widened the horizons of its telecommunications capabilities.

Dr Koichi Irie, the satellite communications engineer for the project, said: "Telecommunications traffic will be much improved. In addition, Brunei will, for the first time, have transmission capability.

"The original station is only capable of receiving television programmes by satellite."

The contractor for the project is a Japanese company, Mitsubishi Electric Corporation. Work began in April last year.

Some of the support services and civil engineering have not yet been completed by the firm, which had a one-year contract.

Dr Irie said the new station has substantially increased the telecoms facilities to Hongkong, Singapore, the United Kingdom and the Netherlands — the busiest telecoms routes for Bru-

nei.

The expansion will cut down significantly, the waiting time for making telephone calls to these places.

Officials said the original satellite station at Telisai, known as a Standard B station, was "completely saturated" — requests from overseas for additional telecoms circuits, were being turned down because of the full load.

The new Standard A station will also provide data communications facilities.

The officials said there has been a big increase in the demand for this service from airline booking offices, banks and major business organisations, but the B station was unable to meet requirements.

Telisai technicians have been able to maintain good quality TV reception through the original station, and they are confident that the service will be enhanced even further by the introduction of the new system.

The difference, in terms

of size, between the two satellite dishes which provide the antennae, is immediately apparent to visitors to Telisai.

The new dish is 32 metres (105 feet) in diameter and completely dwarfs the B dish alongside which measures only 13 metres (43 feet).

There is a busy time ahead for Telisai's TV reception facility. Confirmed bookings for satellite time run right into 1985. These include coverage of many overseas religious functions connected mainly with the annual Hajj to Mecca.

No definite arrangements have been made yet to transmit Brunei's independence celebrations overseas, the Bulletin was told.

SECOND GENERATION SATELLITE PLACED IN ORBIT

Kuala Lumpur NEW STRAITS TIMES in English 21 Jun 83 p 11

[Text]

JAKARTA, Mon. — The Palapa-B placed in orbit over Indonesia by the space shuttle *Challenger* is the second generation of a family of domestic satellites that revolutionised communications in Indonesia.

Palapa is the name of a fruit confection highly prized by Gajah Mada, hero of the 14th-century Majapahit kingdom. Legend says he vowed to abstain from eating it until all of what is now Indonesia was unified. In modern usage a vow is also known as a *palapa*.

Two earlier models of the barrel-shaped satellite went aloft on rockets in 1976 and 1978. Palapa-A had a projected life of seven years and was equipped with only 12 transponders — devices that receive incoming signals, amplify them and relay them to the ground.

Palapa-B has 24 transponders and an expected life of eight years. A second Palapa-B is scheduled to be orbited as back-up.

The system was costly and not without its crit-

ics, many of whom wanted the money used for social services. About US\$53 million was needed to orbit the two Palapa-A satellites which were built by Hughes Aircraft Company at El Segundo, California. The 40 ground stations were priced at US\$1 million each.

Officials said Indonesia will pay US\$74.5 million for the two Palapa-B models. NASA collected US\$11 million dollars for Sunday's delivery at the equator 35,700km over Kalimantan.

Most of the criticism faded as soon as the original Palapa-A was switched on. Coupled with a completely revamped telecommunications network on the ground, the satellite helped knit together this sprawling nation which straddles the equator across 5,120km in three time zones.

About 6,000 of Indonesia's 13,677 islands are inhabited by a total of 150 million people, some sophisticated city dwellers and some barely out of the Stone Age.

Telephones

In the early 1970s, when Jakarta had five million people and only 50,000 telephones, foreign businessmen made weekly "phone flights" to Singapore because they could not otherwise contact their counterparts overseas. Business firms hired "phone boys" whose sole task was to try to get a dial tone on the office telephones.

Thanks to Palapa it is now possible to direct-dial all major cities. International calls are almost as simple. Companies lease private satellite lines to link scattered facilities.

The Philippines, Malaysia and Thailand also leased capacity on the back-up Palapa-A for their domestic needs.

Perhaps the greatest impact was caused by satellite delivery of television programmes to the remotest villages. The Government banned TV advertising two years ago because commercials for consumer goods available to the urban "haves" and not to the rural "have-nots" might spark increased migration to the cities. — AP

CSO: 5500/8508

KAMPUCHEA

BRIEFS

KPNLF RADIO STATION--A high-level military source told MATUPHUM on the evening of 10 July that the Kampuchean People's National Liberation Front of Premier Son Sann is preparing to set up a radio station: "Voice of the Kampuchean People." This station is located at a secret site in Kampuchea. It earlier carried out a trial transmission for 1 week. During the trial transmission it broadcast three times a day on the AM band in the Cambodian language only. No information is available as to when it will begin broadcasting officially. The source said the station's transmission power will limit its reception radius to no more than 100 km. Part of the station's equipment was donated by the Singapore Government at the end of 1982. More equipment is needed to increase the transmission power. [Excerpt] [BK110738 Bangkok MATUPHUM in Thai 11 Jul 83 p 12]

CSO: 5500/4352

NEW MARITIME SATELLITE LINKS SHIP TO SHORE

Wellington THE EVENING POST in English 24 May 83 p 8

[Text]

A \$41.9 million contract signed between a satellite organisation and the European Space Agency could have important consequences for New Zealand shippers.

The organisation is the International Maritime Satellite Organisation which New Zealand is a member of along with 37 other countries.

The organisation has just signed a contract with the space agency to lease the 40-voice-channel capacity of a maritime communications satellite called Marecs B2 which is to be launched next year and positioned over the Pacific Ocean.

Worldwide

When it is in place over the Pacific, New Zealand will be able to communicate much more directly with ships that have the appropriate equipment anywhere on the globe, said the Post Office's director of telecommunications, Mr Andy Turpie.

"We can then contact ships anywhere on the globe with much more sophisticated forms of communication," Mr Turpie said.

The Post Office would connect the New Zealand user, who might want to communicate onward cargo forwarding instructions, to the ship by telephone link

and satellite through the earth station of another country. New Zealand does not have its own earth station.

At the moment communication with ships is done by radio, which Mr Turpie says has the problems of distance; ships get out of range, and reliability, conditions are not always good enough for radio contact.

To be able to use the system, ships would need to be equipped with a "ship's installation," which means a dish antenna and transmitter. This could cost upwards of \$20,000, Mr Turpie said.

The new maritime communications satellite, Marecs B2, will provide the capacity for telephone, telex, data and facsimile services for the shipping and offshore industries around the world says a statement from the satellite organisation.

There are 1757 users of the system, according to the organisation including oil tankers, drilling rigs, cargo and container vessels, fishing boats, ice breakers, yachts and passenger liners.

CHINA DEVELOPS INTERNATIONAL COMMUNICATION

Beijing DIANXIN JISHU [TELECOMMUNICATION TECHNOLOGY] in Chinese No 5, 1983 p 1-3

[Article by Gao Xinzhong [7559 2502 1813]: "China's Developing Communications"]

[Text] Our international communication system is the important means by which the Chinese people communicate with the people of other countries. In recent years, along with a series of Chinese policies of openness to the outside and creativeness in domestic economics, the need of communication in China has been on the rise, especially the need to develop international communication.

By the decree of the supervising departments, Beijing and Shanghai are the principal entry and exit ports for international communication. In addition, border cities such as Guangzhou and Shenyang also have point-to-point communication stations. When a communication station on the domestic circuit needs to conduct international communication, the connection to the international circuit is made through one of the international stations and the specific connection is worked out by the responsible station of the Ministry of Telecommunication. In addition to the traditional international public telegraph and telephone, the following services have been added to the international communication in recent years: international private telegraph, phototelegraph, facsimile telegraph, data communication, television rebroadcast and the transmission of graphical information. The advantages of international communication in China today are the rapid speed of development and the high economic efficiency, but the disadvantages are that the technology and equipment are outdated, the efficiency is low, the volume is small and the waiting time is too long and the present system cannot satisfy the users' needs. In the space below we shall discuss, in terms of communication methods and types of services, the present situation and the trend of development of China's international communication.

I. Communication circuits

1. Satellite communication

Satellite communication is one of the principal modes of international communication in China. From 1973 to 1974 China built three satellite communication ground stations in Beijing and in Shanghai which provided

China's direct lines to more than 30 countries and regions via INTELSAT. The two ground stations in Beijing can enter the global international communication network via the Pacific INTELSAT and the Indian Ocean INTELSAT; the ground station in Shanghai can only link with the Pacific INTELSAT. The business of international satellite communication has been increasing at an average annual rate of 20-25 percent, and the international communication satellite has also evolved from the fourth generation satellite to the four and half generation and to the fifth generation.

The number of repeaters has also increased from 12 in the fourth generation to 27 in the fifth generation. The channel volume has increased from 4000 channels in the fourth generation to 12,000 channels, plus two channels for color television rebroadcasting. To satisfy the increasing communication needs, the International Satellite Organization is in the process of ordering the five and half generation satellite with 15,000 channels and is presently developing the sixth generation communication satellite with an one-way volume of 40,000 channels, which will be in service in the late 1980's. As the international communication evolves through the generations, corresponding technical modifications must also be made at the existing ground stations. According to the needs of business development, the volume of two-way communication may also be expanded. Today almost all China's telegraph and telephone circuits in international communication are provided by satellites.

2. Submarine cable communication

In October 1976 a 872 kilometer submarine cable was installed from Shanghai to Kumamoto, Japan. The communication system based on this cable is known as the CS-5M. In this system, 1 inch outer diameter cables are used, the maximum frequency is 5 MHz, there are 480 telephone channels, the relay repeater stations are 13.65 kilometers apart and an equilibrator is installed after every 15 repeater stations. It is a medium distance, medium capacity system. Since the ocean between China and Japan is mostly shallow (less than 200 meters deep) and the water temperature gradient is large, automatic temperature gain control relays were used to avoid voltage fluctuations due to temperature gradient. After the opening of the China-Japan cable link, the circuit has been partially connected to Beijing and Guangzhou via Shanghai. But due to external factors, communication in this system was interrupted a number of times.

Besides the two more advanced methods of communication, China also has some microwave, wired and wireless shortwave circuits for international communication on a small scale.

II. International long distance telephone

In 1981 China opened 343 direct telephone lines to 34 countries and regions; among these, 91 lines (exceeded 100 lines in 1982) to 27 countries and regions are connected to Beijing. From 1977 to 1981, the average annual rate of increase of Beijing's international long distance telephone

business was 43.4 percent, much higher than the growth rate of the domestic long distance telephone business. China's present international long distance telephone service relies mainly on a manual delay base switching mode of operation, which suffers from a long waiting time and a low switching efficiency. In the last two years outgoing semiautomatic circuits to Tokyo, New York and Hong Kong have been opened in Beijing, Shanghai, Guangzhou and incoming semiautomatic circuits have also been tested. The waiting time has been reduced from 20 minutes in the manual system to 10 minutes in the newer system and users welcomed the improvement. Callers of international telephone, especially foreign callers, often request to cancel the call if the waiting time is more than 10 minutes. The outdated long distance telephone facility in China has therefore seriously affected the development of international trade and tourism. Semiautomatic switching is urgently needed and program controlled telephone exchange equipments should be acquired as soon as possible so that direct dialing of international long distance calls may be placed and the waiting time may be reduced to less than 5 minutes.

III. International public telegraph service

The international telegraph service is one of the oldest communication services and it still has some room for development. In the last few years the annual rate of growth of the international telegraph exchange volume at the Beijing station has been 5 to 6 percent. In places open to subscriber's telegraph service such as Shanghai, Guangzhou and Tianjin, the amount of international public telegraph business has partially shifted to the subscriber telegraph service. Today China's international public telegraph still uses the old paper tape semiautomatic point-to-point method which is labor intensive and inefficient and is hampered by the long repeating time. Most foreign countries adopted the program controlled automatic repeating system in the early 1970's. To rectify the backward situation, the international stations should accelerate technological improvements and strive for automatic repeating as soon as possible in order to reduce the repeating time from the present 30 minutes to 3 minutes and to eliminate the various kinds of human errors.

IV. Subscriber's telegraph

Subscriber's telegraph is a new mode of communication in China. Using teleprinters installed at locations specified by the subscribers, the calling subscriber establishes direct communication with the called subscriber via a teleprinter exchange. Subscriber's telegraph has such advantages as high speed, almost real time, low cost and convenience and has now become an important mode of international communication. Today more than 1.4 million subscribers in nearly 200 countries and regions are communicating on the subscriber's telegraph network and the connection time is only 20 seconds or so.

China started to use the subscriber's telegraph in 1959. Since 1981 the average annual rate of growth of the subscriber's telegraph business in Beijing was 70.2 percent and it has been going up over the years. Today

automatic exchanges have been installed in Beijing, Shanghai and Tianjin and manual exchanges have been installed in Guangzhou, Dalian, Qingdao, Nanjing and Hangzhou. A total of 14 cities now have telegraph exchanges. There are currently 800 subscribers and more than 300 international direct trunklines have been established with some 30 countries and communication is available to more than 100 countries and regions.

In 1979 Beijing first developed and installed a 1000 line (400 in-out trunklines and 600 subscriber lines) subscriber's telegraph automatic exchange and achieved automatic switching in international telegraph. A DJS-19 small computer (both the computer and the softwares were developed by the Chinese) has been used to make monthly bills for the subscribers and for cost sharing accounting with the opposite station. Up to now, more than 260 trunklines and 520 subscribers have been opened. Together with connections to the 100 automatic exchanges in Tianjin and other exchanges, it is already operating with a full load. But the number of subscribers on the waiting list has been remaining in the neighborhood of 130 for the last few years. The main obstacles in the development of subscriber's telegraph today are the severe shortage of trunklines in the city telephone system, the inadequate volume of the exchange facility and the lack of low noise and high quality electronic teleprinters. Shanghai and Beijing have now developed program controlled subscriber's telegraph automatic exchange systems. Wuhan, Dalian, and Qingdao will also adopt automatic exchange. Substantial progress in terms of volume and automation may be expected in the next 2-3 years. Beijing is also planning to import a 2000 line international subscriber's telegraph exchange for domestic and international communications in and out of Beijing. When that happens, the shortage of trunklines in the municipal telephone system and the shortage of teleprinters will become acute problems. Multiplexing of the trunklines will bring great economic benefits; for example, a pair of ordinary city telephone trunkline running between the Beijing Telegraph Building and Xinqiao Hotel has 12 channels, 8 for international telephone use and 4 for telegraph use. It is open to 35 subscriber's telegraph and 11 international telegraph lines are available for rent.

V. Facsimile communication

Beijing and Shanghai have had phototelegraph communication with some countries and regions since 1950's. Such communication was conducted mainly by shortwave and wired circuits in the early 1970's and mostly by satellite in the mid-1970's. Now China has phototelegraph links with 45 countries and regions and has facsimile telegraph communication with Japan. About 1300 photos are transmitted between China and Japan every month. The speed of photographic facsimile transmission is extremely slow, it takes about 8 minutes to transmit an A4 size page of document, graph or photograph (equivalent to a sextodecimo size page).

In November, 1982 Beijing began high speed digital facsimile transmission (e.g., type III transmission) with Tokyo, Osaka, Kobe, Nagoya and Yokohama in Japan using bandwidth compression and digital coding techniques to reduce the length of the signals. It takes only 30 seconds to transmit an

A4 size page of document or graph. The modem operates at four transmission speeds: 2400, 4800, 7200 and 9600 bits per second. In the automatic mode, the speed automatically adjusts itself according to the error rate of the circuit. Today the communication between Beijing and Tokyo can be done at 7200 or 9600 bit/sec and the rate is usually 2400 bit/sec with other cities in Japan.

The type III facsimile transmitter in Beijing is connected to the special business automatic exchange of the long distance station and the international circuit. The international semiautomatic mode is used in calling the opposite party and both transmitters have their special telephone numbers. When the communication is busy between Beijing and Tokyo, direct lines (there are 4 of them) may also be used. Compared to phototelegraph, such facsimile telegraph is simpler, cheaper, and more efficient. Type III facsimile transmitters will be used in Shanghai and other cities in 1983 to handle international service.

VI. Digital communication

Because of the widespread use of computers, digital communication has become a rapidly developing new business in international communication. Many countries and regions have established data banks for the subscribers to share the resources.

International data network is the principal method in today's international digital communication. In 1980, a Reuter News Agency medium speed digital information transmission system was set up in Beijing, the system has established centers in London, Frankfurt, Zurich and New York. Hong Kong is the regional center in southeast Asia and Beijing is a transmission center connected to the Hong Kong center. According to the type of services, there are three kinds of terminals: (1) Monitor (1200 bps), mainly for the transmission of monetary, financial information and news. (2) Video Master (150 to 1200 bps), mainly used in transmitting commodity, stock and monetary information in Europe and in the U.S. (3) Ticker (75 to 300 bps), a low speed data system exclusively used for the transmission of economic news, through which the subscribers receive economic news only a few minutes old. The modem between Beijing and Hong Kong is 4800 bps. The signals in the Hong Kong data bank are partly from local sources and partly from data banks in London and other places. The data transmission between Hong Kong and London is carried out at a rate of 9600 bps. The data bank consists of a PDP 11/34 computer and peripherals such as magnetic disks and tapes. The system is a dual machine system and operates 24 hours continuously. Circuit control equipment in Beijing is installed in the telegraph building and includes a model T16 interlace-scan, time-division digital multiplex. The latter is capable of multiplexing a large quantity of low speed data (up to 16 channels) for transmission in a medium speed circuit (4800 bps). Equipments currently used in Beijing include asynchronous 1200 bps monitor, asynchronous 1200 bps video master, 75 bps asynchronous recorder and 50 bps engineering service typewriter. The subscribers are equipped with modem, PDP 8M small computer, video terminal and teletypewriter.

At this time the Ministry of Foreign Trade and the Bank of China in Beijing and the Tianjin branch of the Bank of China are using the digital information look-up system just described. In the two years of service, customers felt that the convenience and time-saving features of the system have contributed to improvements in foreign trade and financial management and considerable economic benefits have been derived from it.

In addition, a low speed data transmission system has also been made available to subscribers in Beijing. This system may request data from the ITT World Communications Company through the existing 50 baud international subscriber's telegraph network. A small number of users are currently using this service.

VII. International private communication systems

Private communication systems are used by customers with very large business volume located in specific areas. There are three types of private communication systems: (1) Point-to-point international telegram and telephone rental circuits used by diplomatic organizations, news agencies, weather services and large commercial firms. The business volume is large and information is sent to certain fixed locations. (2) Multiple user interconnecting system. In this system several users in different locations share the same circuit in transmitting signals such as the high speed digital circuit shared by Xinhua News Agency and the Common News agency of Japan for information exchange between Beijing and several users in Tokyo. Another example is the digital private line set up by the Japan Embassy in China to communicate with the Japanese Foreign Ministry in Tokyo. These private lines may transmit data, high speed facsimile and general telephone signals. The circuit going through the Pacific international communication satellite has time-delayed amplitude balancer and provides high speed data transmission (9600 bps), bandwidth compressed digital facsimile type III communication (9600, 7200, 4800, and 2400 bps) and the error rate is lower than 1×10^{-5} to 2×10^{-6} . (3) International private exchange system. Some customers wish to expand their private lines into a network to accommodate their expanding business activities and would like the communication department to provide international private communication exchange system, that is, information storage and repeat systems. On the international circuit such services are very common. Some company rents the entire system and some information interchange systems are rented by and shared in use by several companies. The customers may form closed user groups that do not communicate with other users. The international private communication exchange system provided by Beijing uses a 8086 microprocessor 64 channel telegram and text storage and relay system (16 channels at the present) and operates in the single machine mode. Since this type of service provides the users with timely communication with branch offices in various parts of the world, it has an important position in international communication.

VIII. Television rebroadcast and graphical data service

Because of the advances in satellite communication technology, rebroadcasting of color television has become an important part of international communication. Since there are different systems of color television (today there are three types: PAL, NTSC and SECAM), system exchange facilities are needed in achieving the rebroadcasting of television programs.

Graphical data service is also a new service in China's international communication. Beijing has a graphical data center which records programs in politics, military, sports, arts, and news broadcast by various countries everyday and provides such programs to different units. The new service of television rebroadcasting and graphical data is expected to undergo great developments in the next few years.

Today some weaknesses exist in China's international communication; for example, the communication capacity is low, equipments are outdated, inadequate in number and poor in quality, and the development of new services and new technology is not keeping up with the users' needs. We should therefore adopt a policy that gives priority to the development of international communication and to provide domestic long distance services, municipal trunklines and technical equipments.

In the period of the sixth five-year plan, I believe the following problems should receive high priority:

1. International public telegraph

Automatic computer retransmission at major in-out stations of international communication should be realized as soon as possible so that the time for retransmitting a telegram may be cut from 30 minutes to 3 minutes.

2. International subscriber's telegraph

Program controlled time-division exchange should be used at major in-out stations, other cities may adopt distribution controlled electronic exchange so that a network-wide automation may be achieved and the waiting subscribers may gradually be taken care of.

3. International telephone

Program controlled exchange and PCM technology should be used at major in-out stations to partially achieve direct dialing. Other qualified stations may all use semiautomatic relay to reduce the average waiting time to 5 minutes or so and improve the overall circuit quality.

4. Facsimile communication

Type III facsimile transmitters should be installed at major incoming and outgoing stations, high speed facsimile service to qualified countries and regions should be expanded, including public and subscriber's facsimile transmission.

5. Data communication

In addition to the development of various private circuits and private networks, we should also experiment with international group exchange service and gradually establish an international public data network and open medium and high speed data communication.

6. Develop new services and new technologies

New technologies such as international communication network compatible with both digital and analog signals, Teletex data network, and composite digital communication network should be studied and planned in order to coordinate short term development with midterm and long term plans and to derive the maximum economic benefits.

9698

CSO: 5500/4164

ANHUI HOLDS MEETING, RUNS CENTER ON RADIO-TV WORK

OWO80336 [Editorial Report] Hefei Anhui Provincial Service in Mandarin at 1100 GMT on 2 July carries a 3-minute report on a provincial meeting on radio and TV work and another under-minute report on the provincial decision to establish a radio-TV center.

The report on the meeting reads: The 10th provincial radio and television work conference ended today. The meeting urged full scope for radio and television to play their role in building the two civilizations, as well as the building of radio and television undertakings with Anhui characteristics, focusing on propaganda work, to contribute to the modernization drive in Anhui. The meeting, which heard a report on the guidelines of the 11th National Conference on Radio and Television Work, studied, in the light of the actual situation in the province, the question of how to create a new situation in Anhui's radio and television work.

The meeting noted that, in spite of relatively inferior conditions, the province has made considerable progress and development in radio and television work since the 3d Plenary Session of the 11th CPC Central committee, achieving very great results. In carrying out propaganda, the radio, television and re-diffusion stations have adhered to the four fundamental principles for disseminating the guidelines of the 12th party congress. In disseminating policies, they have kept in line with the party Central Committee and contributed a great deal to the actual work by explaining the agricultural production responsibility system in particular. They have been producing an increasingly extensive impact on society with their work in disseminating the party's principles and policies, popularizing scientific and cultural knowledge, striving to serve the various trades and professions and meeting the people's needs in culture and recreation. Their work has won the welcome and support of their listeners and viewers. Relatively fast progress has also been made in the construction of facilities. A number of new radio and television transmission and relay stations have been built. These stations cover an ever-growing portion of the population in the province. The number of receiver and viewing means has jumped by a very large margin.

The meeting pointed out that the radio and television organizations are both journalist and propagandist facilities and management organs in themselves. But their central task is propaganda. Stressing the need for radio and television work to shift onto the track of propaganda as the central task, the

meeting pointed out that all technical, administrative and logistic support work must serve the task of propaganda. Comrades doing propaganda, technical and logistic support work should act in close coordination to create a new situation in radio and television work with their concerted efforts.

The meeting held that the party Central Committee's call for joint four-level efforts to run radio and television establishments and inter-area coverage is an important policy in speeding up radio and television development. It called on the province and various cities and counties to seriously carry out this policy, map out plans and strive, on the basis of the existing conditions, to bring about a new look in Anhui's radio and television work within the next 3 to 5 years.

Yang Haibo, deputy secretary of the provincial party committee, and Wang Houhong, head of the provincial party committee's propaganda department, attended the meeting and spoke to the participants.

The same service in the same cast carried the following under-minute report: It is learned from the 10th provincial radio and television work conference that the provincial party committee and people's government have decided to build a provincial radio and television center and incorporate this major construction project in the province's capital construction plan. The provincial party committee and people's government have also instructed the Provincial Bureau of Broadcasting Administration to draw up a concrete plan and an implementation program and submit them for examination and approval as quickly as possible. The planning, capital construction and other concerned departments are asked to give their vigorous support.

CSO: 5500/4173

HUBEI RADIO ON BROADCASTING, TELEVISION TASKS

HK250309 Wuhan Hubei Provincial Service in Mandarin 1100 GMT 24 Jun 83

[Station commentary: "Resolutely Carry out Reforms and Create a New Situation in Broadcasting and Television"]

[Excerpts] The provincial broadcasting and television work conference has successfully concluded. The conference proposed the targets for endeavor by the end of the century and measures for implementing them. Before 1986, we must make active preparations for the satellite launching, build four radio and television microwave links in the province, and start up the No 2 channel of Hubei Radio Station and also stereo broadcasting. We must get a good grasp of medium wave frequency modulation construction, complete the construction of Wuhan Guishan television transmitting tower, and prepare the construction of a color television central station. By that time, there will be a notable improvement in the province's radio and television transmission methods and a great improvement in transmission quality. Far more of the population will be covered. Apart from places with special difficulties, every county, commune and brigade will be able to receive broadcasts and every household and persons will be able to hear them. Over 90 percent of the population will be able to see television. Quite a number of places will have three radio and two or three television channels to choose from. We will initially form a radio and television propaganda network with Hubei characteristics.

The key to achieving this target for endeavor lies in the party committees and government at all levels strengthening leadership over broadcasting and television and strengthening the building of the broadcasting and television force.

Radio and television propaganda must uphold the socialist orientation and the four basic principles, spontaneously maintain political unity with the CPC Central Committee, and serve the building of socialist material and spiritual civilization and the party's central tasks at any given time. It must educate the people in patriotic, collective, socialist and communist ideology, and give them direction, confidence, courage, and strength.

CSO: 5500/4173

PEOPLE'S REPUBLIC OF CHINA

QUIZHOU RADIO, TELEVISION WORK MEETING CONCLUDES

HK030405 Guiyang Guizhou Provincial Service in Mandarin 2300 GMT 1 Jul 83

[Excerpts] The provincial conference on radio and television work concluded in Guiyang on 1 July after 8 days in session. This meeting was held under the care of the provincial CPC committee and government. Responsible comrades of the provincial CPC committee and government Zhu Houze, Xu Yijiang, and Xu Caidong attended the meeting. Comrades Zhu Houze and Xu Caidong made speeches. The participants seriously discussed the work report delivered by (Yang Dezheng), a responsible person of the provincial broadcasting and television department.

The meeting held: Under the leadership of party committees and government at all levels, Guizhou has scored notable success in radio and television work since the 3d Plenary Session of the 11th Central Committee. However, the state of the work in the province lags behind that of the nation as a whole; the work still fails to satisfy the demands of the cadres and masses or meet the requirements of building the two civilizations in the province. Reform is urgently needed.

We should integrate wireless with wired broadcasting and speed up the development of radio and television in the province. It is therefore necessary to build a good propaganda and technical force to meet the requirements of developments.

CSO: 5500/4173

BRIEFS

RADIO BROADCASTING MEETING--A meeting on exchanging radio broadcasting experience in nine provinces and autonomous regions in China's southwest and northwest areas was held in Guiyang from 20 to 30 June. In addition to representatives of radio announcers from the nine stations, representatives of radio announcers from the stations of Chongqing City, Chengdu City, Ziyong City, Tongchuan City, Wenshan Autonomous Prefecture and Xishuangbanna Autonomous Prefecture also attended the meeting. Representatives of the central station and the Beijing Broadcast Institute, and the announcer in charge of the Public Letterbox program of the Guangdong station were also invited to attend the meeting. The subject of the meeting was: How to successfully broadcast a special program. During the meeting, all the participants listened to program recordings of the central station and other fraternal stations and exchanged their experiences. Centered on the spirit of the 11th national conference on radio and television work, they held discussions on how to carry forward the good tradition in China's radio broadcasting, how to change the previously immutable radio broadcasting style, and how to establish the new style of announcers talking with listeners like friends and relatives so as to turn radio broadcasting into an effective weapon of the party and government, and a means of propaganda loved by the broad masses. [Text] [HK070635 Guiyang Guizhou Provincial Service in Mandarin 2300 GMT 20 Jun 83]

LIAONING SEMIAUTOMATIC DIALING--Beginning on 1 July, the Shenyang long-distance telephone call bureau in Liaoning will put into use a semiautomatic dialing system from Shenyang to Jinzhou and to Dandong. [Excerpt] [Shenyang Liaoning Provincial Service in Mandarin 2200 GMT 29 Jun 83 SK]

COMMUNICATIONS IN SHANGHAI--Using Chinese technology, the Shanghai Municipal Telegraph Station successfully developed China's first 64 channel repeating system. The system has been operating smoothly since it was put in service, 60 million retransmissions have been made within error and the speed is 10 times higher than before. The Shanghai station has also designed and developed China's first programmable telegraph exchange system using Chinese made computers; the utilization rate is 100 percent and the efficiency of communication has been improved 60 fold. The long distance station has succeeded in the development of semiautomatic terminals for long distance and international telephone calls. This provided the technology and equipment for semiautomatic dialing of domestic and international long distance calls. These international telephone equipments have been widely used in 7 circuits to Japan and the United States and have performed well. Using automatic control circuits made of transistors and small relays, the Shanghai Municipal Telephone Station developed a novel miniature automatic weather forecast device which is compact, economical in electricity usage, reliable and provides 24 hour around the clock service with a clear and pleasant voice. The telephone station has also applied computer technology and developed an automatic directory assistance system. Based on the unit to be located, the operator simply presses the keys and the telephone number appears on the television screen. The system is fast and accurate and has greatly reduced the labor intensity of the operators. China's first tunnel television monitor system has been developed jointly by the Institute No 1 of the Ministry of Telecommunication and the Shanghai Tunnel Management Office and the system is already in use in the Huangpu Jiang Tunnel. [Excerpt] [Shanghai JIEFANG RIBAO in Chinese 17 May 83 p 1] 9698

CSO: 5500/4161

THAILAND

BRIEFS

TELEVISION RELAY STATION--According to the director general of the public relations department, the department has submitted to the National Economic and Social Development Board a project to build a television relay station in Mae Hong Son Province. However, the department has realized the urgent nature of the project and has decided to set up a small microwave television relay station atop Kong Ngu mountain in Mae Hong Son. The department has also built buildings for stations under its education program network. These station buildings have been completed in Lampang, Khon Kaen, Songkhla, Bangkok, Ubon Ratchathani and Surat Thani. Transmitters are being installed in these buildings and transmission should commence by June 1983. [BK270422 Bangkok Domestic Service in Thai 0000 GMT 22 Feb 83]

CSO: 5500/4351

VUNG TAU-CON DAO BROADCASTING STATION BEGINS TRANSMISSION

Hanoi QUAN DOI NHAN DAN in Vietnamese 16 May 83 p 3

[Unattributed article: "Vung Tau-Con Dao Special Zone Brings Broadcasting Station Into Operation"]

[Text] The Vung Tau-Con Dao Special Zone has just completed the construction of the material-technical base of a broadcasting station and has begun daily broadcasting.

Working on the broadcasting station of Vung Tau City, the cadres and workers restored much old equipment and machinery and brought them into operation, and upgraded the broadcasting system to the subwards and villages. In addition to restoring everything from the station's control room to the machinery repair element, the broadcasting station of the Vung Tau-Con dao Special Zone has set up two relay stations at Con Dao and Long Son to help the people on distant islands keep abreast of the news.

5616

CSO: 5500/4349

BOLIVIA

BRIEFS

CONCERN OVER RADIO STATION--Buenos Aires, 7 Jul (AFP)--Official sources indicated here today that the Argentine Government is concerned over the high frequency radio station which Cuban and Nicaraguan technicians are currently setting up in Bolivia. This powerful radio station is being installed in El Mutun, south of Puerto Juarez, on the border with Brazil. The technicians in charge of the project are Cubans and Nicaraguans who came to Bolivia as advisers for literacy and agrarian technology campaigns. The sources explained that the station is due to start operating in August. [Excerpt] [PY080002 Paris AFP in Spanish 1705 GMT 7 Jul 83]

CSO: 5500/2086

ECONOMIC CRISIS WILL NOT AFFECT DOMESTIC SATELLITE PROJECT

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 19 Jun 83 p 30

[Article by Eliana Lucena from the Brasilia branch]

[Text] The secretary of planning and technology of the Communications Ministry, Arthur Alves Peixoto, said in Brasilia that the Brazilian domestic satellite project is not going to be affected by the economic crisis and that launching of the equipment is envisaged from February 1985. The funds for its construction and launching by the Spar-Hughes and Arienspace international consortiums are already guaranteed and almost half of the financing contracted has already been transferred from the financing institutions to the suppliers.

The domestic telecommunications satellite is being financed by five credit institutions from Canada, the United States and France for a total of \$369 million, approximately 190 billion cruzeiros. Of that total, about \$200 million or 103 billion cruzeiros will be applied to the project, including the supplying of two space units--one being a spare--and the control and telemetry stations, as well as its launching by Arienspace. The remaining money will be transferred to the Brazilian Government for other applications.

"The problem of the country's foreign debt did not affect the satellite project, drawn up according to the directives established by the Communications Ministry to undertake programs that guarantee an exporting counterpart to cover imported resources," the secretary declared. The program for installation of the Program Controlled Telephone Exchanges (CPA's) is being discussed within that same spirit."

The financing program for the satellite provides for a grace period of 3 years for beginning payment of the debt. Also included in the contract signed with the suppliers is the transfer of technology, a task that is already being carried out between the CNES, which is the French agency for space studies, and the Brazilian Space Activities Commission (COBAE).

Parallel with the project for supplying and launching the satellite, which will remain in a geostationary orbit in the Amazon, Brazil continues to promote the installation of ground stations to receive the signals. Including the private stations of the Globo and Bandeirantes television networks, there are already 60 stations in operation.

According to the secretary of technology, with reference to the launching, the government is not concerned about the performance of Arienespace because of the fact that two of the rockets it built failed in the launching of two satellites. "This week," he said, "the European Ariene L-6 rocket was launched successfully from the Kourou base in French Guiana and other missions were also successful."

How It Will Operate

When it goes into operation, the Brazilian satellite will make it possible to cover the national territory and, if there is interest on the part of other Latin American countries, the signals can be relayed abroad. For the present, according to the secretary of technology, none of those governments has expressed an interest to the Brazilian Telecommunications Company (EMBRATEL).

The satellite will be used for public telecommunications, as is already being done through the leasing of channels on Intelsat, for the transmission of television signals and it will also be able to promote extension of the national telecommunications system to points that are difficult to service, such as oil-field exploration and prospecting platforms, agroindustrial complexes, etc.

The satellite will give greater support to social-oriented services, including education, public health, and service to locales in a disaster situation. It may also be used for the formation of private networks for large users such as banks and public and private organizations of a regional or national level.

The satellite may also be used for the remote and simultaneous printing of newspapers and periodicals, for teleconferences, facsimile and videotext, collection of data, remote sensing, etc.

How Much It Costs

The Canadian-American Spar-Hughes consortium won the bid for supplying the Brazilian satellite last year after presenting a bid of \$16 million, about 8 billion cruzeiros, more reasonable than that of the French Aerospatiale. According to the bids presented, the basic prices of the satellites were as follows: Aerospatiale, \$90.3 million and Spar, \$86.3 million. Including the supplying of the control and telemetry stations, the figures were: \$147.5 million and \$131.1 million, respectively.

8711

CSO: 5500/2081

IMPROVED RADIO LINKS FOR EMERGENCY SITUATIONS STUDIED

Kingston THE DAILY GLEANER in English 14 Jun 83 p 2

[Text]

The radio communication system used in national disasters in Jamaica, and between the island and other countries, has been improved by the donation of VHF (Very High Frequency) equipment by the Canadian Government, through the Canadian International Development Agency (CIDA), to the Jamaica Amateur Radio Association (JARA).

The equipment, valued at \$45,000 includes seven repeaters, seven duplexers, 17 antennas, 10 link radios and a generator.

Shortly after he formally handed over the equipment to Mr. Nigel Hoyow, President of JARA, at the Red Cross, Arnold Road Headquarters, Wednesday night, Mr. David Reece, Canadian High Commissioner, exchanged greetings on the system with Mr. Ossie Murray, Jamaica's Consul General in Toronto. Mr. Reece also spoke to his daughter, Caroline, in Toronto.

A large number of 'hams' (amateur radio operators) attended the handing over ceremony, JIS also reported.

In accepting the gift, Mr. Hoyow said that the equipment enabled JARA to install a repeater system on VHF.

He said JARA has been liaising with the Office of Disaster Preparedness (ODP) to develop a communication system for use in national disaster.

"We are committed to provide the ODP with communications for at least 72 hours, in times of emergency arising from national disasters of whatever nature - hurricane, earthquake, flood, fire and so on," he said.

Mr. Hoyow pointed out that the equipment was landed in two instalments, the last in May. Since then, repeaters have been installed at Cooper's Hill in St. Andrew, and Flower Hill, Montego Bay. He expressed appreciation to the Canadian Government for the gift.

In his address, Mr. Franklyn McDonald, Director of ODP, said that a well-structured programme of assistance in developing a comprehensive communication system had been worked out with CIDA.

The ODP, he added, was looking forward to working with CIDA.

For his part, Mr. Reece said, he hoped that the co-operation between Jamaica and Canada in the vital area of communication would continue to grow.

PROGRAM FOR WORLD COMMUNICATIONS YEAR TOLD

Bombay THE TIMES OF INDIA in English 18 May 83 p 9

[Text]

THE government programme for the World Communication Year announced today envisages the experimental introduction of telephones in running trains, relaxation of revenue norms to open P and T offices in remotest areas, provision of STD facilities on international circuits and study of more applications of the communications satellite system.

Another highlight of the programme for this year announced by the minister for communications, Mr. V. N. Gadgil, is a series of seminars and discussions, with large representative expert participation, to facilitate the formulation of a new national communication policy by the year-end.

Mr. Gadgil announced the programme at a press conference timed for world communication day being observed in pursuance of a U.N. resolution.

He explained that his ministry had been chosen by the government as the nodal agency for the World Communication Year programme in this country. It involved co-ordination of work with other departments of electronics, science and technology information and broadcasting and the like.

Direct subscriber trunk dialling facilities are immediately available for Australia from Delhi, Bombay, Calcutta and Madras.

Besides, according to the minister,

the P and T department was considering introducing own-your-own exchange scheme for villages, extra registration fee for additional telephones, and insistence of one telephone for one family.

He explained that own-your-exchange scheme was primarily proposed for villages. Low-cost electronic exchanges ideally suited for villages could be supplied for a reasonable price.

He thought of the scheme for one-telephone-one family after going through papers relating to the damage caused to the Malabar Hill telephone exchange in Bombay. Some of the houses serviced by the exchange had as many as six telephones per family.

In his view, the introduction of the scheme would facilitate reducing the waiting list now extending to 100,000 applicants in places like Delhi and Bombay.

Answering questions, the minister said a decision whether to use indigenous or imported technology for the second electronic switching factory (the first one is to be set up in Gonda) would be taken up within a month. He did not think that choosing the site would be a problem.

As for the controversial question whether P and T should be bifurcated, he was content with relating the experience of other countries which went to show that much could be said for both sides.

CSO: 5500/7134

BRIEFS

DOORDARSHAN TELEVISION AID--NEW DELHI, May 12--The Union Information and Broadcasting Minister, Mr. H.K.L. Bhagat, said today it was the Government's objective to provide at least a 17-hour television service daily. Expressing himself against a "prolonged gestation period" in this regard, Mr. Bhagat called upon Doordarshan Directors to increase the telecast time in a phased manner so that the objective of an uninterrupted schedule from 7 a.m. to midnight or a little later could be achieved in a "couple of years". Inaugurating the three-day conference of Doordarshan Directors here, he said it was also the Government's endeavour to extend television coverage from the present 19 per cent of the population to 70 per cent by the end of next year. [Madras THE HINDU in English 13 May 83 p 1]

CSO: 5500/7132

IDF RADIO EXPANDS MILITARY PROGRAMMING

Tel Aviv MA'ARIV in Hebrew 31 May 83 p 1

[Text] On the new broadcast schedule of the IDF station which will begin broadcasts on 19 June, two main changes stand out: setting up of a "strip" of live broadcasts and music for 11 consecutive hours--starting at 0700 hours and until 6 (1800 hours) in the afternoon. On the IDF station these hours are being called "organized radiophonic plasma." This programming will come into its own at a later stage, because of financial difficulties and difficulties involving manpower.

Before the start of planning the new schedule of broadcasts, IDF radio conducted a comprehensive survey through the DAHAF Institute by which it became known, among other things, that there is a great demand for broadcasts of this type which combine music and interviews, bulletins, segments on current topics, and more. If these broadcasts become possible, the programs "Nahon L'ahshav" [Right For Now] and "Sha'atayim Mishtayim" [Two Hours of Two] will be cancelled.

If "Nahon L'ahshav" is not cancelled, then on 20 June it will be presented three times weekly by Ya'akov Agmon instead of Yizhaq Ban-Ner who has resigned recently from IDF Radio.

The recognizable change in the new programming is the increase of broadcast hours devoted to military programs--from 3 hours weekly until now to 6 hours. These programs have also been allotted better broadcast hours in the new schedule. This is one of the concepts which Ron Ben-Yishay, the current station director, brought with him when he undertook the assignment. In his opinion, it must not be forgotten that this is a military station and it is obligated to devote more time and greater thought to programs on military topics.

In this area of military programs they are now dealing with the production of a new drama program which will deal in radio-play form with the daily problems confronting service people during their military service.

8090

CSO: 5500/4532

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

BRIEFS

TASS-ANA TELEX LINE--A telex line was opened today between ADEN NEWS AGENCY [ANA] and TASS, the Soviet news agency. The new line was inaugurated by Brother 'Ali 'Abd ar-Razzaq Ba Dhib, member of the Central Committee, deputy prime minister, and chairman of the state committee for information.
[Summary] [GF080420 Aden Domestic Service in Arabic 1630 GMT 7 Jul 83 GF]

CSO: 5500/4535

NIGERIA

BRIEFS

GONGOLA STATE TV TRANSMITTERS--The Gongola Government has set aside N5m. for the installation of the state television transmitters and the provision of equipment to enable the station to take off in August, the State Commissioner for Internal Affairs and Information, Mrs Fibie Nadah, has announced. She told newsmen in Yola that the government had directed the firm handling the project to install two 10 kilowatt transmitters in Yola to cover a 70-kilometre radius of the state. [Text] [London WEST AFRICA in English 4 Jul 83 p 1580]

CSO: 5500/181

NATION'S ROLE IN TECHNOLOGICAL REVOLUTION EXPLORED

Durban THE DAILY NEWS in English 7 Jun 83 p 4

[Article by David Canning]

[Text]

IF you are a professional or a white-collar employee, chances are that fairly soon you will seldom visit your office or even see your boss. If you're a housewife, exhausting shopping trips will be an unpleasant memory... you will select purchases from the comfort of a rocking chair and make payments just as effortlessly. And your children, if you have any, will no longer rip through magazines to find school project pictures — they will have instant "fingertip" access to televised versions of the latest illustrated encyclopaedia.

LOCAL computer services boffin Mr Mel Cunningham believes that South Africa could be in the forefront of this technological revolution flowing from advances in electronics.

But to achieve it, big South African companies, banks and building societies are going to have to overcome individual rivalries that are preventing the design of a common system. And, he says, the Post Office must become flexible enough to change its plans in mid-stream.

In an interview in Durban this week, Mr Cunningham, managing director of the Info group, said the Post Office next year is planning to introduce the public to Beltel — which allows subscribers to dial into a computer to

extract information which is displayed on the domestic television screen.

Though theoretically in time this will give them access to "instant" services like booking of entertainment shows, purchase of goods, financial transactions, transfer of messages to other subscribers, news, weather, entertainment, data libraries, and other information, Mr Cunningham believes Beltel will fail from the same kind of short-comings of its British Prestel parent. After 4 years Prestel in Britain has only 16 000 users.

Though his group is fully participating in the South African Beltel system, he believes that its technology already is outdated and it will prove just too costly and inconvenient for the average South African.

With the experimental service being run at present by the Post Office already showing disappointing levels of participation, Mr Cunningham asks how many South Africans will be prepared to pay more than R3 000 for a service that runs off television sets which they prefer to use for normal viewing?

Overseas it has been realised that telephone lines (the Prestel or Beltel unit plugs into the standard telephone line) are far too slow to really effectively carry graphics.

The high standard of design required has put many information suppliers off the system with the result that they offer their data banks to the public independent of Prestel.

Development in Japan and elsewhere of laser technology, and an indi-

cation that Japanese manufacturers are hastening to get rid of their stocks of magnetic Video Cassette Recorders (VCRs), is another indication that the Beltel system is soon to be outdated.

Mr Cunningham says that on a recent trip to Australia he was shown a "laser" disc the size of an old 78 record on which was stored more than two million characters and 85 000 individual colour pictures (far more information than the largest encyclopaedia series contains).

The disc sells for \$18 and, with an adaptor (rather like the VCR), can be played through the standard television set.

The laser technique does not suffer from the loss of image and media found in magnetic systems, such as that on which Beltel relies.

"I was given a demonstration of the sound reproduction of the London Philharmonic playing on both the best magnetic and laser systems. The laser technique reproduction was measured as nine times clearer," he said.

All this has led Mr Cunningham to the idea of developing a small home electronic unit (slightly bigger than the standard telephone but with a "five-inch" screen attached) which he hopes will market in South Africa for less than R500. It will be at once a telephone receiver (with built-in amplifier), calculator, clock,

alarm, and a receiver and sender of information from and to the Beltel computers.

Simple information and services of the type his company, Info, provides — such as availability and booking of hotels and shows, latest news and stock exchange prices, etc. — would be accessible through the small screen.

An older child doing a home project on cell growth, for example, would be able to call up latest encyclopedea information from the laser disc (which would have been purchased or rented) on to his home TV screen. Moreover, the machine would

allow a linking of thousands of coloured pictures to create a "movie effect."

The full consequences of the electronic revolution cannot really be grasped now. According to the London Financial Times less than two percent of all printing is now 'electronic printing', but within five years, with the development of laser techniques, that figure could be as high as 20 percent — an economic revolution providing true 'electronic publishing on demand'.

But in South Africa to get the total scheme off the ground will take a

huge capital investment and require the Post Office to recognise the need to revise Beltel plans. And, irrespective of which system is used, banks and building societies are going to have to get together and accept a common system for electronic funds transfers so that consumers will be able to pay for goods on a common system.

FOOTNOTE: Mr Cunningham was due to leave for the United States yesterday to discuss his development ideas with manufacturers there.

CSO: 5500/172

FUTURE DEVELOPMENT OF TELEVISION DISCUSSED

Johannesburg SUNDAY TIMES in English 5 Jun 83 p 33

[Article by Lawrence McCarney]

[Text]

WITH the assumption that the concept of independent broadcasting, with appropriate government control, may now be generally acceptable in South Africa, discussion is centred on how an independent television system might be implemented.

The whole question of the development of South African television is of enormous significance to the social and economic wellbeing of the country.

The need for a government-backed study into the future of broadcasting and representing the interests of all South Africans is now urgent.

Without such an investigation there is a danger that the planned development of television could be sacrificed to commercial expediency.

Amid the speculation that some kind of fourth channel is imminent for South African viewers, it is interesting to examine some possible options open to the Government in implementing additional television services.

It is logical to assume that the capital investment will come from the private sector in the form of the Afrikaans and English newspaper groups, Argus, Nasionale Pers, Perskor and SAAN, plus a number of large organisations from conglomerates to individual firms with an interest in the development of the medium in this country.

In my evidence to the Steyn Commission of Inquiry into the Mass Media in January, 1981, I urged that the future of South African broadcasting merited consideration at the highest level as we were uniquely placed to benefit from overseas experience, not all of it good by any means.

I had hopes that the Steyn Commission would have been instrumental in transforming South African television.

It is a cause for regret that it chose caution over innovative thought in formulating its recommendations on broadcasting.

Cursory

Two points of significance did, however, emerge from the commission's disappointing and rather cursory treatment of television.

The first was that it did not slam the door on the future possibility of independent broadcasting.

Some of the speculation on a fourth channel centres around the possibility of the SABC leasing air time and facilities to an "independent" company.

This immediately raises questions as to whether the corporation can spare the capacity, considering each of the three services, TV1, TV2 and TV3, are just beginning to get into their stride.

Professor Mouton, chairman of the SABC, is keenly aware of the formidable job still ahead of the corporation in serving the needs of the community as a whole.

He is reported as laying great stress on the educational potential of television and is also aware of the needs of coloured and Asian viewers.

In addition, the existing TV services are due to be expanded and improved as part of a R250-million, five-year capital development programme.

To impose a fourth "independent" channel upon the existing SABC infrastructure could be seen as inhibiting the natural development of the cor-

poration, and therefore not in the best interests of taxpayers.

Other questions are also posed. How "independent" could a fourth channel be in these circumstances and what then of the SABC's progress towards even greater autonomy?

An alternative solution might be to encourage a working partnership between State and the private sector through the formation of a State-controlled Independent Broadcasting Commission, by Act of Parliament, with responsibility for setting up and administering a regional television network based on South Africa's major metropolitan centres.

The commission would control and award franchises to private companies to operate the regional stations, in much the same way as Britain's IBA does.

Advertising

Revenue, in its entirety, would come from advertising. The question then arises, is there sufficient advertising in the South African economy to support an additional TV network?

Looking at the SABC's annual report for 1982, we see that television advertising contributed just over R104-million, or 38 percent of the corporation's total revenue.

It is difficult to obtain accurate measures of the extent to which SABC-TV is over-subscribed, but informed advertising industry estimates for TV1 are between 100-250 percent, while the figure for TV2/TV3 is between 25-40 percent.

An important economic consideration is that an independent network

TELEVISION TRANSMISSION TIME TO BE EXTENDED

Johannesburg THE CITIZEN in English 8 Jul 83 pp 1, 2

[Article by Zanne Greyvensteyn]

[Text]

TV transmission time will be extended by 10 hours a week as from January 1, 1984, the SABC announced yesterday.

The most important consideration for the decision, said Mr Hein Jordaan, head of SABC public relations, was to make more provision for children's educational programmes, other informative programmes, regional magazine programmes, special women's programmes and programmes for the elderly.

The new schedule would also allow the SABC more freedom in its schedule format while to a lesser degree it would thus be able to incorporate more "narrow casting" programmes. The latter include specialised programmes such as opera, ballet, and classical music productions, among others.

Normal

Programmes screened from Monday to Friday would start at 4.00 pm. Saturday's transmission would feature normal programmes from 1.00 pm until 2.30 pm, the start of the usual Sport '84. Sunday programmes would begin transmission at 3.30 instead of 4.30 pm as was the case now.

Mr Jordaan said that new advertising times had not yet been decided on, but would in all probability be announced within the next few weeks.

The decision was taken at the monthly SABC board meeting on Wednesday.

Newspapers

The increase in television transmission time would not have a marked effect on advertising in newspapers, Mr Graham de Villiers, vice-president of the Accredited Advertising Practitioners Association said last night.

He estimated that the extra 10 hours viewing a week would mean there would be about 48 extra

minutes for advertising a week, writes MARILYN COHEN.

"There has always been a shortage of TV time for advertising with the result that money has been waiting in the wings to be spent on TV," he said.

Advertisers

He therefore could not see money being diverted from newspaper advertising to television advertising. This was also because advertisers in South Africa did not yet use television in the same way as in countries which had had television much longer.

Mr Clive Kinsley, president of the Newspaper Press Union, was cautious when asked to comment on the increased transmission time's possible effect on newspapers.

"A major factor will be to see how much more time is allowed for advertising. I would like to study the details of this before commenting," he said.

ROSY FUTURE PREDICTED FOR ELECTRONICS

Johannesburg RAND DAILY MAIL in English 7 Jun 83 p 12

[Article by Simon Willson]

[Text]

SOUTH AFRICA'S electronics industry is set to grow by at least 20% a year in the foreseeable future, according to Mr Ray Gould, chairman of the Electronic Components Manufacturers' Association.

He told delegates yesterday at the Componex '83 electronics industries exhibition in Johannesburg that sales were already worth more than R2 300-million a year, and South Africa was becoming heavily dependent on its electronics industry.

The industry's rapid growth was largely due to support from, among others, the Post Office, SA Transport Services and other Government bodies which had promoted South African self-sufficiency in electronics.

"I believe that if South Africa is to be recognised as an international force in electronics, she must have an indigenous electronic components industry of merit and world standing."

Local component manufacturers already produced sophisticated and advanced-technology components, he said.

The challenge was to increase skills, create more jobs and develop the industry

as rapidly as possible to ensure both economic and strategic stability in a vitally important sphere.

Investment in the electronics components industry was one of the principal routes to South Africa's survival as a trading nation, Posts and Telecommunications Minister Dr Lapa Munnik said yesterday.

Opening the exhibition, Dr Munnik said component manufacturers had become the pioneers of a new technical age, as electronics had developed into the key technology in engineering.

He noted, however, that South Africa's multi-million rand electronics industry was confronted by a lack of skilled technicians.

No effort was being spared to stimulate the flow of qualified engineers from the universities, and 160 people were using bursary loans from the Department of Posts and Telecommunications to become better qualified electrical engineers.

As an incentive, these students were being paid handsome awards for good performance in their yearly examinations.

Dr Munnik said training had always been a problem for all South African industries, but none more so than in the case of electronics.

"The reasons are threefold, and the principal problem is that the industry is relatively new and that there is no tradition when it comes to training, as in the case of mining or farming, where a father would hand down knowledge and encourage his children.

"The second problem is that the growth rate cannot be matched by the available education and training resources and the third is the sophistication of the technologies being introduced."

He said the Board of Trade's committee of inquiry into the electronics industry, set up last year by Industries Minister Dr Dawie de Villiers, would be paying particular attention to the development potential of electronics, whether the electronics industry should be encouraged and what bodies should be used to develop the industry.

Within the next decade, he said, telephone subscribers would be able to obtain equipment which would radically alter their daily lives.

Digital electronic telephone exchanges were being manufactured in three factories in South Africa, and local component manufacturers would benefit from this newly-created demand.

DEVELOPMENT OF VIDEOTEXT INFORMATION SERVICES PLANNED

Johannesburg THE STAR in English 29 Jun 83 p 16M

[Article by Duncan Collings]

[Text]

Beltel, the South African telephone and television information service, is experiencing good public response to its trials now being conducted.

The service, run by the Department of Posts and Telecommunications, is to be launched nationally in 1985, after trial marketing in 1984.

Says Mr Adrian Michie, manager of information technology at the Communication Group's Specifile division — intimately involved in the development of Beltel: "Over the next few years Specifile will develop videotext information services to complement its publications, library services and compendia.

"This year we at Beltel are putting together a data base at the same time as running the trials."

The trials this year have a twofold purpose: to introduce the public to Beltel, and to demonstrate how the information can be used to advantage.

"We have found some resistance from people who cannot get away from printed-word thinking. Our job is to demonstrate the advantages."

Beltel will use a link between TV and telephone to display a variety of information and news and provide services in the home such as banking, shopping and theatre and aircraft bookings.

It differs from the British Ceefax and Oracle systems

where transmission is by airwaves and the telephone is not used. The Argus group will be inputting news to the system.

Specifile has been providing specialised information, primarily to the building trade, for 25 years via libraries and compendia of information.

They have now decided to link their services to the 1 850 Beltel subscribers, with all information cross-referenced.

Specifically, the company has launched Speciview on Beltel — a specialised information service for the building, mining and engineering industries.

The Speciview service comprises 150 frames of information provided by manufacturers and contractors. This is co-ordinated into various indices, making the comparison of information easy.

The strength of the system lies in its ability to present fast changing information which can be updated daily. It also enables the user to order catalogues or send messages back to product suppliers.

Specifile will run South Africa's 1984 Videotext conference and exhibition which is expected to introduce the public to Beltel.

Specifile will also launch Mediafocus later this year. It will be an information service on how to use communication aids such as video, audiovisuals etc, and will be aimed at schools and the training sectors of commerce and industry.

The company is the local agent for the American Information Technical Services, which provides information on microfilm for specialised industries.

Completing Specifile's list of services is Specidraft. This is a proposed library of computer aided design (CAD) product patterns for the construction industry, still in the feasibility study stage.

Information relating to this service will also be displayed on Beltel, and the diskettes will be available from Specifile.

The Beltel system is based on blank frames which can be purchased by subscribers to input their own data.

CSO: 5500/178

capable of regional coverage would not only soak up much of this advertising from small and medium-sized companies unable to afford existing national TV exposure, but anxious to benefit from TV's unique marketing characteristics.

When using the criterion of per capita expenditure on advertising, South Africa still lags behind most industrialised countries.

There is also another very important consideration. In February, it was announced that Mr R J Raath, Deputy Postmaster General, had formed a committee to examine the feasibility of a domestic telecommunications satellite system for South Africa.

The committee is due to report by the end of the year.

This event did not attract the publicity it deserved, for if, as I believe it will, the committee recommends that South Africa should have its own domestic telecommunications satellite, it will mean that not only will we be able to boast a telecommunications system equal to the best in the world, but, depending upon the system purchased, there will be facility for up to five additional television channels which could be used in any combination, giving national and regional coverage.

Meanwhile, north of our borders developing African countries are also looking at satellites in improving their telecommunications and broadcasting infrastructure.

Swaziland is currently using a loan from the Canadian Government to bring the country's telecommunications services to international standards and reduce its dependence on South Africa.

Canada also happens to be one of the world's most experienced countries, with direct broadcasting by satellite (DBS) technology.

United Nations agencies are also involved in educational and other social programmes featuring INTELSAT for relaying international as well as domestic TV to a number of African countries.

Currently, a number of American and European satellite technology consultants are competing to win lucrative multi-million rand contracts throughout Africa.

DBS systems have one thing in common: they are placed in geo-stationary orbit over the equator, so inevitably there are large areas of geographic overlap of television broadcasting signals of "footprints".

Control

The International Telecommunications Union (ITU) at a conference in Geneva in 1977 recognised this problem and has attempted to control it, but the facts are, that as the range of receiving equipment becomes ever more sophisticated, television viewers in South Africa will be able to receive a number of DBS channels, many broadcasting from outside our borders.

A South African DBS system would enable both the SABC and an independent newcomer to offer viewers a range of ethnic, regional and national broadcasting in addition to existing services.

The hardware, consisting of the satellite system and the regional earth stations, could be owned and controlled by a consortium formed by the State, the Press and the telecommunications industry.

The regional broadcasting stations, operating the earth stations under licence from the consortium, could again be a mix of the Afrikaans and English Press, commerce and industry

and private investors, with strong regional investment encouraged.

A national satellite communications system for South Africa could be purchased now, off-the-shelf, from a number of American, European and Japanese aerospace companies, together with the means of placing it in synchronous orbit.

I would estimate the cost of a three-satellite (allowing for spares) system, including launching costs and up to five earth stations, to be in the region of R300-million.

For this we would get not only additional TV channels but excellent radio and telecommunications facilities.

The capital costs of launching a satellite system are high, but the operating costs, spread over the operational life are not unreasonable.

A big advantage is that a satellite service would provide total national coverage immediately it comes into operation, avoiding the long delays involved in gradually extending conventional transmitter networks.

In examining the future of television in South Africa the major concern must be the public interest. It is imperative that we avoid "piecemeal" solutions which at best are compromises based on expediency.

And, at all costs, the people responsible for leading South Africa into this new and exciting communications era must avoid giving the impression that "deals" are being worked out behind closed doors, with commercial gain the prime consideration.

It is to be hoped that the Government will take the lead and set up a working party to examine and make recommendations on the whole question of the future of broadcasting in South Africa, with public service and enduring social benefit the prime objectives.

BRIEFS

SPK SYSTEMS--Systempack, commonly known as SPK Systems, are relatively old hands in the Micro-Computer industry. The company was founded almost six years ago in the Transvaal and has grown into a nationwide organisation and is soon to become international. The SPK System was written in South Africa to cater for local conditions. The original SPK ACCOUNTS package became such a success in the market place that Systempack was soon prompted to write the SPK ACCOUNTS PLUS SYSTEM which is so versatile that jobbing, wholesaling or manufacturing activities are catered for in one single package. This is what Mr. B.R.FRASER Financial Director of Tyresoles (PTY) LTD has to say of the SPK SYSTEM. "The system is user friendly, accurate, very comprehensive and obviates the need for entering data more than once. Support is excellent." The hardware is well supported by the Tedalex Group of Companies which needs no introduction. There is a nationwide dealer network. Enhancements are coming out monthly and ongoing support is rendered to all existing sites on a regular basis. [Text] [Durban THE DAILY NEWS in English 28 Jun 83 p 21]

VOLKSKAS BUYS IBM GEAR--In possibly the biggest order of its kind in South Africa, Volkskas has bought R37 million of IBM equipment, reflecting the bank's determination to keep pace with rapidly developing electronic banking technology. The order comprises the supply of IBM 308X multi-processors with a combined leading memory of 96 megabytes, 12 strings of diskdrives with total storage capacity of 120 000 megabytes, and additional tapedrives, instant bank laser system printers and branch workstations. The units will be installed in the next two years. Volkskas general manager Mr J L J van Vuuren says the bank "has always considered its activities in the current cheque, savings and deposit account market as the nucleus of its business." This investment will enable it to offer a faster and more convenient service. [Text] [Johannesburg THE STAR in English 29 Jun 83 p 16M]

HKC SWITCHES TO CPM--HKC Systems, specialists in construction computer software, have begun converting their software to the Control Programme for Micro-processors (CPM). The move is being carried out in conjunction with Murray and Roberts. Mr Eric Moir, consultant for Murray and Roberts Computer Services, says this is essentially a cost efficiency exercise. The aim is to make people aware of the options offered by computers and it is essential that the programmes be transportable. "CPM is far more universal, and with modifications, can be used on an HP microcomputer." Murray and Roberts have several sites operating on microcomputers, which Mr Moir says are cheaper and more efficient than mainframe computers. [Text] [Johannesburg THE STAR in English 29 Jun 83 p 17M]

PLUG-COMPATIBLE MANUFACTURER--The lead in the race to become the first plug-compatible manufacturer to install an alternative to the IBM 3380 disk drive at a South African computer installation has been taken by Control Data. It has received orders for its 33800 disk drives, to be delivered in the last quarter of 1983. Maintaining technical leadership in this highly competitive market takes considerable investment in development. Control Data is now spending R100 million a year and expects this to rise substantially in the next five years. Among the most important features of the Control Data 33800 is separate and independent environmentally-sealed disk head assemblies, which eliminate many common head disk interface problems. Each drive has a capacity of 2,52 gigabytes and average retrieval time is 16 milliseconds. [Text] [Johannesburg THE STAR in English 29 Jun 83 p 17M]

TV ONE'S COLORED ANNOUNCER--The South African Broadcasting Corporation Channel One television service is not for Whites only, a SABC spokesman said yesterday. Commenting on complaints from viewers about SATV's first Coloured continuity announcer, Vivian Solomons, who made his debut on the Afrikaans service on Thursday night, he said the SABC was not disturbed by complaints. "Television Channel One is not meant to serve Whites exclusively, it is for Coloured and Indian viewers as well," he said. He said that was one of the reasons why SATV would use more Coloureds and Indians. "And we are determined to use Coloureds and Indians in future," the spokesman said. SATV received about 75 calls from viewers who complained that non-Whites infringed on the "White" TV service. Most complaints came from viewers in the Northern Transvaal and Pretoria areas. One Cape Town viewer and one Port Elizabeth viewer complained. An estimated three million people watch television at peak time every night, according to SATV. "On bad nights we receive more than 100 complaints. The SABC is thus not upset by 70 callers." Mrs Bets Steyn of Linden, Johannesburg, was one of the complainants. She told The Citizen that Mr Solomons' appointment was regarded by many Afrikaners as a move to promote racial integration and a step in Prime Minister, Mr P.W. Botha's constitutional reform. Another complainant was upset because the SABC did not "negotiate the matter" with White viewers first. "TV 1 is a White channel," she said. A Brakpan housewife who did not want to be named, complained about the way she was treated when she phoned the SABC about Mr Solomons. "I feel terribly humiliated," she said. "Does one no longer have the right to put your case? Has it become a shame to be an Afrikaner and to say so?" A spokesman for SATV said all complaints were handled with tact and in a professional manner. [Text] [Johannesburg THE CITIZEN in English 8 Jul 83 pp 1, 2]

MICRO COMPUTER MARKET EXPLOSION--The South African micro-computer market has exploded out of all proportion. Conservative estimates put the size of the market in 1983 at R50-million, although, if the early figures from distributors are anything to go by, the figure might well be closer to R70-million. This compares with total sales of less than R2-million in 1979. The sharp growth in popularity of micro-computers is well indicated by the recent success of the fifth Computer Faire held in late May in Johannesburg. Terry Murphy, managing director of Systems Publishers, which hosted the faire, tells BUSINESS TIMES that a record 25 000 people attended the exhibition. There were 70 exhibitors with stands occupying 2 000 sq m at this year's exhibition. As a result of the success of the 1983 faire, Systems has already started taking bookings for next year. Alice Goldman, who organises the faire, expects that there will be at least 100 individual exhibitors occupying 2 500 sq m in 1984. Although it is more than 11 months away, 30% of the available area has already been reserved. She expects that more than 40 000 people will visit the 1984 Computer Faire. [Text] [Johannesburg SUNDAY TIMES-BUSINESS TIMES in English 12 Jun 83 p 11]

CSO: 5500/172

ZIMBABWE

BRIEFS

CONTRACTS WITH TASS, ADN, BTA--Zimbabwe plans to widen its international news links. This was stated by the minister of information, post, and telecommunications, Comrade Nathan Shamuyarira, in Harare, yesterday. Comrade Shamuyarira, who returned from Europe recently, said the government is signing contracts with TASS in the Soviet Union, ADN in the GDR and the Bulgarian news agency in order to get news on the international situation. He said Zimbabwe should not rely entirely on Western news agencies but should hear news from both socialist and capitalist countries. Comrade Shamuyarira said part of Zimbabwe's objectives in this year's world communications year include work on new communication links within the Southern African Development Coordinating Conference in Agrica. [Text] [MB100829 Harare Domestic Service in English 0500 GMT 10 Jul 83]

MICROWAVE ELECTRONIC EQUIPMENT--Chloride Zimbabwe (Private) Limited has been awarded a contract to supply 17 power units for running microwave electronic equipment manufactured by NERA Radio Links of Norway. Each unit consists of two batteries, two charges and a central switching cubicle. The units are to be installed in the new microwave link between Bulawayo, Victoria Falls, Zambia and Francistown in Botswana, and will be used and maintained by the Postal Authorities in these countries. Work on the Chloride Units is due to be completed by the end of April and the total communication system is due for commissioning towards the end of 1983. Paul Lewsey, Manager of the Systems Division, said "The units have been designed locally to PTC specification and even though we had PTC approval, NERA had the final say and we were awarded the tender against international competition." [Text] [Harare THE FINANCIAL GAZETTE in English 20 May 83 p 9]

CSO: 5500/183

NORDIC MINISTERS MEET TO DISCUSS TELECOMMUNICATIONS ISSUES

Stockholm DAGENS NYHETER in Swedish 23 Jun 83 p 14

[Article by Mauritz Edstrom]

[Text] The plans to establish a joint Scandinavian TV channel as early as next year--in the fall of 1984--using the EBU (European Broadcasting Union) communications satellite are going to hang in the air a little longer.

The Nordic Council of Ministers met in Reykjavik on Tuesday to discuss the matter. But the expected decision was not reached because Finland came to the meeting without having adopted a position on the issue.

Schedules Exist

The satellite project known as the ECS [European Communications Satellite] is a cooperative venture by the EBU's member countries and is in two parts. The first satellite was launched last week using a French rocket. The second satellite will follow next summer.

The Norwegian Telecommunications Administration has an option on two channels in that satellite. Earlier this year, the Norwegian Government invited its Scandinavian neighbors--which previously had been uninterested in the ECS--to use one of those channels jointly.

The Nordic Council's Cultural Secretariat in Copenhagen was then instructed to investigate the possibilities for using that opportunity to establish a joint Scandinavian TV channel. Weekly schedules consisting of 35 and 45 hours of programming per week have even been outlined.

That was the proposal that the ministers of culture met in Reykjavik to discuss.

But it was not possible to reach a decision because the recently appointed Finnish Media Committee had just started work and had not yet managed to make up its mind, according to Jerker Persson, public relations officer for the Nordic Cultural Secretariat.

Tumble Forward

He says: "But I nevertheless regard that as a tumble forward for the project. The Cultural Secretariat was instructed to continue discussions with the Norwegians, who will probably commit themselves to the EBU for the two TV channels next week."

But a joint Scandinavian decision will not be possible until after summer. The next meeting on the subject will be held in Stockholm on 27 September.

Meanwhile, Great Britain's BBC, West German TV, Holland and Belgium are beginning test transmissions via the first ECS. Programs from that communications satellite must be redistributed via cable systems, unlike those from direct broadcast satellites, whose signals can be picked up by TV viewers with parabolic antennas.

Scandinavian cooperation using the ECS would make it possible to establish a joint TV channel 3 years earlier than would be possible using the Tele-X satellite, which has already been adopted and which Norway and Sweden, but not Denmark, have agreed to use. The Tele-X satellite will be launched in the summer of 1986 and may go into operation in 1987.

The ministers in Reykjavik have now appointed a four-man committee--one man from each country--to investigate ways of adapting Tele-X to the total program for satellite cooperation.

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CSO: 5500/2739

BRIEFS

NORWAY, AUSTRIA JOIN EUTELSAT-- On 10 and 11 May Norway and Austria signed the convention establishing the European Satellite Telecommunications Organization known as Eutelsat, and the system utilization protocol, according to an announcement by that agency. Norway's Ambassador Georg Kristiansen and Austria's Ambassador Erik Nettel signed the documents at the External Relations Ministry, since France is the depositary for the agreements. Norway and Austria thus become the 16th and 17th European nations to join the organization, to whose financing they will contribute 2.51 percent and 1.97 percent, respectively. Cyprus, Denmark, Finland, France, Italy, Luxembourg, Monaco, The Netherlands, Portugal, the United Kingdom, San Marino, the Holy See, Sweden, Switzerland, and Turkey had signed the agreements some time previously. EUTELSAT will operate the European regional satellite telecommunications system which will provide businesses and individual users, through the European national telecommunications services, with transmission services for telephone, telex, data transmission, television, etc. [Text] [Paris AFP SCIENCES in French 19 May 83 p 17] 6182

CSO: 5500/2738

CABLE TELEVISION, TELE-X SATELLITE ARE MAJOR POLICY ISSUES

Helsinki HELSINGIN SANOMAT in Finnish 13 Jun 83 p 12

[Article by Hannele Tulonen: "Cable TV Networks Growing; Finnish Broadcasting Corporation Plans to Cooperate with Private Firms"]

[Text] New cable television companies are springing up in different parts of the country and Helsinki Televisio [Helsinki Television Company] (HTV) is expanding. The Finnish Broadcasting Corporation (YLE), which has traditionally dominated the field of electronic communications, may have to make room for a new type of television communication system. YLE will also have to plan to cooperate with the many different cable television companies.

Networks are being built in Rovaniemi, Turku, Tampere, Kuopio and Varkaus. Even a tiny community like Laitila, with 9,000 residents, has with the help of interested parties gotten its own cable television company, which follows town council meetings, films summer egg markets and is starting up its own record council.

The Laitila Television Company came into being in a typical way: To improve a poor television picture, they acquired a large common antenna system that also helped them to watch Swedish television programs and at the same time local enthusiasts got excited about their own television operation.

All kinds of flowers can bloom because the cable television bill, which was regarded as an urgent matter, lay gathering dust on a Communications Ministry desk. To be transferred to a new ministry committee on communications policy at the end of this summer, the Perttunen Committee report will probably have to be considerably overhauled.

"The issues most urgently in need of being resolved are those involving the Tele-X and NORDSAT [Nordic Satellite] satellites, regarding which they will want to hear Finland's point of view at the Reykjavik conference just before Midsummer Day," the chairman of the committee, Justice Minister Christoffer Taxell, told us.

As concerns the much-disputed report, Communications Minister Matti Puhakka feels that the question is whether the bill should be formulated in accordance with the YLE model or the press model.

The report was based on the YLE model, coordination of conventional YLE and cable television operations. Cable television operations also constitute a public activity and they must be made subject to regulation.

Supporters of the press model have, on the other hand, compared cable television operations to the publication of newspapers, with adaptation of the freedom of the press law to electronic communications as a basic principle.

Advocates of the press model defend people's right to receive information from existing accessible sources. Supporters of the YLE model stress the fact that, if cable television activity were to be freely governed by economic market factors, it would be just as much a threat to freedom of speech as public censorship.

According to Taxell, "there are unlimited alternatives in life" and that is why we do not necessarily have to resort to either the YLE or the press model, rather some combination of the two may be considered.

New Attitudes

Newspapers interested in cable television remind us in their editorials that "development of the mass media will require new attitudes."

With regard to the evolving information society, Prime Minister Kalevi Sorsa recently declared that, if you can't beat them, join them.

Some people hastened to interpret his words as also indicating a change in the SDP's [Social Democratic Party] attitude toward cable activity. So far the Left's common view of electronic communications has been that they should be largely developed on the basis of YLE. They would therefore be controlled by Parliament, not by private enterprise.

KANSAN UUTISET went so far as to condemn the SDP for "saying farewell to the goals of peace and democracy and submitting to the wishes of commercial profiteers."

YLE's plans for selling programs to private cable firms and its cooperation of an experimental nature with them have been interpreted as the shaping of new attitudes in the hot new fields involved in cable television.

Satellites Are Coming

The apparently undeniable arrival of satellites has also shaped attitudes. Cable television opportunities will be increasing faster than before when the television satellites designed for the Central European countries climb into the sky in 1985.

According to one estimate, in 10 years time cable networks will already account for about 70 percent of Finnish television.

At the National Communications Conference Arne Wessberg, the manager of Television Channel 1, cautioned Finns against imagining that a nation of 5 million people could pay for a cable television network as large as those of the United States or England. As a conclusion to his warning, he admitted that YLE too must adjust to changing conditions. He also explained how YLE could participate in serving cable television viewers.

"We are not eager to participate in financial contributions or in construction. But we can acquire and create programs and sell them to the companies," Wessberg said.

He assiduously pointed to other countries: At the BBC the same plan will be implemented with the future satellite. In Sweden BETAL-TV [expansion unknown] charges cable television companies for the basic services it provides them with.

Finnish Programming and Sports

In Wessberg's opinion, YLE's number-one point of departure must be Finnish programming since the other sources would not in any event concentrate on that. YLE could also exploit its resources in the resale of programs aimed at broad civic sectors. For example, sports programs which are at present bought for Finland at ever higher cost. In Wessberg's opinion, it would be wise to distribute them further through cable television programs.

YLE could sell programs for children and young people and music programs in the field of entertainment.

"YLE's contribution will be needed because cable television will consume thousands of hours of programs. Where would we get all that? There isn't a supply that large in all of Europe," he said.

Wessberg thought that YLE might determine program prices either on the basis of the number of viewers or the size of the company that purchases them.

YLE would participate in companies only in exceptional cases.

YLE Must Not Be Left Out

In addition to the Post Office, YLE has negotiated on collaboration with the Municipal League and established contacts with the cable television companies.

The Post and Telecommunications Administration is building experimental networks in 12 towns, the latest ones in Hanko, Porvoo and Kauhajoki. This summer and experiment will be set in motion in Rovaniemi in which YLE will transmit cable television and TELSET [expansion unknown] programs through the postal network.

"As far as YLE is concerned, there is really an urgent need for a new law," Wessberg said. All rights and obligations in cable television operations are as yet unspecified. YLE programs should be viewable in all networks. In

Wessberg's opinion, it must be made impossible for the companies to decide not to admit YLE to a network.

Program Funds for Finland Too

Domestic participation in programs should, in his opinion, be clearly defined. It need not be a percentage of the programs themselves, but could take the form of a given amount in financial investments in domestic programs. "So that some portion of the funds would remain in Finland too," Wessberg said.

Coordinating cable television with the press would not, in Wessberg's opinion, succeed because it is so much more expensive. It will never be run as the publishing business is, such that just anyone could manage a cable television operation. One can only get into it with money. Overall vision and national participation are required.

And who should issue licenses for cable television operation? Among others, Prof Martti Tiuri has proposed that the municipalities could issue these licenses.

"Well, why not... that's how it works in the United States... but perhaps it would be clearer if the agency that issues licenses were only one official," Wessberg pondered. "Of course, that sounds like a monopoly... but it would guarantee more clearcut rules and better results. A license would be retained if the rules were not broken. They are leaning toward this system in England"

Preposterously Expensive

"The terms for the municipality may be overemphasized, as has happened in some places in the United States. Then too many municipal services and programs that cater to special groups are expected. Such operations have become preposterously expensive. In the United States they even pay as much as 200 markkas a month to the companies," Wessberg said.

A recent memo of the YLE cable television committee stresses the fact that in a cable network YLE programs would be telecast unchanged over channels set aside for them. No other programs would be allowed on those channels. According to the committee, no special fees could be collected from the channels over and above the service charge agreed on.

"Newspapers on the Air"

Veikko Loyttyniemi, the general director of the Newspaper Association, feels it would be impossible to arrive at some sort of cooperation between YLE and the cable television companies. In his opinion, however, a distribution of functions would be more natural: YLE would take care of the irwaves and the newspapers cable television.

"If YLE is absolutely determined to participate in cable operations, the newspapers should in return be given an opportunity to go on the air. In England,

for example, the newspapers participate in local radio operations," he said.

Free Channels

HTV marketing director Esa Malm reminded us that the company's channels, which reach 82,000 households, are open to anyone, including YLE and Mainos-TV [Commercial TV Company]. So far neither of these has displayed any interest in them.

"We buy what people watch and reach our decisions in terms of programs," Malm said. Referring to YLE's offer of sports programs, he said that there are good films and bad ones and that the same goes for sports telecasts.

And what do people watch? By far the most popular programs are old Finnish films and well-made adventure and detective series.

Big and Isolated

Other Finnish cable television operations are still scattered and the companies' administrative models are of the most varied sorts. This fall the Newspaper Association will issue an overall report on the situation.

The number of households that have so far subscribed to cable television is estimated to amount to several thousand. Once they are completed, the networks they have begun to build in Tampere and Turku will reach about 22,000 households. Once it is completed, Rovaniemi's big common antenna will cover the whole city and a part of the surrounding rural area with about 13,000 hookups. Esko Kuusela, the chief editor of LAPIN KANSA, said that there are now 2,000 of them.

An experimental program is in operation in Rovaniemi for 5 hours a week and, in addition to Helsinki, it is the only town where English OTS [expansion unknown] satellite telecasts can be viewed.

Of its kind, HTV is still a big, isolated operation in Finland, also in terms of a European or American scale of things. By 1990 its 12-channel network may be expanded to 38 channels.

Report Incites 34 People to Issue Statements

As a bill concerning cable television operations, the Perttunen Committee report has been lying on government adviser Kai Tornblom's desk at the Communications Ministry for a long time now. It was submitted to the Council of State in October 1981 and Tornblom got it into night-school shape as early as last October.

"It's just been lying there waiting for action by the powers that be," Tornblom said.

The next move will be when Communications Minister Matti Puhakka takes the report to the ministry's Communications Policy Committee for discussion.

According to Christoffer Taxell, the chairman of the committee, they will familiarize themselves with the matter as of the end of this summer.

The report is significant in that despite the fact that it was drawn up with nearly unanimous agreement -- there was only one dissenting opinion on a point of relatively secondary importance -- once published, it aroused strong opposition, producing the record number of 34 statements.

Also unusual is the fact that most of the statements were sent to the ministry spontaneously, unsolicited.

Members of commercial television associations were particularly active. "When some gibe popped up, it was most likely the Finnish-Swedish Radio Association presenting its opinion to the ministry," Tornblom said.

The latest to issue a statement was Justice Ministry official Kai Korte last December. Aside from the way the regulatory function was in some respects organized in the bill, he also called attention to the rules, which in his opinion would restrict freedom of speech.

The most markedly differing views presented in these statements have to do with the questions as to whether cable television operations are to be adapted to the principles of the press model or the so-called YLE model, whether a certain amount of domestic participation is to be demanded for the programs and whether limits are to be imposed on the commercials included in the programs. Also the question as to whether the bill under consideration is to be adapted to the mere distribution of programs is debatable in light of these statements.

Commercials Limited

According to the report, the Council of State would grant 5-year cable television operating permits. According to the proposal, a permit could be granted only if the municipality becomes a partner in the cable television corporation if it so desires.

There could be commercials to the extent of no more than 7.5 percent of the monthly program time. This figure is half of what Mainos-TV is permitted.

In cable television commercials would have to be inserted as clearly integral units at the beginning or end of a program cycle and they could be presented as coherent units before or after individual programs.

A cable television program could not be brutalizing, damaging to mental health or immoral. At least two-fifths of the programs would have to be of Finnish origin.

Will It Prevent Operations?

Only the Sibelius Academy endorsed the report without comment. The cultural organizations were in general satisfied with it, as were YLE and the Journalists Association.

The Newspaper Association wanted an entirely new one and a clearcut distinction to be made between the technical distribution system and program operations. The association also viewed as doubtful the municipality's participation as a shareholder or member.

In the opinion of the Advertising Agency Association, as in that of many others as well, the proposal makes cable television operations in practice quite impossible for the private sector.

The Justice Ministry noted that a bill conforming to the proposal could easily be avoided by procuring common antennas. According to the Education Ministry, in the report insufficient attention was devoted to the prospects for new technological developments.

The Commerce and Industry Ministry rejoiced over the fact that cable television would bring opportunities for using a new technology when it comes and export opportunities for the industry's equipment.

Reworked

The Magazine Association, Central Chamber of Commerce, Advertising Agency Association, Middle-Class Cultural Effort League, Cable Television Association and Municipal League proposed that the report be completely reworked or a new committee be formed to draft recommendations. The Finnish Marketing Association also wanted the communications industry and commerce and industry to be represented on it. In the opinion of the Industrial Confederation, the users of the new information-transfer methods and representatives of the regular communications industry should also be represented on the new committee.

Department head Juhani Perttunen has served as chairman of the Perttunen Committee. The committee was formed in December 1979 to draft an overall report on radio and television activities and the proposal for legislation governing cable transmission operations was its third partial report.

General secretary Toivo Pohjonen, assistant attorney Matti Anderzen, member of Parliament Mauno Forsman, Master of Political Science Eero Hirvonen, Prof Antero Jyranki, members of Parliament Ritva Laurila, Ole Norrback and Juhani Saukkonen, information chief Lauri Sivonen and department head Veikko Tavastila have served as members of the committee. Minister Forsman resigned from his membership on the committee in August 1981 and was replaced by member of Parliament Lasse Lehtinen.

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CSO: 5500/2724

FRANCE

BRIEFS

FIBER OPTICS RESEARCH--Experts at the National Center for Telecommunications Studies predict that a new alloy known as InGaAsP will be widely used in the future in semiconductors designed for use in fiber optics telecommunications. A study conducted at CNET into the thermodynamics of the alloy and its microscopic properties led to definition of the optimum conditions for liquid-phase growth by epitaxis: the growing temperature was considerably increased in the light of this finding from 650 to 740°C. When this is done, the electrical properties of the alloy are enhanced: electron mobility is increased by 130 percent at low temperature and by 25 percent at ordinary temperature. According to INNOVATION TELECOM, this research will generate considerable spinoff in microelectronics and fiber optics in applications of transistors and light-detectors. [Text][Paris AFP SCIENCES in French 19 May 83 p 22] 6182

DATA TRANSFER DEVICE DEVELOPED--The CNET is looking for a partner to handle industrial production and marketing for a newly patented device that can transfer data between computers of disparate design plugged into a terminal-accessible communications system, according to INNOVATION TELECOM, CNET's newsletter. CNET says it is now possible, by means of an asynchronous channel concentrator, to transfer data between computers not otherwise compatible, with no specific changes in software required. The transfer is made by an operator who supervises transfer operations through an asynchronous terminal and packet assembler-disassembler (PAD) connected with the TRANSPAC system, and through an asynchronous channel concentrator. Transfers of this kind, at outputs ranging from 1,200 to 4,800 bits per second, have been made since February 1982, using a pilot model built in CNET's computer center at Issy-Les-Moulineaux. [Text][Paris AFP SCIENCES in French 19 May 83 p 23] 6182

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