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FOREIGN BROADCAST INFORMATION SERVICE

JPRS Report

Telecommunications

Telecommunications

JPRS-TTP-90-019 *4 December 1990*

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INTERNATIONAL

INTER-AFRICAN AFFAIRS

African Radio, TV Union Conference Opens in Nairobi

Cooperation in Information Exchange

AB2011134890 Nairobi KNA in English 1402 GMT 19 Nov 90

[Text] Nairobi, 19th November (KNA)—The minister for information and broadcasting, Mr Nahashon Kanyi, has urged African countries to foster co-operation in the area of information exchange in order to forge a united approach to the problem of distorted and misrepresentation of facts on individual African countries by the foreign media. Mr Kanyi made the call today when he launched the fifth Union of Radio and Television Network Africa (URTNA) screen 90 at the programme exchange centre (PEC) at the Kenyatta International Conference Centre.

The four-day event has attracted representatives from 30 African member countries of URTNA, who will view some 115 high quality programmes and finally select on the spot African TV programmes suitable for use by their respective countries in accordance with their respective national broadcasting policies.

The URTNA screen, the minister noted, had proved a popular annual event where African broadcasters turn for African TV programmes on agriculture, education, science, cultulture and general entertainment. Cautioning on the power of TV, the minister said TV, when used carefully, can enhance development, but if used loosely, it can destroy. He added that TV has been used in a subtle manner in Africa to perpetuate neo-colonialism. The minister said that African journalists had a duty to re-shape the image of Africa from an African perspective devoid of distortions, hasty conclusions and half truths.

Mr Kanyi noted that URTNA, being the sole pan-African electronic mass media organisation, had continued to play its role objectively, and he took the occasion to appeal to member countries to pay their dues, [words indistinct] and current call-ups to the union to enable it to carry on with the sterling work it is performing.

The minister, who was welcomed by the secretary-general of URTNA, Mr Kasaye Demena, challenged African TV producers to come up with programmes whose message would help Africa to achieve its development goals and to take its place among the honourable world communities.

Also present were the director of PEC, Mr Atsen Ahua: the director of information, Mr Shadrack Musandu: and the managing director of the Kenya Broadcasting Corpn, Mr David Ole Nasieku, among others.

Official Says URTNA To Exchange News by Satellite

AB2011135890 Nairobi KNA in English 1742 GMT 19 Nov 90

[Excerpt] Nairobi, 19th November (KNA)—The Union of Radio and Television Network Africa (URTNA) will next year start exchanging news by means of satellite, the union's secretary- general, Mr Kasaye Demena has disclosed. He revealed this today when he welcomed the minister for information and broadcasting, Mr Nahashon Kanyi during the launching of the fifth URTNA Screen 90 at the Kenyatta International Conference Centre. He explained that the news exchange project will be cordinated from the co-ordination centre in Algiers with the assistance of the Algerian Government, adding that the union's general assembly decided to open its membership to private radio and TV organisations who may be enrolled as supplementing active members.

Saying the screen gives African television executives and producers an opportunity to present some of their best programmes to their counterparts from other broadcasting stations in Africa, the secretary general added the screen also served as a venue for assessing their production and exchanging views. [passage omitted]

ANGOLA

National Television Director Dismissed

MB2011140390 Luanda Domestic Service in Portuguese 0600 GMT 20 Nov 90

[Text] Angolan Information Minister Boaventura Cardoso has appointed Olimpio de Sousa e Silva as acting general director of Angola People's Television [TPA] to replace Carlos Garcia.

According to a communique from Minister Boaventura Cardoso issued in Luanda yesterday, Olimpio de Sousa e Silva will be in charge of the TPA until the appointment of a new general director, while Carlos Garcia will be integrated into the Information Ministry.

The new acting director of the TPA graduated in social sciences at the party high school.

The Angolan information minister also decreed the establishment of a commission to restructure the TPA. The commission will have to present proposals to improve TPA programs within 30 days and provide a new organic structure in 60 days. The commission has been empowered to deal with any matter it deems appropriate.

MOZAMBIQUE

Telecommunications Seminar Opens in Maputo 28 Nov

MB2811190690 Maputo in English to Southern Africa 1800 GMT 28 Nov 90

[Text] A two-day seminar on Mozambique telecommunications operational management plan began in Maputo today. The seminar was opened by Mozambique's Deputy Transport and Telecommunications Minister Rui Lousa. Taking part in the seminar are telecommunications experts from Italy, Sweden, Portugal, the United States, Cuba, France, Britain, Sudan, (?Ivory Coast), Austria, and Finland.

Speaking at the opening session, Mr. Lousa said of the total of 26 projects set up in 1988, (?95) percent have been carried out. Presently, he said, 12 projects are in the process of implementation at [word indistinct] level in the areas of management, operation and maintenance, finance, training, and planning. Rui Lousa said the International Telecommunications Union is in the process of updating the [words indistinct] telecommunications development plan to cover the period up to the years 2009.

SOUTH AFRICA

CNN Gets Backing of SABC, M-Net for News Channel

MB0212162690 Johannesburg SUNDAY TIMES in English 2 Dec 90 p 5

[Report by Douglas Gordon, TV Correspondent: "Get Ready for 24 Hour News"]

[Text] American news giant CNN [Cable News Network] has the backing of the SABC [South African Broadcasting Corporation] and M-Net in its bid to run a news TV channel in South Africa.

The consortium needs the government go-ahead for a TV channel to show the news service next year.

It's the first sign that the SABC and independent M-Net will work together to give the public better TV services.

The SABC has the local broadcasting rights to CNN. M-Net has 500,000 decoders on its pay-TV network, and is looking for more services to offer to subscribers.

President of CNN's international special projects, Sidney Pike, said the partnership is ideal for business development.

"CNN wants to sell a daily news service," he said.

"We now have an arrangement to facilitate it. We must apply for government approval. But I'm optimistic that the country's first 24-hour news channel will go ahead."

The CNN network is linked to 50-million homes in America alone.

Its 24-hour service includes headline news, indepth reports and specials on showbiz, sport, finance, business and health.

Mr. Pike sells the service to national networks, cable networks and to hotels.

He licensed CNN to the SABC in 1988, and to three five-star Johannesburg hotels this year.

The SABC uses excerpts from the CNN satellite channel in its daily news bulletins.

M-Net confirmed the CNN approach, but said it was too soon to comment on an outcome to the talks.

The SABC said it was looking at the deal, but that the only the government could decide on new TV channels.

RENMIN RIBAO Notes Satellite Communications Growth

OW2011091690 Beijing XINHUA in English 0745 GMT 20 Nov 90

[Text] Beijing, November 20 (XINHUA)—China is boosting satellite communications at an increase of 35 percent each year, "PEOPLE'S DAILY" reported today.

The overseas edition of the national paper said the country has set up six large international ground satellite stations to connect the country with 180 other countries and regions via satellite.

China has succeeded in launching two telecommunication satellites since 1988.

So far, the country has 12 satellite transponder stations and more than 20,000 ground satellite receiving stations.

The paper noted that the country is preparing to build more domestic ground satellite stations to meet the needs of the telecommunications boom.

Beijing Maritime Satellite Station Begins Work

OW2711111290 Beijing Television Service in Mandarin 1100 GMT 26 Nov 90

[By reporter Liu Haijiang [0491 3189 3068] and correspondent Feng Xuejun [7458 1331 6511]; from the "National News Hookup" program]

[Text] According to a briefing by the Chinese Satellite Launching, Tracking, and Controlling System Department today, the Beijing International Maritime Satellite Tracking and Controlling Station—China's first satellite tracking and controlling station meeting advanced world standards—has been completed and put into operation in Beijing. This marks the entry of China's space tracking and controlling technology into the international market. Tracking and surveying data obtained from the communications satellite launched by the International Maritime Satellite Organization [IMSO] on 31 October have been accurate and reliable. IMSO has highly evaluated the data. [Video shows compound with tall antenna tower flanked by two large satellite dishes; cuts to interior shots of racks of equipment, personnel operating computer terminals; further cuts to show Chinese and foreigners meeting, holding discussions]

China won the bidding for the Beijing International Maritime Satellite Tracking and Controlling Station in 1988. A contract for construction and operation of the station was signed the same year. Under the contract, China will manage the surveying, controlling, and positioning of second generation maritime satellites of the international organization. According to the first contract, China will provide continuous tracking and controlling services to IMSO for five years.

Tianjin To Construct Television Tower

OW2211191990 Beijing XINHUA in English 1550 GMT 22 Nov 90

[Text] Tianjin, November 22 (XINHUA)—Tianjin, a coastal city in north China, is planning to build a 405 meter television tower.

The tower will be the third tallest in the world, following the Toronto Television Tower in Canada, and the Moscow Tower in the Soviet Union.

The tower, which is designed to resist an earthquake with a magnitude of nine on the richter scale, has the capability to transmit both color TV programs and FM broadcasts.

The towers revolving restaurant—the highest in Asia—at the 257 meter level was built to allow customers a panoramic view of the city scenes.

Heilongjiang's Telecommunications Achievements Reported

SK3011104090 Harbin Heilongjiang Provincial Service in Mandarin 2200 GMT 28 Nov 90

[Summary] Heilongjiang Province has scored marked achievements in the undertakings of post and telecommunications. During the Seventh Five-Year Plan period, the telecommunications capability of various localities has shown a from 1 to 50 times increase over the figure scored during the Sxith Five-Year Plan period. The province has recently put 100,000 telephone lines into operation among urban areas this year, which are equal to the province's total telecommunications volume scored before the PRC's founding. By the end of June of this year, the province had automated all urban telephone systems.

INTER-ASIAN AFFAIRS

Japan's KDD, DPRK Sign Satellite Communications Pact

Direct Circuit via Satellite

OW2911141190 Tokyo KYODO in English 1345 GMT 29 Nov 90

[Text] Tokyo, Nov. 29 KYODO—Japan and North Korea signed an agreement in Pyongyang on Thursday to open a direct circuit via satellite between the two countries, North Korea's KOREAN CENTRAL NEWS AGENCY (KCNA) said.

The KCNA report said the agreement was signed by Kim Yong-ryong, chief engineer of North Korea's International Communications Bureau, and Yasuo Koseki, director of Kokusai Denshin Denwa Co. (KDD).

Further on Communications Agreement

OW2911175490 Tokyo KYODO in English 1459 GMT 29 Nov 90

[Text] Tokyo, Nov. 29 KYODO - Japan's international telecommunications giant, Kokusai Denshin Denwa Co. (KDD), signed an agreement with North Korea on Thursday to open a direct circuit via intelsat satellite between the two countries, a KDD spokesman said.

Under the agreement, signed in Pyongyang, three telephone circuits and 10 telex circuits will be established later in the year if everything goes well, he said.

He also said KDD agreed with North Korea to start international television transmission service if necessary.

INDONESIA

Contract on Radio Transmitters Signed With UK

BK3011135190 Jakarta Domestic Service in Indonesian 1200 GMT 30 Nov 90

[Text] Alex Leo Zulkarnain, director general of Radio, Television and Film, representing the Indonesian Government today in Jakarta signed a contract with the British Government on the supply of transmitters to RRI [Radio Republic Indonesia]. The British Government was represented by John Frederick Mason, assistant director of Marconi Communications International Limited, while the Indonesian Marconi subsidiary, P.T. Astona Mitra Sabena, was represented by Agung Laksono.

According to Alex Leo Zulkarnain, the project was intended to further improve the quality of RRI's radio program transmissions nationwide. Nine 250-kilowatt transmitters costing 29 million pounds sterling will be stationed at Cimanggis in west Java and Ujungpandang in South Sulawesi.

JAPAN

New Yuri-3A Satellite To Start Broadcast Service 30 Nov

OW2911124690 Tokyo NHK General Television Network in Japanese 1000 GMT 28 Nov 90

[Text] The Yuri-3A broadcasting satellite, which was launched by the National Space Development Agency [NSDA] in August, was handed over this evening to NHK and Japan Satellite Broadcasting Incorporated, a commercial enterprise. The two stations will start broadcasting on three of the satellite's channels on 30 November.

Yuri-3A, the new broadcasting satellite, was handed over to NHK and the private Japan Satellite Broadcasting at 1800 this evening, since the NSDA has confirmed that there will be no problems for the satellite to broadcast on three channels for the time being.

Yoshiro Nakamura, executive director-general at NHK's engineering headquarters, said in a news conference that NHK will begin broadcasting through new satellite at 0400 JST on 30 November. Japan Satellite Broadcasting will start test transmissions tomorrow. The two stations will officially start broadcasting on three channels via Yuri-3A on 30 November.

NHK programs presently broadcast on satellite (BS) Channel number 15 will be broadcast on BS Channel Seven, although viewers will be able to continue watching on BS Channel 15 until the end of January.

Programs now broadcast on Channel 11 will remain on the same channel.

SOUTH KOREA

Telecom Authority Signs Intelsat Lease Contract

SK2711022890 Seoul YONHAP in English 0155 GMT 27 Nov 90

[Text] Seoul, Nov. 27 (YONHAP)—The Korea Telecommunication Authority signed a five-year lease Monday for use of an Intelsat satellite from January 1992, KTA President Yi Hae-uk said.

The head of the government-invested telephone company told a news conference that KTA would pay 6.4 billion won to intelsat (the International Telecommunications Satellite organization) for the lease period.

"Making use of an Intelsat satellite, we hope to accumulate satellite operation technology, which is essential to launching our first two communication satellites in 1995," Yi said.

KTA plans to launch its first two communication satellites, called "Mugunghwa" (Korea's national flower), in 1995.

The leased satellite was made in 1985 by the U.S. Ford Aerospace Co. and is in geosynchronous orbit at 177 degrees east on the equator. KTA will use it to provide communication services ranging from video conferences to high-speed digital services and vsat (very-small aperture terminal) services.

The contract was signed by Yi and Dean Burch, secretary-general of the Washington-based consortium that specializes in satellite systems leases.

Ministry Says North May Be Allowed To Use Satellite

SK0212053790 Seoul THE KOREA TIMES in English 2 Dec 90 p 1

[Text] A communications and broadcasting satellite that South Korea plans to launch in 1995 can be used by North Korea in the long run, a ranking Communications Ministry official said yesterday.

Another senior ministry official, however, said that the projected medium-size satellite to be named "KoreaSat" will be designed to cover only the southern part of the divided Korean peninsula in accordance with the regulations of the International Telecommunication Union (ITU).

During the parliamentary inspection of the ministry, Rep. Choe Yong-kun of the opposition Party for Peace and Democracy asked Minister Yi U-chae if it was possible for the North to use the projected satellite.

Yun Tong-yun, director of planning and management of the ministry, said, "Our government was given an ITU permission in 1988 to launch the satellite to cover the southern part of the peninsula only. Therefore, it would be difficult to change the plan at present to extend the coverage of the satellite."

Minister Yi U-chae said, however, that "in the course of manufacturing the satellite," the ministry can study the possibility of expanding coverage to North Korea.

A ministry official said, "it would not be too late to study the issue even after the satellite has been launched."

He explained that it will take two to six years for the government to win endorsement from ITU and neighboring countries, including China and Japan, to design and launch a satellite which can cover the whole peninsula.

"If and when inter-Korean relations improve and North Korea wants to use the satellite, our government will consider it favorably," the official said.

An expert at the ministry opined that the satellite might be utilized in some regions of the North without changing its design, frequency and orbit.

The government communications satellite project has to pass an inspection by ITU to determine whether it followed the original design before it is launched.

The government plans to invest some 300 billion won (about $422 million) in the project, according to the ministry report to the National Assembly.

MALAYSIA

Telekom Malaysia Launches Large-Scale Investment Program

91AN0053 Chichester INTERNATIONAL TELECOMMUNICATIONS INTELLIGENCE in English 8 Oct 90 p 22

[Article: "Five-Year M$5.6 Billion Investment Programme Announced"; all figures are in Malaysian dollars]

[Text] Syarikat Telekom Malaysia (STM or Telekom Malaysia), the government-owned corporation that is setting the scene for private-sector investment in the country's telecommunications infrastructure (formerly managed by Jabatan Telekom Malaysia), is embarking on an ambitious and much-needed five-year, M$5.6-billion ($2.1-billion) capital improvement programme. Announcing this, STM also said it would cooperate with Singapore Telecom on engineering, marketing, and international service projects as well as joining with eight other carriers and telecommunications administrations to build Asia's longest fibre-optic submarine cable system linking Hong Kong, Japan, Malaysia, Singapore, and Taiwan.

The M$5.6-billion, five-year plan includes M$1.4 billion for a cellular telephone expansion programme; M$415 million for investment in jointly constructed and operated international fibre-optic undersea cables, including the project with eight other carriers; M$1.4 billion on expanding rural telecommunications; and at least M$2.5 billion for general modernisation. STM is also planning a nationwide digital transmission network, including microwave. Within three years, the digital network is expected to be sufficient to enable commercial integrated services digital network (ISDN) services to begin.

Malaysia's telecommunications development is way behind other Asian countries. Its 1,484,000 telephone lines (June 1990) and a penetration ratio of eight per 100 people compares badly with Singapore, which has 37 telephones per 100 people. In 1987 the number of telephone lines in Malaysia totalled 1,131,700. At the end of June 1990, STM had 30,156 telefax service customers, compared with 4,674 in June 1987.

The company's ATUR 450 cellular mobile phone system has grown from a customer base of 17,411 in January 1987 to 47,060 subscribers in June 1990.

STM said the success of the five-year plan will be based on the success of its public shares offering.

MONGOLIA

Mongolia Orders South Korean Equipment

91AN0049 Chichester TELEFACTS in English Sep 90 p 5

[Article: "Daewoo Wins Telecoms Contract"]

[Text] Mongolia strengthened its diplomatic ties with South Korea recently with the award of a $30-million contract to supply telecommunications equipment.

South Korea's Daewoo Corporation is to install a 120-channel fibre-optic network stretching 40 miles between Ulan Bator and Zoonmod, supply digital switching equipment comprising a 69,000-line time division exchange (TDX), and construct radio and TV broadcasting systems.

POLAND

Development of Polish Telecommuncations Reviewed

91WT0027 Warsaw WIADOMOSCI TELEKOMUNIKACYJNE in Polish No 10, Oct 90 pp 2-3

[Article by Ryszard Katanski: "The Development of Telecommunications in Poland"]

[Text] The direction of and prognoses for the development of telecommunications in Poland to 2000 were often the subject of discussions and analysis at meetings of the Economics Committee of the Council of Ministers. As a result of these discussions, the premises of state policy in the area of telecommunications were designated.

Among other things, the premises assert that:

- Reconstructing the system for operating the economy and state requires fundamental changes in telecommunications. Considering the significance of the telecommunications network as a system affecting the operating efficiency of administrative organs at all levels and for all levels of the economy, and asserting that the status of the existing telecommunications network is highly unsatisfactory, it is recognized that developing telecommunications in Poland and improving its operations is one of the priority tasks to be accomplished in the next decade, and the state should create proper conditions to accomplish this.
- The primary goal of state policy in the area of telecommunications is to create conditions to achieve by 2000 a state of development of telecommunications in Poland such that the needs of the national economy and citizens for telecommunications services would be met to the same extent they are met in other european countries having similar levels of national income per resident.

  The Polish standard telecommunications network should satisfy criteria for a modern world network.
- In particular, the changes in telecommunications will concern:—improving the existing telecommunications networks and creating modern multitask digital networks;—expanding to a perceptible degree access to these networks (increase saturation with generally available telephone equipment, reduce waiting time for telephone installation, and the like);—introducing new services into the networks, for example, data transmission, land mobile radiocommunications, electronic mail, access to bank information, videotelephones and the like.

The technical base for developing and modernizing Poland's telecommunications network should remain above all the domestic telecommunications and cable industry, which should be restructured and modernized, as well as cooperation with the telecommunications industries of the developed countries.

Only highly specialized test equipment necessary for the proper maintenance of the network and network devices that are few in numbers should be imported.

In addition the only other exceptions should be equipment needed to realize tasks projected for the 1990-1991 program that are very essential for creating the proper conditions for the future development of the telecommunications network in Poland, and to satisfy exceptionally urgent current needs, such as improving international telecommunications and the very critical situation in the Warsaw telecommunications network. Above all this concerns the international telephone exchange and several transit exchanges for Warsaw, the digital radio links for the main Koszalin- Warsaw line, which is the extension for the Koszalin-Bornholm undersea cable, and equipment for the first stage of development for a cellular radiocommunications network, especially station equipment.

The unsatisfactory state of Poland's telecommunications and its causes already have been discussed many times. Thus, I will not dwell on this subject. Instead, I will concentrate above all on the immediate tasks designed to improve the situation rapidly in selected areas of communications. Among these there is, above all, the need to set into operation the KOMERTEL long-distance and international automatic allocated telephone network with a special exchange in Warsaw which will make direct connections with selected subscribers in several of the larger cities, such subscribers as large international hotels, foreign commercial representatives, diplomatic posts, foreign trade headquarters and the like.

The new automatic international exchange having over 3000 lines, which is supposed to be in operation by the end of this year or beginning of next year, will improve international communications significantly and will finally enable all institutions involved in cooperation with foreign countries to operate normally. The eight new relay transit exchanges in Warsaw that enable automatic by-passes and the planned installation, at least on several routes, of digital radio links as interexchange connections should finally immunize the Warsaw telephone center against the incessant damage to the interexchange cables caused by the metro construction operations and heating system accidents. The completion of the Koszalin-Warsaw radio link will provide a large number of international links to North and Northwest Europe and will improve international communications. This also applies to the planned construction of the EUTELSAT satellite communications ground station.

The initiation of operation, also probably by the end of this year or beggining of the next, of the first mobile cellular radiocommunications network will satisfy the big-business people who cannot even for a moment be

out of touch with their secretaries, even while driving about town in their cars (though this will not be a cheap amenity).

This also applies to the call radio network, which is already beyong the stage of practical experimentation. This network can be constructed easily with very little outlays because the UHF FM radiotelephone station network, on which it is based, is already available and encompasses the entire country. It will only be necessary to provide the call signal to all the stations and to equip the transmitters with the proper oscillators and subcarrier frequency modulators on which this signal is transmitted. The mass production of call signal receivers and their relatively high cost are more important problems. But it seems these difficulties can be overcome.

These are the most important immediate problems for which financial resources must still be found. For some of them, such as the construction of the mobile cellular radiocommunications network and the data transmission network with packet switching, that involve the entire country and a significant number of terminals, it will probably be necessary to find solutions in the form of partnerships with participation of foreign capital. However, for the telephonization of the rural areas, local capital should be used.

Concerning future goals, in the area of technology the trend undoubtedly will be toward the digitization of the network. This is linked with the need to eliminate completely as quickly as possible the mechanical systems, which are completely worn out, require highly qualified mechanics to maintain them properly, do not permit the use of new network maintenance methods (for example, automatic search for by-passes) and do not permit the introduction of the CCITT Nr 7 signalling system without which we will not be able to make use of the interantional network in the near future. Concerning the Pentacont system cross-bar exchanges, the installation of new exchanges with electromechanical registers should be abandoned as quickly as possible and program control, which is necessary to implement the CCITT Nr 7 signalling system, should be introduced in existing exchanges as quickly as possible. Concerning the digital exchanges, the E10 system in its present and improved version as well as other digital systems projected for use in the network, for example, the System 12, EWSD and AXE, then the concept of an exchange with wyniesiony koncentrator [translation unknown] should be implemented as extensively as possible. This should be especially useful considering the urban construction promulgated in Poland (settlements in the form of large residential blocks, where it would be easy to find room for a koncentrator [translation unknown], are being built and will probably be built for many years to come). This will provide significant savings in the distribution network cabling because connections between the koncentrators [translation unknown] and main exchange could be accomplished via fiber-optic cables, and only the subscriber cable would be copper.

Only fiber-optic cables should be used for inter-exchange connections. This also applies to cables in local and long distance networks where the use of coaxial cables should be discontinued as soon as possible.

In many cases, especially in areas exposed to mining dangers, digital radio links should be used instead of fiber-optics at all levels of a network, especially in networks equipped with digital exchanges that do not require the use of relatively expensive translations, which are essential in electromechanical exchanges with DC signalling.

In the relatively near future we should also consider proceeding to digital technology in satellite communications systems, high capacity systems as well as systems with ground stations having small-diameter antennas. The latter systems are worthy of greater interest from the technical, legal and tariff viewpoints because they permit communications beyond the public telecommunications networks on a domestic as well as international scale. In addition, in some countries the users of such systems lease links to third parties, realizing a so-called added-worth network and competing with PTT.

These problems are the subject of heated discussions within the Association of Telecommunications Systems Users, an organizations that lately has begun to establish a strong position in the international telecommunications community, the UIT and in regional organizations, such as the CEPT.

Concerning mobile land radiocommunications, the near future belongs to cellular networks in the 450 MHz area, and this is preordained.

However, one must make preparations for the introduction within Poland of the GSM system in the 900 MHz area, which will be an all-European system. Undoubtedly TIR heavy road transport, whose routes traverse all of Europe, will be interested in this system. But this does not necessarily exclude the INMARSAT satellite communications system from competing in this area. It is supposed to offer a certain number of frequency channels for satellite mobile land service. Some opine, however, that the number of channels will be insufficient for servicing the TIR fleet, which makes thousands of trips, and that the TIR trailer-trucks will have to use the GSM system.

The ministry's position on providing telecommunications services is in general in agreement with the previously mentioned Premises of State Policy in the Area of Telecommunications, in which the need to maintain a standardized state telecommunications network is mentioned several times.

But, it is obvious that the state's budget is not in any position to subsidize the development of telecommunications. In addition, the current credit policy, high interest rates and limited resources of available bank credit do not favor the development of telecommunications in Poland on domestic credit, and it is necessary to

seek external sources for financing this development in Poland and abroad. One of these sources of credit is the World Bank which also has limited capabilities and is reluctant to finance investment projects other than those based on purchasing ready-made equipment from the developed countries where the development of telecommunications is close to saturated and where the telecommunications industry actively seeks markets for ready-made equipment and enters into cooperative agreements with industries of the lesser developed nations only as a last resort. It appears that the optimum solution is joint ventures with foreign partners to realize specific types of telecommunications services, for example, a mobile radiocommunications network. However, if greater capital is necessary, then such resources should be treated as equity stock in companies.

I would like to add a few details concerning the example of the Hungarian administration of communications. Lately this administration was transformed into a joint stock company and is waiting for a new law on communications that will cancel the state monopoly in telecommunications and permit several foreign companies, primarily American ones, to own stock in the joint stock company. One should be aware of the dimensions of such a venture is it were realized in Poland.

To achieve the desired goal of obtaining by 2000-2010 an increase of 12-15 million new telephone subscribers, an investment outlay of $12-15 billion is needed, and one must strive for such a sum. Discussions on this matter should only be held with significant investors and not with such investors as the one competing for the cellular mobile radiocommunications network who who wanted $300 million for the project.

The recent contacts made with representatives of many foreign development companies, including the offers for the mobile radiocommunications network, indicate that many of these companies are interested in investing in Poland's telecommunications network. This encourages the hope that the goals presented in the development programs can be realized and even exceeded.

(The article was submitted for publication in June 1990.)

BOLIVIA

Construction of Ground Station To Begin in Santa Cruz

PY2411000290 La Paz Television Boliviana Network in Spanish 0030 GMT 22 Nov 90

[Text] The National Telecommunications Enterprise [Entel], through Entel General Manager Juan Jose Peralta, has announced the signing of a contract for construction of a ground station in Santa Cruz de la Sierra.

[Transport and Communications Minister] Engineer Willy Vargas Vacaflor signed the contract for construction of the ground station in the city of Santa Cruz with representatives of the French enterprise Alcatel [expansion unknown] and the German enterprise Siemens, which will implement the project.

[Begin Vargas recording] It is impossible to begin a development process without considering that telecommunications are perhaps the basic infrastructure for creating the conditions that will permit Bolivia to participate in international trade as an economic reality—giving and taking. In addition to that, there is also the relationship between the people and between nations. There is no business in the world today that is not conducted through sophisticated telecommunications systems. [end recording]

High-ranking Entel officials attended the signing of the contract.

The Santa Cruz de la Sierra facilities will be similar to those of the ground station already installed in La Paz. The work, which will begin immediately, has been scheduled for completion on 24 September 1991. The foreign contractors have committed themselves to the deadlines for this work which is so important for regional development and national integration, Entel's basic objectives.

CUBA

Satellite Communications Station Opens in Santiago

FL3011144290 Havana Tele Rebelde Network in Spanish 1200 GMT 30 Nov 90

[Text] The country's third ground station for international communications has opened in Santiago de Cuba. It is the result of cooperation between Italy's Italcable and Cuba's Intertel communications companies. This portable-type facility has computerized equipment and will ensure direct telephone communications for the first time between Santiago de Cuba and Rome, Italy, and the other countries in the world. It will provide extensive benefits, mostly for tourism.

Esteban Lazo, a Politburo member and first party secretary in the province; Minister of Communications Manuel Castillo Rabasa; and representatives from the two countries' companies attended the opening ceremony. The Cayo Largo ground station and one in Holguin are also to be opened in a few days. The first two installed in Cuba are in operation in Varadero and Havana.

NICARAGUA

New Television Channel Begins To Air

PA2311223190 Managua Radio Sandino in Spanish 1200 GMT 16 Nov 90

[Text] A new television station, Channel 2, will begin to air today, thus opening a new era of television in Nicaragua. Channel 2, operating as a mixed commercial venture enterprise, will officially begin transmitting today with modern audio and video equipment.

The enterprise, identified as Channel 2, will initially transmit programs recorded abroad and several television soap operas, which have been successful with the Spanish-speaking viewers in the United States.

Octavio Sacasa and his wife Marta Sacasa are the administrative directors. Before 1979 they were important partners of Televicentro of Nicaragua, which had a vast array of television repeater channels in the interior of the country.

Channel 2 will air as a result of a commercial agreement between the government of Nicaraguan President Violeta Chamorro and businessman Octavio Sacasa Rascosci, who has brought modern audio and video equipment into the country. Only the antenna of the old Channel 2 is being used. It will be replaced in a few months in view of its deteriorated condition, Sacasa told our newscast.

Today at 1800 Oscar Miranda, who is sales manager for Channel 2, other former employees of Televicentro, and Sacasa himself will make the presentation of their programming, followed by a toast at the Terraza restaurant.

The station's transmitter has 20 kilowatts of power and, according to the early reports, is received as far as Ocotal city.

ST LUCIA

Radio Caribbean International Begins Test Transmissions

FL2811233590 Bridgetown CANA in English 2039 GMT 28 Nov 90

[Text] Castries, St. Lucia, Nov 28, CANA—St. Lucia-based Radio Caribbean International, which ceased broadcasting on medium wave several years ago, is returning with new programme format aimed at an expanded audience in the Eastern Caribbean, a spokesman said on Wednesday.

Christian Bonnel, the station's programme director, said test transmissions had started on the old mw frequency of 840 kilohertz aimed mainly at listeners here, as well as in Barbados, St. Vincent, Martinique, and Dominica. The station, owned by the French state company Sosirad, also broadcasts on FM.

Bonnel said a 10 kilowatt transmitter was currently in use and there were plans to boost the station's signal with the addition of another 10 kilowatt transmitter.

The station promised a varied programme format, featuring news from the CARIBBEAN NEWS AGENCY and major international shortwave broadcasters such as the Voice of America, Radio France International, and Swiss Radio International. There will also be features on science, sports, the arts, the economy, and a wide range of music from all over the globe.

Eighty five percent of the broadcasts will be in English, with the remaining 15 percent in Patois, a dialect spoken in St. Lucia, Dominica, and the French Caribbean islands.

EGYPT

Regular Transmission Via Arabsat To Begin on 1 December

NC2111090090 Cairo MENA in Arabic 2337 GMT 20 Nov 90

[Text] Cairo, 20 Nov (MENA)—The regular transmission of programs on the Egyptian international wideband channel via Arabsat will begin on 1 December, according to Engineer Fathi al-Bayyumi, trustee chairman of the Radio and Television Union. He said that experimental transmission on this channel, which began on 1 November, will continue through the end of the month.

Eng. al-Bayymi noted that the Egyptian television's channel one programs will be transmitted on this channel after some domestic programs have been eliminated. He said that some of the television's channel two items, especially newscasts in English and French, will be introduced into these programs.

He added that transmissions on this space channel will be beamed to Africa, East Asia, and some south European states. He explained that one of the objectives of transmitting on this channel is to provide the Egyptian Armed Forces abroad with Egyptian television programs so that they may follow Egyptian events and establish a permanent link between them and their homeland.

Eng. Fathi al-Bayyumi noted that one of the most important objectives of this channel's transmission is to ensure that Egyptian programs reach the Arab decision-makers who wish to follow Egypt's stand on various issues. It is also to provide Egyptian television to the Egyptian and Arab communities in Africa, Asia, and Europe, as well as to the Islamic communities in these states who are interested in seeing Egyptian television, especially the programs that are broadcast during the holy month of Ramadan.

The al-Ma'adi ground satellite station that links Egyptian television to Arabsat was opened in early November. The construction of this station cost 12 million pounds, which was donated by Saudi Arabia. The annual rent for this wideband channel is $2 million.

Talks Held With Italians on Satellite Channels

NC2611214290 Cairo MENA in English 2055 GMT 25 Nov 90

[Text] Cairo, Nov 25 (MENA)—Information Egyptian-Italian talks under Fathi Bayyumi, the chairman of the T.V. and Broadcasting Corporation, and the visiting deputy director of the Italian T.V. and Broadcasting Corporation, to prepare a draft protocol for information cooperation between Egypt and Italy, opened here tonight.

The meeting dealt with formation of working groups to prepare the draft protocol and define its information fields, as well as the possibility of Egypt's use of the programme of the Italian international satellite channel in Egypt, and Italy's use of the Egyptian international satellite channel.

The final session of the talks will be held tomorrow.

The Italian delegation had toured today T.V. and radio studios and saw the system of work.

[Cairo MENA in English at 1924 GMT on 26 November adds, "The Egyptian-Italian talks on preparing the draft information cooperation protocol between the two countries ended here today.

"Fathi Bayyumi, radio and TV union board of trustees chairman, said that the protocol was expected to be signed in the second half of January.

"Bayyumi, who led the Egyptian side to the talks, said that the protocol included, among other things, bilateral cooperation in the sphere of TV programmes exchange via satellites."]

INDIA

First Indigenous Expansive Communications System

91WD0109 Madras THE HINDU in English 9 Oct 90 p 11

[Text] New Delhi Oct 8—India's first indigenous expansive communication system known as the AREN (Army Radio Engineered Network) for use in modern battlefields, has been successfully executed on the ground.

This was announced by Brig. S.K. Vij, the project coordinator, who took reporters around the base here and apprised them of the capability of the network. "Commissioned into service last year, this system has placed India on the world communication network map," Brig. Vij said with pride. According to him, India was the third country in the world to have acquired this system after Britain and France, U.S. would be implementing it only next year, he said.

Brig. Vij said a formal function would be held here on October 11 to honour and felicitate all serving and retired officers, scientists, technicians and engineers who helped in transforming the AREN into reality.

Conceived in the Sixties to meet the futuristic communication requirement of the Army, the AREN is based on a fully integrated computer controlled system and is primarily used for field force communication. "Since fast secure, robust and flexible communications play a vital role in modern warfare for fast manoeuvring and exchange of information, the AREN helps in maximising the effort at the point of decision," Brig. Vij explained.

The AREN provides an adaptive network which can be configured and re-configured to suit a fluid tactical environment and enemy threats. The architecture offers

multi-media, multi-mode and multi-axial approach which has an in-built survivability. The AREN has also dispensed with the time-consuming and long-drawn-out processes of the old days like open wire long-distance lines for trunk communications, manually operated exchanges for telephone services and the use of morse keys for traffic clearance.

The AREN comprises a grid or network of communication centres connected through trunk radio linkages known as 'highways', which are established in the area where the field force is operating. The formation headquarters, operating anywhere in the area, 'hook' on to the nearest communication centre through a communication element called an 'entity' and gain access to all other formation and units in the grid.

Voice communication, teleprinter, facsimile and data communication facilities are offered to the subscriber in the field even while on the move with the AREN. All these communications are cryptographically secure, efficient, quick to establish, capable of handling a large volume of traffic, multiaxial in nature and with longer ranges, according to Brig. S.K. Vij.

The effective launching and successful completion of the AREN plan marks a significant event for the personnel of the Corps of Signals.

World's Largest Radio Telescope To Be Set Up

BK0212084490 Delhi Domestic Service in English 0730 GMT 2 Dec 90

[Text] The world's largest radio telescope is soon to be set up in the country. This giant meter wave radio telescope will be ready within three years and the expertise and efforts will be entirely Indian. Coming up at Khodala near Narayangaon near Pune, this telescope will be a national facility. AIR [All India Radio] correspondent reports that the telescope being set up by the Department of Atomic Energy involves the cost of over 80 crore rupees. It will offer many exiting opportunities to the scientists to unravel the mysteries of the universe. Our correspondent says the giant meter wave radio telescope will be the most powerful facility in the world for astronomical research in a meter and decimeter wave bands. It is being designed to investigate a wide variety of celestial objects reaching out from our solar system to the very edge of the observable universe.

IRAN

Satellite Ground Station Commissioned Near Bandar Lengeh

LD2711120790 Tehran Domestic Service in Persian 1030 GMT 27 Nov 90

[Text] A satellite ground station in Zangard and Chahbenard, in the suburbs of Bastak in Bandar Lengeh, was commissioned. According to the report of the Central News Unit, with the commissioning of this satellite station, from now on the people in those villages will be able to watch the programs of Channel One of the Vision [Television] of the Islamic Republic of Iran on station five. The works for the installation and commissioning of this satellite ground station have been carried out by the engineers and experts of the television and fm transmitter units, and the installations unit of the Voice and Vision [radio and television] of the Islamic Republic of Iran, Persian Gulf center.

ISRAEL

1,000 Pirate TV Stations Reportedly Broadcast in Country

TA3011180190 Jerusalem Domestic Service in Hebrew 1200 GMT 30 Nov 90

[Text] Approximately 1,000 pirate television stations [as heard] are operating in Israel. Those in the Arab villages broadcast PLO propaganda material. This was reported by our correspondent Mor Suliman. Other stations air pornographic movies, illegal advertisements, and KAKH propaganda. Most of the stations are operated by criminals, and some serve as a means to transmit coded messages to drug stations. The director general of the Communications Ministry says that his ministry plans to establish a special patrol unit to raid the stations and arrest their operators. It seems, however, that the police lack the necessary manpower to deal with the problem.

Parameters Given for 'Gorizont' Satellite

LD2411111790 Moscow TASS International Service in Russian 1020 GMT 24 Nov 90

[Text] Moscow, 24 Nov (TASS)—In connection with the program for further development of the communications and television broadcasting system utilizing artificial earth satellites, a regular "Gorizont" communications satellite was launched on Friday in the Soviet Union by the "Proton" launch vehicle.

The satellite has been placed in a close to stationary orbit with initial parameters:

—Height above the earth's surface: 36,545 kilometers;

—Period of revolution: 24 hours, 35 minutes;

—Orbital inclination: 1.3 degrees.

The apparatus aboard the "Gorizont" satellite is working normally. A command-measuring complex controls the satellite. The operation of the satellite's communications and television apparatus will be conducted in accordance with the planned program.

New TV Head Kravchenko Interviewed on Plans

PM3011154190 Moscow PRAVDA in Russian 27 Nov 90 Second Edition p 6

[Report on interview with Leonid Kravchenko, newly appointed head of the USSR State Committee for Television and Radio Broadcasting, by N. Krivomazov: "Shakeup at Ostankino. It Seems That the Days of the USSR State Committee for Television and Radio Broadcasting Are Numbered. What Is Leonid Kravchenko's View of This?"]

[Text] Something else I did not like at Central Television was the "oriental-style" coffee in faceted glasses which cost seven pre-perestroyka kopeks apiece. No, I am not complaining about the coffee, they make coffee excellently here. A good strong "brew." And I believe that when, especially during the night, television stars, worn out by the work which goes on around the clock, sip coffee from the vile glasses, they do not even notice the crass, offensive incongruity between form and content any longer. They have gotten used to it. Who cares about cheap glasses, as long as there is coffee and sandwiches...

"Oriental-style" Coffee in Faceted Soviet-Style Glasses

Then, taking a fresh look at this lack of sophistication at Ostankino, I suddenly realized that the main problem with our television is very similar to this. Sometimes a very high-grade television "product" is badly packaged on the screen. Just like the good coffee in bad glasses. And frequently the reverse is the case: There is more than enough "cellophane" wrapping, but the substance behind the dazzling words and striking opposition stance is second-rate. In both cases you immediately feel like a "TV idiot." Again there is nothing to watch on TV!

So where does Leonid Kravchenko, the new head of the USSR State Committee for Television and Radio Broadcasting, who has only just been appointed to this post, intend to begin?

"I must swiftly disband... the State Committee for Television and Radio Broadcasting, and then abolish my own post," he says with a grin. "But, to be serious, two autonomous state companies independent of each other must be established. One may be called the All-Union State Television Company, and the other, which will enjoy equal status, the Radio Broadcasting Company. Essentially, the former State Committee for Television and Radio Broadcasting does not exist any longer."

His predecessor used to argue that television cannot be better than life. It is difficult to disagree with this. After all, even in fairy tales the magic mirror merely reflects what it sees. If it is Cinderella who is looking into the mirror, it is her image that the mirror reflects. Until she becomes a princess.

We will assess the creed of the new, 52-year-old leader as soon as the perestroyka of radio and Central Television has been completed, for which he has been given a matter of weeks. But one of the answers, as far as I am concerned, is immediately apparent. Yes, television can only reflect what it sees. But sometimes this reflection has been thoroughly filtered. Life is more colorful than its depiction on the screen, which may be in color, but sometimes portrays life in black and white. Like the last "Before and After Midnight" program on which a former CPSU Central Committee official looked like a dissident, and a genuine dissident looked like a thoroughbred party leader.

I have already written—in the 18 October edition of PRAVDA—about what our television looks like from the outside, in this case after a cursory acquaintance with Japanese television. The report was entitled: "Should We Seek To Alarm or To Please?" But the question mark in the headline was superfluous. Because as far as I am concerned, the answer is known. There is no need to excessively worry people by telling them that "matters are going to get worse." One knows that without being told. It would be better to teach them what to do to ensure that matters get better. And every such effort has to start with a small step. It is impossible to love all mankind—it is necessary to love individual people: pensioners, rockers, politicians, poets. And I am absolutely sure that it is impermissible to alarm us all with beautifully produced "late-night news" just before we go to bed. After such news it is sometimes impossible to go to sleep. Therefore the news must be followed by a soft, tranquil program such as the "Good Night, Adults"—L. Kravchenko's first proposal.

And so where should the "new broom" begin to sweep? How about the coffee cups?

"Madhouse"

So as not to incur accusations of being subjective, I will cite the opinion of a former journalist. Today Vladimir Shilov heads the main sociopolitical programs desk, but he still remembers that his first impression from his new place of work was... shocking. "It was as if I had fallen among raging lunatics."

Every conference, every meeting turned into a cauldron of seething passions where everyone was shouting and no one was listening to anyone else. However, V. Shilov soon came to understand that people's need to speak their mind and to shout stemmed from the acute creative dissatisfaction of his new colleagues. The main propaganda desk, as it was then called, was essentially an appendage of the CPSU Central Committee ideological apparatus. And hence the main principle of its creative activity was compiling apologias.

It is much easier to show life the way members of the Politburo and government leaders would like to see it than to examine and analyze life the way it really is. Circumstances were frequently at variance with this incongruity. Then perestroyka began to break down the circumstances. It became necessary to switch from pontificating to expressing public opinion.

And so for Shilov Central Television changed from a "madhouse" into a house of selfless creative people, totally ruthless about their own health, disregarding their own personal and family interests, ready to work in the editing suite for days on end, and to depart to any trouble spot on the planet at a moment's notice.

What Is Your Title Now?

And so, what is your title now, Leonid Petrovich? After all, a day before his departure your predecessor announced a very important piece of news at his farewell press conference—the establishment of four television channels to replace the single Central Television.

Here is L. Kravchenko's reply:

[Kravchenko] Indeed, it has been decided to give each Central Television channel full creative and commercial independence. The Central Television First Program, to give it its old name, will be a state information and arts channel.

The second channel will carry the program of the All-Russian State Television Company. But I must mention that there will be a transitional period during which the volume of Russian television will gradually increase. Meanwhile we intend at present to keep on this channel television broadcasts from the other union republics and also sports programs.

The third program will be taken up by broadcasts of the Moscow TV association, whose founders will be the Moscow City and Oblast Soviets along with us.

And, finally, the fourth channel is to be called "21st Century TV." It will be based on the current educational channel. Good old Shabolovka Street [where education channel is based] will have to find a new image.

[Krivomazov] Leonid Petrovich, this news is stunning in itself, but it nonetheless demands some explanation. After all, this is not just "divorce Ostankino-style," it is not merely a division into radio and television companies.

In this context allow me to ask you point-blank: Four television channels presuppose at the least four opinions, don't you think? That is, it is a question of pluralism in action. However, MOSCOW NEWS, for instance, does not regard you as a pluralist. This newspaper has worked out that "Leonid Kravchenko has taken up the fifth major leading post of his career." Can you cite these posts for the sake of television staffers, of whom there are almost 90,000 in our country. To be frank, we too would like to know who is heading such an important sphere as television.

[Kravchenko] My posts called not only for "large-scale leadership," but also for hard work on an even greater scale. The print run of STROITELNAYA GAZETA doubled during my time there. And TRUD was the most courageous newspaper.

[Krivomazov] It is a pity that STROITELNAYA GAZETA was closed down...

[Kravchenko] I agree. Subsequently I was deputy head of the State Committee for Television and Radio Broadcasting. I would like to thank V. Mukusev. On the last "Vzglyad" program he reminded viewers that "Vzglyad" was created during my time. That year there had been only... half an hour of live airtime. During my six months in office, the amount of live broadcasting increased 25-fold. Many programs which are popular to this day were established at that time. This includes the first TV linkups, "The 12th Floor," "90," and then "120 Minutes." Volodya Molchanov began his career during my time. In general, it is time to stop dividing people into left and right. What television needs are professionals. And quite simply decent people. The decentralization of Central Television does not mean in the least that anarchy is really the "mother of order." Ask any motorist whether he would agree to abolishing restrictive, prohibitory, and advisory road signs. He would not. It would immediately lead to accidents and blood would flow.

[Krivomazov] It is already flowing—all over the country...

[Kravchenko] This is because democracy presupposes a superhigh standard of civilization on the part of society and the ability to obey very many moral restrictions. Therefore I do not believe that the leaders of the alternative television channels will advocate a "head-on crash" on the street of life.

The old model of the State Committee for Television and Radio Broadcasting no longer exists. Fourteen republics have their own television and radio broadcasting committees. So let us have a coordination council headed by a chairman. The council could be made up of all the chairmen with the right to vote. And those who do not join the council will suffer. It is necessary for us to work together, beginning with the allocation of frequencies on the airwaves. Unity will also needed for the upcoming transition to high-definition television. Which option will we choose? The Japanese or the European? In the past, out of purely political motives, we made a mistake and opted for the SECAM system. Unless we come to a new agreement, the result may be that we will be able to watch the whole world via satellite, but not the neighboring republic. The upshot is that against the backdrop of the "parade of sovereignties" only culture, and particularly television, will be capable of uniting rather than dividing us.

[Krivomazov] So what is in store for provincial studios at oblast and kray level, which are by no means staffed by provincials? I have had telephone calls from Irkutsk, Krasnoyarsk, and Novosibirsk: Please ask Kravchenko what we can hope for?

[Kravchenko] It will be hard. In the past everything was centralized. From the distribution of equipment to studio "management." In the past there was tutelage. Now no one will breathe down anyone's neck. Any editing of someone else's material may be interpreted as "political interference."

[Krivomazov] So what is the solution? This question is directly connected with the technical equipment of studios. So far the division into companies reminds me of Christ's attempt to feed the multitudes with a few loaves. It is impossible to put one pair of boots on four pairs of legs at the same time. Furthermore, the "boots" do not even belong to television. I am referring to the fact that the equipment, cameras, airtime, and editing suites are controlled by technical and communications workers rather then the creative staff. It is sufficient to cite the following figure: Annually almost 3 billion rubles [R] are allocated to television. Or more precisely R2.7 billion, of which R2 billion are grabbed right away by communications workers. Is the upshot not that it is the "technocrats" who determine the ideology on the airwaves?

[Kravchenko] Yes, this paradox must be resolved, and resolved to mutual advantage. I remember when we were setting up the then provincial program "Good Evening, Moscow!" No matter how keen its creators were, it was sufficient for the lighting engineer to disappear, or the sound engineer to get drunk, and everything went down the drain. We included the technical staff in the same "team." We even made the drivers dependent on the final result, on success on the airwaves. If the program was successful even the driver, for instance, got a bonus out of the television studio budget. The "Good Evening Moscow!" program, which is popular with Muscovites, still operates on the basis of this collaboration between ideological and technical staff. I believe teams everywhere should be amalgamated along these lines. Television as an electronic spiritual mentor must finally be united with the "technocrats" on the basis of equal rights, equal participation, and equal responsibility for failure and success.

[Krivomazov] We have mentioned money, and I shuddered. It is obvious right now that clearly commissioned programs, programs which bring in money, are sometimes forcing out purely creative ones. We are getting tired of commercials. I already wrote in PRAVDA that in the clash "Cinema Versus the Ruble—Who Will Triumph?" is so far being won by the ruble. Will the same not happen on television screens?

[Kravchenko] It is true that we have to reduce the pressure on the budget, that we must learn to earn money. But not at the expense of the viewer. Television must have its patrons. In the case of state television it is the state. It is necessary to learn to combine both factors. There is no other way. [Kravchenko ends]

Your Problems and Ours

Frankly speaking, during the interview with L. Kravchenko I was tempted several times to say rudely: "These are your problems, Leonid Petrovich!

Why did I not say it? Because any success or failure of television immediately reverberates in every home in our country.

"Television is like a mega 'Kashpirovskiy' [TV hypnotist]," L. Kravchenko said. "But unlike him, television is literally omnipotent. It is a mentor that can exalt society, or degrade and cow it. Consequently it is necessary to sharply raise the quality and quantity of arts broadcasting. To stop sacrificing the classics and restore people's art to its rightful place.

"Or take another sorry acquisition of perestroyka on our screens. 'Preoccupation with sex' is what I call it. In most countries today 'sex magazines,' for instance, are hidden away from the public gaze. And on television 'this kind of thing' can be watched only past midnight, and on pay channels too. In our country sex has crept onto screens gratis, which is a first sign of a lack of civilization on the part of both society and television. Pardon my opinion, but this is no good!

"In general we must focus as much as possible on people who can serve as a moral example. Television exalts the individual and it exposes lack of talent like an x-ray..."

"No doubt, this interview has taken place too soon," we said to each other in parting. "It is impossible after a few days in the job to reevaluate and dig over such a huge patch..."

For this reason he told his new and old collegues at the first meeting: Perestroyka is perestroyka, but let's just make good programs. There is no other way.

Soviet TV To Be Replaced by Lithuanian TV

LD1911235390 Vilnius Domestic Service in Lithuanian 2000 GMT 19 Nov 90

[summary] An extraordinary session of the Presidium of the Lithuanian Supreme Council took place today. The Presidium adopted statements in connection with events which took place on Saturday [17 November] in vilnius. The political situation in Lithuania and issues related to it were also discussed.

A decision was adopted concerning setting up second program of Lithuanian television instead of the currently relayed second program of the Soviet television.

A joint meeting of the Presidium of the Supreme Council and members of the republic government took place in Vilnius today. The meeting was chaired by V. Landsbergis, chairman of the Lithuanian Supreme Council. Opinions were exchanged at the meeting concerning immediate actions, mainly economic ones, which would parry the increasing pressure exerted by the Soviet Union on Lithuania.

K. Prunskiene, Lithuanian prime minsiter, pointed out that in forming the strategy of trade orders it is most important that contacts with the republics of the Soviet Union and the manufacturers be established.

A draft decision was adopted concerning setting up second program of Lithuanian television which would mainly consist of material from Europe and the United States.

RSFSR Minister Views Media Plans

LD2011181190 Moscow Domestic Service in Russian 1630 GMT 20 Nov 90

[Text] A press conference was held today by Poltoranin, Russian Federation minister of the press and mass media. He noted that at the present time, the struggle for the mass media has noticeably intensified, and under these circumstances, the defense of the rights of journalists is acquiring great importance. In particular, the minister pointed to the need to grant journalists the right to strike with the aim of defending their rights.

Speaking about the plans of the ministry, he announced the transfer to Russia of the Second All-Union TV channel, and the setting up of a Russian Television and Radio broadcasting company, and also of a Russian news agency.

RSFSR Ministry To Run Space Communications System

PM2611144390 Moscow KRASNAYA ZVEZDA in Russian 22 Nov 90 First Edition p 4

[Major Yeshchenko reply to reader's letter: "Launch Planned for 23 November"]

[Text] "It is common knowledge that in addition to national launches of space vehicles the United States also carries out commercial launches in the interests of individual states, countries, and industrial companies. And this venture is profitable, it is said. What about in our country? Is it planned to involve cosmonautics in commercial activity?

"Reserve Captain S. Tikhonov."

Major V. Yeshchenko, senior press officer to the USSR Defense Ministry's chief of space units, replies:

Of course this is a profitable venture. And, to be honest, it is a promising one. People living in the Russian Federation will be able to see that for themselves in the very near future when the RSFSR [Russian Soviet Federated Socialist Republic] Ministry of Communications, Information Technology, and Space becomes the country's first owner of its own satellite communications system. The commercial deal was completed in October and the final stage of preparation for launching the first of the three "Gorizont" communications satellites which have been ordered is being completed right now at the Baykonur space center. The launch is planned for 23 November. The second and third satellites will be put into orbit in 1991. The appearance of this commercial satellite means that channel two television will be available throughout RSFSR territory. You will agree that the venture is worth the effort if you bear in mind that hitherto almost 8 million people have been unable to receive channel two.

It will be no great secret if we say that we have received a number of proposals from other organizations, and there is still room in our portfolio to conclude a commercial deal with interested parties.

Telephone: Moscow 330-91-53.

Reports of Soviet Jamming of External Broadcasts Invited

LD3011173390 Vilnius International Service in English 2230 GMT 29 Nov 90

[Excerpt] [Passage omitted recalling spring blockade of Lithuania] We have mentioned on many occasions in the past that so far Radio Vilnius uses the transmitters located on Soviet territory to relay its broadcasts overseas. The transmitters are located in a number of areas in neighboring Belorussia, Khabarovsk, Komsomolsk on the Amur, Blagoveshchensk, and so on. In other words our broadcasts depend entirely on our big eastern neighbor. The possibility that our broadcasts might be blocked in the near future cannot be ruled out. If this would happen it would be very mch appreciated if you could inform us immediately. Our telephone numbe is: 660526, and the area code is 0122. I'll reat it once again. Our telephone number is: 660526, and the area code is 0122. [passage omitted]

Report on Volgograd Cable Television System

LD2711160990 Moscow Television Service in Russian 0930 GMT 27 Nov 90

[By correspondent Ye. Orlov; from the "Vremya" newscast]

[Text] An unusual technical installation appeared recently at the highest point of the river port station, part of the premises of which is rented by the Volgograd leisure center. [video shows satellite dishes] These are satellite antennae which receive the programs of foreign television companies from space. Here at the center they record them on a video recorder and then pick out the most interesting and topical and translate them into Russian.

Besides this, the new television studio has at its disposal a selection of both the best Soviet and foreign feature and documentary films which can be watched uninterrupted for more than 2,000 hours.

And finally there is the output created by its own creative personnel—city news, recordings of festivals, concerts, theatrical performances, coverage of the life of the local soviets and many other things. A total of 362 people—journalists, producers, cameramen, artists, presenters, technical service personnel—all of these make up Volgograd cable television which, at present, has no equal in the country among similar services. [video shows personnel working in the studio and offices]

The picture is broadcast to the city's apartments by means of optical fibre communication lines. The installation of the equipment in an apartment costs the subscriber R77. The charge for using the channel is R15 a month. You can judge for yourself whether that is an expensive pleasure or not. The cost of watching each video film is approximately 6.5 kopecks. [video shows equipment in an apartment]

Cable TV Network Established in Bryansk

PM2611150590 Moscow PRAVDA in Russian 23 Nov 90 Second Edition p 1

[Item from roundup of PRAVDA, TASS, and INTERFAX reports prepared by A. Batygin under the general heading: "Telephone, Teletype, Telefax"]

[Text] Bryansk—For the first time in the oblast a cable television system has been commissioned in one of the city's districts. So far the residents of two large apartment blocks have gotten this opportunity. They will soon be joined by 25 more.

CANADA

Northern Telecom To Sell Switching Nodes to SITA Network

91WT0033 Toronto THE TORONTO STAR in English 9 Oct 90 p C6

[Text] The world's largest data transport network will be equipped with new switching capability under a $50 million (U.S.) contract awarded to Northern Telecom Ltd.

The Mississauga-based company said yesterday the contract is with SITA, the air transport industry's global telecommunications organization.

In the next five years, more than 300 Northern Telecom DPN-100 packet switching nodes will be installed in most of the 185 countries and territories where SITA operates, Northern Telecom said in a news release.

These nodes will provide a global network for SITA's more than 400 member companies. In addition, Northern Telecom said it will supply an access overlay to the network.

SITA's new global network, to be known as Mega Transport Network, will supplement and eventually replace SITA's existing data switching installations. It provides services to the air transport industry, connecting 25,000 airline and air transport offices worldwide.

Northern Telecom said more than 65 public and private DPN-100 networks have been installed worldwide.

As the leading global supplier of fully digital telecommunications switching systems, the company serves telephone operating companies, corporations, universities and other institutions. It had 1989 revenue of $6.1 billion (U.S.) and employs about 49,000 people around the world.

Plans for Fiber Optic Link to Vancouver Island Announced

91WT0036 Vancouver THE SUN in English 23 Oct 90 p C8

[Article by David Smith]

[Text] Decentralization and demographics led to Monday's announcement by B.C. Tel and Teleglobe Canada that they will build a $45-million fibre optic link between Vancouver Island and the Lower Mainland, according to B.C. Tel's vice-president of technical support.

Don Calder said the expansion of provincial government business from Victoria to the mainland and a continuing increase in people moving to Victoria to retire have boosted telecommunications traffic.

The new 505-kilometre network will more than double the capacity of several microwave routes that now carry messages between Victoria and the Lower Mainland.

"We'll go from about 4,000 voice calls daily to at least 8,000," Balder said.

Customers will notice less transmission noise during conversations, while business users will see a reduction in errors in data transmissions once the new system is up and running, he said.

The companies said the system will also meet the projected demand for television transmission during the 1994 Commonwealth Games in Victoria.

Construction and operating costs of the system will be split roughly 50- 50 between B.C. Tel and Teleglobe, Calder said, and about 100 jobs will be created in digging trenches and laying cable.

Construction will begin next spring with operating deadline set for the fall of 1992.

The network will join the 9,800-kilometre fibre optic Trans-Pacific Cable joining Canada with Japan in which Teleglobe is a major partner.

In broader terms, said Calder, the B.C. Tel-Teleglobe project is just one part of the growing network of fibre being installed world-wide and will link Vancouver Island to the national fibre optic system, the Lightguide Transmission System.

The network will be configured in a figure of eight to give alternative routings in case of system failure. It includes two different routes to be built across the Georgia Strait.

The first crossing links Teleglobe's cable terminal in Port Alberni on Vancouver Island to its international switching centre in Burnaby. The cable will pass from Port Alberni through Cameron Lake and Qualicum Beach across the strait to Locarno Beach and then on to Burnaby.

A second crossing will connect Teleglobe's satellite earth station at Lake Cowichan to the international centre in Burnaby. That cable will cross the strait via Chemainus, Galiano Island and Lulu Island.

Additional fibre links will be built to serve B.C. Tel customers on Vancouver Island.

About two-thirds of the entire network, or 345 kilometres, will be on land and the remaining 160 kilometres underwater.

B.C. Tel will build the terrestrial facilities with land-based links being buried using construction techniques similar to those used in the Lightguide system.

Teleglobe and its sister company, Teleglobe Marine Inc., will be responsible for construction of the submarine facilities and will employ a cable ship to lay the fibre across the Georgia Strait.

Teleglobe, a Memotec company, is Canada's international telecommunications carrier and provides telephone, telex, broadcast and data transmissions services to more than 200 countries using satellites, fibre and coaxial undersea cables.

DENMARK

Firm Would Link East Europe To Fiber Optic Net

91WT0021B Copenhagen BERLINGSKE TIDENDE in Danish 28 Sep 90 pp II 10, 1

[Article by Uffe Gardel: "GN Wants To Grow"—first paragraph is BERLINGSKE TIDENDE introduction]

[Text] GN Store Nord wants to double its sales and earnings in three to four years, if necessary by buying up other firms. The first one was taken over yesterday.

GN Store Nord intends to use its money supply to grow.

In three to four years Tietgen's former cable and industry company will have two billion kroner in sales and earn over 100 million kroner in its normal operation—twice as much as today. On the other hand it may well be that its own capital's share of the balance will fall a bit.

This is the way the new move by GN Store Nord's chief executive officer, Thomas Fr. Fuer, can be described in numbers.

Last year GN Store Nord had sales amounting to a good two billion kroner. But in the spring of 1990, the firm sold its subsidiary company, GN Laurids Knudsen, which had sales of 934 kroner. In addition, telephone production in GN Telematic has been stopped. With this, GN Store Nord has almost been cut in half, measured by sales. On the other hand, the firm has obtained a large cash holding.

"We plan to be back at the old sales level in three to four years. Developments in normal operations will follow sales," Duer said.

Mixture of Growth and Buying Up

"Growth will take place by a mixture of 'organic growth' and buying up," he said. He is ready to allow the solid section—that part of the assets paid for with the company's own money—to decline a bit. Today it is as high as 63 percent.

The first purchase took place yesterday, when the GN subsidiary GN Elmi took over for about 125 million kroner the Canadian-American firm Atelco/Navel. Like GN Elmi, the company produces hightech measuring instruments for use in data and telecommunications.

"The two companies' production programs complement each other well, and they will be able to use each other's technology," GN Elmi's president, Ernst J. Hede, said.

At the same time, GN Store Nord was able to present a six-month balance sheet showing a large surplus in spite of fewer sales.

Before taxes, GN Store Nord earned 141 million kroner in the first six months. Of this, however, 96 million kroner are exceptional earnings, primarily from the sale of GN Laur. Knudsen.

Expectations

The pure operational surplus was 45 million kroner. In the same period last year the surplus was 93 million kroner. Since last year, sales have dropped from 982 to 734 million kroner because of the selloff.

For all of 1990, GN Store Nord expects both an operational surplus and a before tax result greater than last year's surpluses of 61 and 111 million kroner.

GN Will Operate Polish Cable

GN Store Nord will operate telecommunications in the new East Europe. The company is negotiating with the Polish telecommunications authorities on laying and operating a fiber optic cable through Poland. The cable will be connected to the new cable from Denmark straight over the Baltic Sea and then go south through Poland into Czechoslovakia and Hungary.

The cable will be laid in cooperation with the Danish Postal and Telegraph Service and NKT. The operation will be managed jointly by the Polish authorities and GN Store Nord. According to GN's chief executive officer, Thomas Duer, the total investment for GN Store Nord will amount to 150 million kroner.

The cable will make it much easier to telephone between West Europe and the three Eastern countries.

"The East Europeans understand that telecommunications are necessary to build up the economy," Duer said.

Representatives of GN Store Nord will go to Czechoslovakia next week to negotiate with the authorities there on the continuation of the cable south of Poland. The company expects a clarification before the new year on whether the project will be realized.

FINLAND

Ministry Issues Telecommunications Survey

91WT0009A Helsinki HELSINGIN SANOMAT in Finnish 23 Sep 90 p 29

[Unattributed article: "Telecommunications Market Worth 160-200 Million Markkas; 150 Companies Offer Telecommunications Services in Finland"]

[Text] There are roughly 150 organizations that offer telecommunications services in Finland, according to a report done for the Ministry of Communications. Most of the organizations are Finnish.

According to the report by International Data Corporation, Incorporated, their value last year was 160-200 million markkas. Experts estimate that the market will grow to 500-700 million markkas in five years.

According to the IDC, only a few individual services are profitable at this moment. Electronic mail has the most customers, and interoganization information transfer the fewest.

Refined telecommunications services are those that, by means of computers, offer additional or complementary capacity for general telecommunications networks or to which one accesses through a general telecommunications network.

In Finland the market for telecommunications services does not have the so-called critical user mass with the help of which business would pick up. The smallness of the market is also an inhibitory factor.

Telecommunications services are generally considered expensive. According to the report, user fees should be reasonable so that small firms and private individuals could begin to use the services. In addition, use of the services still requires a lot of technical know-how.

FRANCE

Ariane Rocket Launched Successfully

LD2111082590 Paris Domestic Service in French 0800 GMT 21 Nov 90

[Text] The successful launch of the Ariane rocket took place during the night. It was very successful as the two U.S. satellites are in an extremely precise orbit.

Encoded TV Channel for Computer Users Sought

91WT0015B Paris LE MONDE in French 11 Oct 90 p 19

[Text] Beginning in January 1991, professionals in the field of data processing and telecommunications will have a new pay TV channel, the Computer Channel. The official announcement will come at the Data Processing and Telecommunications Forum to be held at CNIT from 9 to 12 October.

Heading up the project is Videospace, a subsidiary of France Telecom and no newcomer. It has already been involved in Health Channel, a similar public affairs project. To develop Computer Channel, Videospace joined with Industry Television International (ITI), a young Luxembourg company with European stockholders that would like to become involved in other specialized channels if this initial experiment is a success.

Computer Channel will be broadcast by the European satellite Eutelsat II-F1, launched in September 1990, which covers all West Europe. The two directors, Jean-Marc Harion of Videospace and Frederic de Goldschmidt of ITI, have no immediate plans for broadcasting their programs outside of French-speaking Europe.

Interactivity and Conviviality

"Interactivity and conviviality" are the directors' two catchwords: Computer Channel mainly targets computer experts in the business (data processing directors, systems engineers, telecommunications directors, and so on), who will be both clients and promoters: "Our goal will be to have as much input from our clients as possible. They will decide what topics should be dealt with and participate in our broadcasts," Goldschmidt guarantees.

The channel proposes to broadcast two types of programs: first of all, a basic program of 12 monthly broadcasts 20 to 40 minutes long each, carried in the middle or at the end of the day and based on a specific subject. Such programs, available for Fr3,300 a month (plus a subscription fee of Fr6,000), are accessible as soon as an antenna and terminal are installed. However, since the satellite signal can also be individually transmitted to each terminal, users will be able to buy separate programs such as seminars or training sessions. They may even use the network to send private information to persons of their choice.

What are the operation's prospects? "We shall consider our project a success if we have 450 subscribers in France within a year," says Goldschmidt. It is a forecast that could soon be achieved since the potential market ranges far beyond the sole target of data processing and telecommunications companies and embraces any organization with a big computer operation.

Alcatel Buys Out FIAT's Subsidiary Telettra

91WT0015A Paris LES ECHOS in French 4 Oct 90 p 13

[Article by Philippe Guillaume and Blandine Hennion]

[Text] They had their eye on Alcatel from across the Channel, where the STC is viewed as a choice target, but it was from the other side of the Alps that the No. 2 telecommunications company in the world just pulled off a major coup. FIAT will announce today in Turin that it has sold to Alcatel its telecommunications subsidiary Telettra, which has a turnover of 1.62 trillion lire (7.7 billion francs) and a comfortable profit of 200 billion lire, or Fr950 million).

Alcatel NV, which last year had sales of some Fr90 billion, thus overtakes the leader of the IRI [Institute for the Reconstruction of Industry], which had itself dreamed of a merger of Italian telecommunications companies. The Trans-Alpine public firm wanted to combine its subsidiary ITALTEL with Telettra, a merger of private and public capital that ran into political

obstacles in 1986. Pierre Suard, who preferred the American ATT as a partner for ITALTEL in early 1989, undeniably has his revenge.

Alcatel NV, whose Italian subsidiary Face, inherited from ITT, must naturally face competition from Italtel but also from the Swedish Ericsson, is thus shored up in two major areas: transmissions and private switching. Telettra is committed to partnerships with the Spanish Amper, the French Matra in mobile communications, and particularly the German Telenorma of the Bosh group and its French subsidiary JS Telecom in private telephone systems. These are partnerships that must be renegotiated, even if they did not seem to meet the critical size needed by the Italian firm.

FIAT No. 2

This is definitely the reason why FIAT sought to sell Telettra to a giant, a giant all the more wisely chosen because its parent firm, CGE [General Electricity Company], offers other possibilities to the automobile builder. FIAT, which would sell its subsidiary valued at 2.3 trillion lire, will buy into the CGE, a new shareholder worth its weight in the French firm, whose stable core has bankers such as the General Company or service companies such as General Water.

This entry, which limits the amount of cash paid out by the CGE, will actually seal French-Italian cooperation in two other fields. The CGE, which this year withdrew its subsidiary the CEAC from the Exchange, should agree to have the No. 2 European automobile maker take control of the No. 2 European battery builder, which holds 14 percent of the market.

It is a partial disengagement of the CGE that will scarcely come as a surprise, while the Italian firm increases its integrating power. Early in the year, its subsidiary Magneti-Marelli, which deals in automotive parts, already took control of the next-to-the-last French firm in the field, the French Electrochemical Company.

In addition, FIAT is to buy a minority holding in the Alcatel NV subsidiary specializing in aids to navigation.

GERMANY

Deutsche Bundespost Telekom To Offer Satellite Transmission Services

91P60031P Berlin NACHRICHTENTECHNIK ELEKTRONIK in German Oct 90 p 362

[Text] In the future, Deutsche Bundespost Telekom will be offering three different satellite transmission services. These three services, DAVID, DIVA and DASAT, are to support rapid economic development in the former GDR.

The DAVID (direct connection to the dissemination of news in the data sector) service is especially suited for large-scale enterprises desiring to communicate with several branch offices from a central headquarters. With the aid of DAVID services, a consumer builds up his own transmission network which, apart from the central station, can encompass several hundred subscriber stations. The receiving and transmitting antennae have a diameter between 1.8 m and 2.4 m. If only reception is required, the diameter can be reduced to 0.75 m. This year, around 200 subscriber stations can be established in the new Federal laender. The first subscriber stations were provided in May of this year and are already operating in six cities.

Another satellite service for commercial communications, the DIVA (direct connection via main foreign exchange lines) service, offers the switching of fixed cable connections between two locales of the "old" and "new" Federal laender. A large number of connections was to be implemented at each locale (up to 72 telephone connections are possible). Thus, the DIVA service makes possible the installation of standard telephone connections or private branch exchanges for partners in the laender of the former GDR. The satellites Eutelsat or Kopernikus are used for the DIVA as well as the DAVID services.

For high-speed data transmission, the DASAT (data transmission via satellite) service is being offered under operational test conditions. In the FRG, Deutsche Bundespost Telekom has already built its own closed automatic network with 32 stations. The operational test is to be extended over the territory of the former GDR. The Kopernikus satellite is also used for the DASAT service. Since, at each connecting station, around 270 lines with high throughput rates can be switched, a large number of subscribers can be hooked up.

In addition, Deutsche Bundespost is expanding DATEX-P service for commercial communications. By the end of this year, up to 1100 subscribers from the former GDR can be hooked up to the network nodes already established. In the FRG, the network is being expanded to keep pace with demand, so that additional customers can be quickly provided with DATEX-P connections.

Hamburg Firm To Form Private Satellite Network

LD2911141790 Hamburg DPA in German 1012 GMT 29 Nov 90

[Excerpt] Hamburg (DPA)—News will be reaching its recipients via satellite.

The Medien-Communikations-Gesellschaft (MECOM) in Hamburg received a license to set up and operate a private satellite network in the Federal Republic. The firm announced today that the new system will be used to transmit news agency data to newspapers, magazines, and radio and television broadcasting organizations from the middle of next year.

Until now, the dissemination of news has taken place exclusively via the lines of the Deutsche Bundespost and

via the air waves. The aim is to replace the lines gradually with satellite links. In the firm's view, the advantages of the new technology include a higher standard of data transmission. By the end of the changeover, around 600 offices would be linked up to satellite reception.

MECOM was set up by the news agencies DPA, AFP, DDP, KNA, EPD, and DENA (DEUTSCHE NACHRICHTEN). [passage omitted]

Spokesman on Transmission of TV Station in Saxony

LD0112172290 Hamburg DPA in German 1313 GMT 1 Dec 90

[Text] Dresden (DPA)—Second German Television (ZDF) will, contrary to an announcement yesterday evening, not be broadcast on DFF1's frequency but on that of the former second channel of DFF. Saxony Government Spokesman Michael Kinze clarified this today. From 2 December it will be possible to receive ZDF throughout Saxony for the first time. The transmission of DFF2 on channel 39 by the Loebau transmitter will thereby cease.

ZDF TV To Cover New Laender

LD3011184490 Berlin ADN International Service in German 1350 GMT 30 Nov 90

[Text] Mainz (ADN)—From this Sunday Second German Television (ZDF) will be received in all 16 federal laender, according to ZDF Managing Director Dieter Stolte speaking in Mainz today. He emphasized that the distribution serves the "equality of opportunity in communications as well as the creation of equal living standards." The premiers of the new federal laender of Brandenburg, Saxony, and Mecklenburg-Western Pomerania agreed to ZDF's proposal to use hiterto unused transmitters to close the gaps in coverage. The authorization to transmit is subject to the reservation of a final new version of the ZDF state treaty which would be necessary to enable the five new laender to accede.

ITALY

Italian Company's HDTV Research Activities Reported

91MI0028X Milan SISTEMI DI TELECOMUNICAZIONI in Italian Sep 90 pp 102, 104

[Text] Telettra began to carry out research in the field of conventional television signal transmission using the numerical technique in 1985.

Successively it launched studies which in 1989 led to the development of CODEC, the numerical transmission system for high definition television (HDTV) signals.

CODEC Telettra, due to a particular coding of the signal, allows for long-distance transmission, as for example in the case of the Olympus satellite which orbits at a distance of 36,000 km from Earth. The system is currently the most advanced in the world in this field of application.

The characteristic feature of high definition television is the quality of the image—comparable to the best cinematographic images—and the sound, which is similar to that reproduced by a compact disc. As an example, the conventional television image is composed of 625 horizontal lines while the projects for high definition TV provide for a doubling of the lines. Even the proportions of the screen will change, passing from a traditional "square" (4:3) to a more rectangular (16:9) shape similar to that used in cinematography.

Another fundamental characteristic of high definition is that the spectator can "live" the sensation of taking part in the scene. Given the quality of the image it is possible to get closer to the screen, thus being able to use a vision angle of 30° as opposed to the normal 10° for conventional television.

The project leading to CODEC's development is part of the EUREKA [European Research Coordination Agency] EU-256 program which, in addition to Telettra, includes RAI [Italian Radio Broadcasting and Television Company], Retevision Spagnola, and the Polytechnic of Madrid.

CODEC Telettra is capable of operating with the Japanese and European HDTV standards (1,125 lines, 60 Herz and 1,250 lines, 50 Herz respectively). The possibility of using CODEC Telettra for the two production standards shows the operating flexibility of this solution which was adopted in the context of worldwide television production.

The principle problem that Telettra solved—and that had always been a major stumbling block for designers worldwide—was the need to compress the high definition signal (at the source equal to more than a billion bits per second, corresponding to about 15,000 telephone channels transmitted by a numerical system) to permit its subsequent transmission to present-day carriers (satellites, optical fibers, etc.) at an acceptable cost. Telettra's technology, which is based on the DCT (Discrete Cosine Transform) algorithm, created a compression ratio of about 15 times, reducing the information transmitted to 70 million bits per second, without any reduction in quality detectable by the human eye.

The achievement of these prestigious results is proof of the technological capability and active collaboration that public and private concerns in Italy and Spain have demonstrated in a sector of great technological dynamism and turbulence such as the telecommunications sector.

The experiment currently under way at the World Cup Soccer Championships involves the first international link-up using numerical technology. The signal is sent by the television cameras to CODEC Telettra's transmitting

element and then to the Olympus satellite on channel 24. The spectators present in the seven viewing centers in Italy—such as Lingotto in Turin—can watch the soccer matches with a system that consists of an antenna to receive the satellite's signal, CODEC Telettra's receiving element, and a large 120-inch television screen.

Likewise in Spain the signal is received in Barcelona from the Olympus satellite and from there sent via optical fibers to Madrid.

Only professional uses (of the point-to-point type) are currently foreseen for CODEC Telettra. These include, for example, connections between television studios, telemedicine, the long-distance transmission of "computer graphic" images, industrial applications, high quality video-conferences and more. All of these applications are already being requested by the Japanese and American markets and their eventual extension to Europe is expected.

CODEC Telettra is part of a project that is not intended to be an alternative to the HD-MAC system for the direct diffusion of high definition to the consumer using analogical technology. The latter is part of the EUREKA EU-95 program, with the participation of an Italian consortium which also includes RAI and Telettra. The HD-MAC system will be tested at the same time as the EU-256 system and received in Milan and Central Europe on channel 20 of the Olympus satellite.

NETHERLANDS

Dutch PTT To Install Metropolitan Area Network

91AN0048 Chichester TELEFACTS in English Sep 90 p 4

[Article: "Alcatel's Third European MAN Success"]

[Text] The Alcatel group has received its third order to install a metropolitan area network (MAN) in Europe. This time, a letter of intent has been received by Alcatel Bell Telephone of Antwerp (Belgium) and Alcatel Netherlands to supply, install, and maintain a MAN for the Dutch PTT Telecom.

The initial configuration will be installed in The Hague by mid-1991 and, subject to an in-depth evaluation, may lead to a further extension of the network throughout the country. The network will be based on the DQDB (distributed queue dual bus) principle, which is part of the IEEE 802.6 standard for MANs.

About a year ago, Alcatel signed an agreement with QPSX Communications to manufacture and market MAN products based on QPSX's MAN technology, which has been selected to form the basis of the IEEE 802.6 standard. MANs operate at high speeds (34 and 140 Mbit/s) and connect LANs, computers, and PABXs over fibre-optic transmission channels.

This agreement with QPSX led to Alcatel receiving its first order—in January of this year—to supply a MAN to the Deutsche Bundespost Telekom. A second deal was struck with Finland's P&T-Telecom (now Telecom Finland) a few weeks later.

SWEDEN

Teli Firm Wins AXE Switching Contract

91WT0030C Stockholm DAGENS NYHETER in Swedish 1 Nov 90 p C 2

[Report by Newspapers' Wire Service, Inc.: "Teli Expands AXE Network"]

[Text] The telecommunications enterprise of Teli has received a billion-kronor order from the National Telecommunications Administration to expand the AXE network in Sweden in the course of three years. The order is worth 1.4-2 billion kronor.

The order was won in competition with Ericsson, which will get a minor order for AXE equipment worth 350-700 million kronor.

Teli and Ericsson will continue expanding the AXE system, developed jointly by Ericsson and the National Telecommunications Administration, throughout Sweden. With the new order, the plant will be able to expedite the computerization of the telecommunications network.

Teli is a subsidiary of the National Telecommunications Administration, but according to Deputy Director Benny Strom, the competition for the order was keen.

Ericsson to Stress Research Effort, Internationalization

91WT0030B Stockholm DAGENS NYHETER in Swedish 25 Sep 90 p C 3

[Article by Jan Nylander: Major Emphasis on Research"—first paragraph is DAGENS NYHETER introduction]

[Text] Ericsson is increasing its research efforts. In the course of the next four years, the telecommunications giant will employ no less than an additional 7,000 new engineers. However, only a fraction of them will be working in Sweden.

"The expansion will take place abroad," says Ericsson's Deputy Director Lars Ramqvist.

During the past week, Lars Ramqvist has informed the 800 top managers of the concern of the strategy to be followed in the 1990's.

Internationalization and increased market adjustment are the key words of Ramqvist's vision of how Ericsson will be able to hold its own in the increasing competition that is expected in the course of the next few years.

Like all other Swedish multinational corporations, Ericsson has long ago moved a large section of its production away from Sweden. Now it is the turn of research.

"We have today 10 percent of our business in Sweden, but as much as 75 percent of our research and development resources are located here. That is not reasonable," says Lars Ramqvist.

"For one thing, we do not get hold of the people that we need, for the other, we have to expand where the markets are, that is to say, abroad."

Seven Thousand Engineers

However, there will be no disengagement of employees in Sweden.

"Our plans apply to the future expansion where we invest steadily increasing resources on research and development," says Lars Ramqvist. "This year, the expenditures will increase by 1 billion kronor."

A total of 7,000 engineers will have to be engaged by the end of 1994. Today, the number within the various research and development departments of the concern totals 10,000.

Lars Ramqvist says, however, that part of the increase will have to be applied to covering the turnover of personnel and that part of the number of vacant jobs will disappear in the course of the current rationalization of the production. That is why it is not a question of 7,000 new jobs but of 7,000 new engineers within the organization, the majority of whom will be employed abroad.

Paradoxically enough, Sweden's role in the research work will not decline: "Even if we decentralize the activities, the management from the central quarters will be stricter," says Lars Ramqvist.

The fundamental systems research remains in Sweden, whereas specialities, on the other hand, will be placed in various parts of the world.

By way of example, he mentions Australia, where a department handles the development of the Axe exchange for the countryside.

Research and development will become increasingly more important for Ericsson.

"Last year, it accounted for 11 to 12 percent of our turnover. And that figure will increase in the future," says Lars Ramqvist.

He also brings happy news for Goteborg, where Ericsson Radar Electronics is located. The subsidiary is the core of the defense systems efforts and has been operating at a loss for a long time.

However, after a very strict diet, Ramqvist stated that the profits this year will amount to "hundreds of millions of kronor."

"The enterprise is not on the sales list. Our strategy is instead to add civilian activity to complement the current activity."

Paper Comments on Agency Privatization Plan

91WT0030A Stockholm DAGENS NYHETER in Swedish 22 Sep 90 p 2

[Article: "Private Telephones?"]

[Text] Tony Hagstrom, director general of the National Telecommunications Administration, wants to privatize the National Telecommunications Administration, according to the headlines given to his proposals in the mass media. Is that really correct? When stateowned plants and enterprises in Great Britain are privatized, the entire capital stock, or most of it, has been sold to private investors, most of it to private persons. The purpose has been partly to spread the ownership, partly to break up ineffective monopolies or subject them to profitability control.

Hagstrom suggests that the state convert the National Telecommunications Administration into a corporation, subsequently selling 45 [percent] of the stock. The state thus retains the majority, and the telecommunications corporation remains under political control. At first, the minority items will be offered to institutions, such as the National Pension Insurance Funds. Much can be said about those funds, but hardly that they administer capital legally and politically under private auspices. Later on, the 50,000 employees of the National Telecommunications Administration will be given the opportunity to purchase stock. If, on an average, they purchase 1,000 kronor per person, their total share of the capital (and the votes) will constitute slightly more than one per thousand. How much profitability control will that provide?

The underlying reason for Hagstrom's model is entirely different. He wants more risk capital to finance the expansion of the National Telecommunications Administration. However, public utilities, such as the infrastructure, are ousted from the public budgets by private utilities. There is not much to be obtained from the state. The alternative becomes the stock market, via new capital issue. And this presupposes the formation of corporations, and introduction on the stock exchange, which, in turn, presupposes a certain amount of distribution of the ownership (the state cannot be left with 95 percent). And as a corporation quoted on the stock exchange, the National Telecommunications Administration will be in a better position to expand internationally, perhaps via cooperation with other corporations.

A regular privatization of the National Telecommunications Administration in its present form would be technically difficult. The combination of authority and a—constant—natural monopoly, i.e., the central telecommunications network, cannot be broken up and offered on the market. On the other hand, there are no compelling reason why service and the production of

components should belong under a public utility which, in practice, exercises a public monopoly. However, if the producing units of the National Telecommunications Administration are to be subject to competition and profitability requirements, the National Pension Insurance Funds may not be the ideal owners.

TURKEY

Suspension of Turksat Project Reported

NC3011104990 Istanbul CUMHURIYET in Turkish 27 Nov 90 p 20

[Excerpt] Ankara (CUMHURIYET)—In view of the East-West rapprochement, Turkey's first satellite project, known as Turksat, has been found to be "technologically" inadequate.

The Post, Telephone, and Telegraph Administration [PTT] reached an agreement with the French Aerospatiale firm after a lengthy bidding process a while back, but no agreement was ever signed. The agreement was to have been signed yesterday, but PTT officials have announced that it has been suspended.

The officials have said that in view of the East-West rapprochement over the past few months, Turkey's first satellites would be technologically inadequate. They also announced that they plan to seek bids for a more advanced system. PTT Director General Emin Baser said that in view of the East-West detente, the area to be covered by the Turksat satellites should be broadened. Baser noted: "We considered only our kinsmen in West Europe in the past. East Europe was not taken into account, but now we have to consider it as well. Consequently, the specifications of the satellites will have to be modified and, of course, there will be a corresponding change in the costs. Therefore, we must seek new offers." [passage omitted]

USSR, FRG Cooperate in Satellite Communications

LD2911185690 Moscow TASS in English 1359 GMT 29 Nov 90

[By TASS Correspondent Rena Kuznetsova]

[Text] Moscow November 29 TASS—The Soviet Union and Germany have begun joint work to develop a satellite communication system. Research related to the first such project ended in success.

Representatives of Germany's Ant Bosch Telekom, the Soviet Glavkosmos Space Agency, the Soviet Research-and-Production Association of Applied Mechanics and the Radio Research-and- Production Association gathered in the German city of Backnang to discuss further steps in their cooperation.

The Romantis project was initiated by the Intersputnik International organisation.

Lev Kantor of the Radio Association told TASS that the results of the joint research opened the possibility of quickly implementing the project.

"As compared with other national and international systems, Romantis requires minimal investments," he said. "The project fully meets the requirements of the world administrative radio conference, which ensures the placing of spaceships into any coordinated point of orbit."

The implementation of the project is to begin early next year, Kantor said. At first, the partners will sign an agreement on cooperation, the production and supply of communication satellites and ground stations.

After that, they plan to sign an agreement on the joint operation of the system.

USSR, PRC Sign Broadcasting Accord in Beijing

OW2311175190 Moscow International Service in Mandarin 1400 GMT 21 Nov 90

[Text] A Soviet-Chinese protocol for providing bilateral radio transmitters to transmit programs to other countries and regions was signed in Beijing.

According to this document, Moscow Radio will broadcast through Chinese transmitters to Australia, Bangladesh, Burma, Vietnam, Indonesia, Thailand, the Philippines, and other countries. China will use the Soviet transmitters to broadcast to Iraq, Saudi Arabia, the Persian Gulf region, Turkey, Britain, France, and other countries. The protocol is for two years, but it will be extended automatically if neither side terminates it.

Ma Qingxiong, minister of radio, film and television, [as heard] said that this is another important step in fostering closer relations between broadcasting organs of the two countries.

China-USSR Telephone Line Opens

SK2511231990 Harbin HEILONGJIANG RIBAO in Chinese 16 Oct 90 p 1

[Summary] An international telephone line between China's Suifenhe and the Soviet Union's (Geluojiehuowo), that had been suspended for nearly 30 years, recently reopened. This telephone line links more than 20 cities and counties to the east of Harbin and more than 20 cities in the Soviet Far East.