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Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 283

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SUB-SAHARAN AFRICA

USSR

WEST EUROPE

SATELLITE HOOKUP BETWEEN MOSCOW, CALIFORNIA TV

Moscow Domestic Television Service in Russian 1215 GMT 5 Jul 83

OW101813 [Editorial Report] Moscow Domestic Television Service in Russian at 1215 GMT on 5 July carries a 50-minute program entitled "Moscow -- Space -- California" on a television satellite hookup between a Soviet panel in Moscow's Ostankino Television Center and a U.S. panel at an American youth festival held in San Bernardino, California, at the end of May.

The program is preceded by an introduction by Gennadiy Gerasimov, political observer of the NOVOSTI Press Agency. Appearing in a studio, Gerasimov says: "Good evening, comrades. The program you are about to see is generically a talk show and, to some extent, a concert. Well, television viewers are accustomed to talks -- in Studio 9, in a theater lounge or in other places. However, today's program is unique. First of all, the participants are separated by a distance of 11 time zones. In other words they find themselves at almost opposite ends of the earth. It is morning there; it is evening here; and the talk is held via satellite. Enthusiastically, one could say that this is unreal, or one could put it more mildly -- a miracle of technology; but in fact such a program has long been within the scope of the technical possibilities of present-day television. The point is not that it is possible to speak across seas and oceans and, moreover, to see each other. The point is: is there anything to say to each other and is there a mutual desire to look each other frankly in the eye?

"In my opinion, what is most interesting is not so much the technical aspect of the program, but its organizational side. The U.S. Unuson Corporation and Soviet television decided to set up a television link for a talk between American and Soviet people -- an unrehearsed talk, however it turns out. The program was held within the framework of the "Us" music festival and you will see this word "Us" both in Russian and in English. Technology worked to draw together peoples and nations. Many countries became interested in the program, and so the more widely it is shown, the better, because it serves the international education of people.

"All too often technology contributes not to drawing together, but to alienation, discord and even hostility. Too often the mass media is used for mass misinformation. Too often the division of the long-standing contrast of "we" and "they" is pursued. Just like two tribes who lived in ancient times divided by a river, those who lived on the other side of the river were already "they." If one may say figuratively, like plague cockroaches, "they" were aliens deprived of common human qualities and features. They may have been called differently: heathens, dark skins and infidels.

"Anthropology and history would give their own convincing explanations here. However, it is a different time now. It is called an age of instant information and mass communications. One even talks about the world turning, from the viewpoint of all-permeating information, into one global village. It would seem that there could be no more [word indistinct], nor heathens, nor wariness of the unknown, nor, particularly, automatic

hostility toward something different. There is no longer anything that is unknown. However, mass communications did not abolish politics. The unknown was replaced by lies and the unknown is used to frighten.

"The Reagan administration uses mass communications precisely for preserving this division of "we" and "they." To it the Soviet people are the tribe on the other side of the river. They are those who inhabit the empire of evil, as the U.S. president said about our country. Correspondingly, we are portrayed as fiends. Observers there have thought up the term "demonization" of the enemy -- from the word demon. Of course, this did not begin with Reagan. The same observers write about the chronic U.S. political sickness, Soviet phobia or, as we more commonly call it, anti-Sovietism. During the years of detente, one observed a remission, an abatement, of this sickness. However, under Reagan it has taken on a serious and even fatal form, insofar as it brings war closer.

"Long years of anti-Soviet inculcation have led to the fact that many Americans react to the word communist not in a common, rational, sensible way, but emotionally. Over these long years an automatically negative reaction to the word communist, and at times to the words Russian and Soviet, has been cultivated in them. In an analogous situation, you remember Famusov's exclamation in Griboyedov's "Woe from Wit": Oh my God, he is a carbonaro. [member of 19th century secret Italian organization] However, if you ask all these Famusovs what these carbonari are, they could not answer comprehensibly. Just as many Americans could not answer comprehensibly if one asked them to explain what communists are and what their aims are, besides seizing America, besides this foolishness which there they constantly ascribe to us Russians.

"You can imagine how a Soviet-U.S. talk -- not about missiles, but a general talk -- must be regarded against such a negative and emotional background. You can imagine what sort of sensation it is for some Americans to see Soviet people as people. One would say that for the Soviet television viewer this program is also an opportunity to see ordinary Americans with their freckles. Of course, it is. However, the fundamental difference here is that we have never made, nor make, demons and fiends out of them.

"We are educated in the spirit of internationalism and the friendship of peoples. But it is not the same over there. I think that over there they are still not prepared to screen the movie "Circus." We point to the integral defects of the United States as a capitalist society. However, Reagan himself talks about both unemployment and the crime rate. He talks about them because they are his problems as well. We point to the military-industrial complex, but this very expression was circulated by a U.S. president [Eisenhower], though not Reagan. However, this is also a U.S. problem which, incidentally affects the destiny of the world."Generally, we have the friendliest attitude toward Americans, as a talented and frank people. We have not waged war against each other, if one does not count the unpleasant episode of U.S. participation in the foreign intervention against the fledgling Soviet Government. We have no territorial claims on each other. Well, there was a Russian America, but the tsar sold it. It has now become a U.S. state and is called Alaska. What have we not shared, that there should be a quarrel? The world? But it does not belong to us. We have different ideologies. This is grounds for polemics, but not a reason for bloody quarrels. The joint statement, adopted after the meeting of the leaders of the seven socialist countries last week in Moscow, again expressed the firm conviction of our countries that no world problems, including the historical argument between socialism and capitalism, can be solved militarily. A nonmilitary path remains -- the path of peaceful coexistence. Incidentally, the principles of peaceful coexistence were discussed in the document on the framework of relations between the United States and the Soviet Union signed in 1972 in Moscow. The current administration in Washington is conducting a different policy.

"However, you will see another America, other Americans from California, who reason differently. Look at how a Soviet-U.S. dialogue at the space level turned out."

CSO: 5500/1025

NORWAY WEIGHS PROTEST TO USSR OVER KIEV STATION INTERFERENCE

Oslo AFTENPOSTEN in Norwegian 6 July 83 p 40

[Article by Rolf L. Larsen: "Protest Action Against Kiev Transmitter Considered--Boycott of Soviet Ships?"]

> [Text] There could be protests and boycott of Soviet ships and aircraft if the Kiev transmitter does not reduce its interfering transmissions. AFTENPOSTEN has learned that trade unions in several European countries are considering taking actions to emphasize the anger of radio operators at the Soviet transmitter which is destroying the working environment for thousands of union members all over Europe. "For a number of years we have used all lawful means to put a stop to the transmissions. But soon the end of our patience will be reached," said union leader Viggo B. Kristiansen at the National Federation of Telegraphers [TMLF] to AFTENPOSTEN.

Kristiansen said that TMLF will, for the time being, await the outcome of requests that the union has made to the Foreign Ministry and LO [Federation of Trade Unions].

"If that does not produce results, we will consider other actions. We are now discussing which actions we can take with our sister organizations in other European countries," said Kristiansen.

He pointed to a similar boycott threat in 1977-78. Interference from the Kiev transmitter was so great, and caused such serious problems for radio operators, that they threatened to boycott radio traffic to and from Soviet ships at a number of European coast radio stations. After that threat of boycott the transmissions were reduced for a prolonged period. In this country LO approved such a boycott.

Secretary Eidar Trulsen at LO's international division told AFTENPOSTEN that the organization now understands the radio operators' situation. "we are now also awaiting the Foreign Ministry's decision, and we have already

discussed possible further actions with both TMLF and corresponding union organizations in the Nordic countries and Europe. But before we take other actions, we hope for a reaction from the Soviet Union if the Foreign Ministry again emphasizes the seriousness of the situation through diplomatic channels," said Trulsen.

Foreign Ministry Considering New Complaints

The Foreign Ministry is now considering whether Norway should again send complaints to the Soviet Union through diplomatic channels to put an end to interference from the Kiev transmitter. The issue was last taken up through diplomatic channels in the summer and winter of 1981. "We are now getting more information from the Telecommunications Directorate about interference from the transmitter, and we will consider whether we will again raise the issue," said the acting press spokesman at the Foreign Ministry, bureau chief Carsten Helgeby, to AFTENPOSTEN.

It is because of requests from TMLF and LO that the Foreign Ministry is now considering the issue again. In both the requests it is emphasized that Norwegian authorities must now exert pressure on Soviet authorities to stop the radio interference from the controversial transmitter. After a relatively quiet period in 1979-80 the interference is again so strong that it is causing great problems for the operating personnel at Rogaland Radio and the aviation safety service. The interference also disturbs transmissions to people at sea and Norwegians abroad from Norwegian National Broadcasting--the so-called "short wave."

Since 1976 Norway and other countries have sent about ten requests to the Soviet Union to have the interference stopped.

"The issue was last taken up at the civil service level during the summer and winter of 1981. First our UN ambassador--then department head Tom Vraalsen--raised the issue with the Russians in Moscow on 1 June 1981. In December of the same year Undersecretary Eivinn Berg also raised the issue. The transmissions were then in a quiet period, and he emphasized to the Russians that Norway was then satisfied with the situation and the actions which had been taken, said Helgeby.

Previously this year the transmissions began to be stepped up again and in February Rogaland Radio took the issue up with the Telecommunications Directorate. "In March we sent a complaint to the Soviet telecommunications authorities. We received a reply that they would investigate the matter, and we would be informed of what they would do about it. We have heard nothing since then," said division engineer Per Michalsen at the Radio Transmission Office in the Telecommunications Directorate.

Secretary Eidar Trulsen at LO's international division said that LO raised the issue last fall in Moscow. "Both Tor Halvorsen and LO's international secretary Kaare Sandegren discussed the issue then with the Soviet LO. Since then we have heard nothing about it," said Trulsen.

9287
CSO: 5500/2749

ENTEL'S SERIOUS FINANCIAL PROBLEMS ATTRIBUTED TO UNPAID DEBTS

La Paz PRESENCIA in Spanish 20 June 83 p 3

[Text] The National Telecommunications Enterprise (ENTEL) reports that it is owed large sums of money by both the state and the telephone companies. It notes that its "domestic and external debts amount to 1,782 billion Bolivian pesos" and, of this amount, the state owes over 17 million pesos and the telephone companies over 547 million pesos.

ENTEL is a comparatively new enterprise. It was organized a few years ago under its present structure. Its aim is a gradual expansion of its services as proved by the fact that from time to time the enterprise announces that direct dialing service, which allows for faster communications, is now available in such or such area of the country.

To stop it from joining the ranks of other state enterprises, the government would be well advised to pay its outstanding debts on time and not let the bills accumulate because, in the long run, this could have adverse repercussions not only for the enterprise but also for the state which, from a budgetary standpoint, will be increasing its already permanent deficit.

Although some telephone companies have already resolved the matter of payments to ENTEL, the fact remains that to get paid on time ENTEL must give the telephone companies the necessary advance notice of their bills for long-distance calls. There is no excuse for the telephone companies which get paid for long-distance calls, merely acting as "withholding agents for ENTEL," then fail to transfer these funds in due time. They cannot claim that they were not paid by the telephone subscribers because everybody knows that when telephone bills are not paid the service is automatically disconnected. In other words, when a telephone bill is paid, that bill also includes calls between cities inside the country or calls made to another country.

To protect the interests of ENTEL and spare the country in general bigger problems--because if things do not change ENTEL will become yet another enterprise operating in the red--both the state and the telephone companies must pay their bills when they are due. This is the least that can be expected if ENTEL is to be a constantly expanding enterprise with prospects of being economically profitable for the country. Its earnings will also contribute to expand and improve its services.

8796
CSO: 5500/2085

EXPANSION PROJECTS ON COURSE DESPITE DIFFICULTIES

La Paz PRESENCIA in Spanish 20 June p 3

[Text] Alfredo Sanchez Aranibar, the general manager of ENTEL, has announced that the JICA Plan adopted by that enterprise will link telecommunications systems in 71 towns from remote areas of the country and will require an investment of $55 million. He added that the project is now being evaluated by the Ministry of Planning and Coordination where experts are studying its feasibility.

Sanchez said that in a very near future ENTEL's communications systems will reach all over the republic. Speaking of the JICA Plan, he said that it is a program of social import because people in these remote towns from the south of the country will be getting favorable treatment as regards the scale of charges. In these areas the charges imposed will be for calls lasting a minimum of 4 minutes instead of the 3-minute charge imposed in urban districts.

He said that ENTEL links 18 provincial capitals of the country expanding its area of operation with television signals. He added that they are also going to launch the DOMSAT Program which calls for an investment of around $12 million and will benefit towns located in the north of the country.

He noted that the project to build a telephone exchange in Huanuni, which is scheduled to open this week, required an investment of 1.335 billion pesos. He said that preferential treatment will be given to that type of social project in view of the economic plight of the inhabitants of the regions receiving telecommunication services.

Social Aspects

Fausto Ardaya, leader of the Federation of ENTEL's Workers, said that the purpose of the workers' joint management in that enterprise is to protect the investment of human and economic resources for the good of the national community. He noted that ENTEL's workers do not have the benefit of social legislation. He pointed out that some workers are exposed to "radioactive radiation which clings to their clothes and that they are prone to serious illnesses."

Ardaya said that many former telecommunications employees have lost their hearing; they lack medical care and there is no industrial health program to protect the specialized human resources of ENTEL. He noted that these issues and many others concerning work safety will be brought to the government's attention for consideration.

As for ENTEL's administrative manager, Beatriz Jordan Tapia, she said that from as far back as its five previous managements the enterprise has carried unpaid bills amounting to 5.3 billion Bolivian pesos and among those which haven't paid is the Bolivian Television with an outstanding bill of 45 million pesos for sale of services. ENTEL's own indebtedness stands at $25 million. These debts were contracted with the BID [Inter-American Development Bank], the CAF [Andean Development Corporation], Mitsubishi, Schroder, the INDEF [Financing Institute], Sagem and Ericcson of Sweden and Brazil.

9876
CSO: 5500/2085

BRIEFS

TELEPHONE EXCHANGE NEAR BANKRUPTCY--Oruro, 22 Jun--This past weekend, the Telephone Company (ETOSA) marked its 22nd anniversary to a background of total austerity. "The time has come for decisions and changes of an economic and administrative nature," said Humberto Murguia Encinas, the company controller. The company is currently going through a very difficult economic situation which has brought it to the verge of collapse. According to figures worked out by the controller's office, ETOSA has an outstanding debt of about $3 million owed to national and foreign institutions and, more particularly, to the Ericcson Company of Sweden. The situation is all the more alarming since ETOSA does not have the means to pay these debts which have even made it impossible to start direct dialing service in the newly expanded network. The company also owes a considerable amount of money to ENTEL as a result of which the idea has been put forward to place ETOSA under the authority of that enterprise. In the past ETOSA used to be pointed as a model of good management to other similar national companies but today, and following an interference encouraged by political and academic sectors, the company is operating without a legal governing body. Meetings of its shareholders when called are attended by just over 100 shareholders (out of its 7,000 or 8,000); Murguia Encinas said that the problem will be gradually solved "with participation of the enterprise." He added that measures must be adopted to solve these problems while protecting the assets which belong to the people of Oruro. [Excerpts] [La Paz PRESENCIA in Spanish 23 June 83 p 6] 8796

SWEDISH PURCHASE--Fernando Cabrerizo Rios, manager of the Automatic Telephone Municipal Service, reports that they have applied to the Central Bank of Bolivia for foreign exchange to purchase signal transmitter-receiver sets to improve the city's telephone service subject to breakdowns particularly between 1000 and 1200 hours and between 1500 to 1700 hours due to an overload of calls. He explained that a lack of foresight in the past was the reason why these sets were not purchased to increase the number of communication circuits between existing telephone exchanges. He noted that due to the increase in the number of calls made and to the abusive use of the telephone by many people and by children, the service suffers breakdowns particularly during office hours resulting in complaints from many subscribers who are unaware of the technical reasons when they make their complaints. He said that to solve this problem they have requested the immediate purchase of signal transmitter-receiver sets from Sweden to increase the number of communication circuits and improve the service. [Text] [Cochabama LOS TIEMPOS in Spanish 22 June 83 p 7] 8796

CSO: 5500/2085

NATIONWIDE DIRECT DIALING TO BEGIN IN 1984

Dhaka HOLIDAY in English 25 Jun 83 p 3

[Article by Musleh A. Tarek]

[Text]

The digital electronic nation-wide dialing (NWD) system covering four major city exchanges, namely, Dhaka, Chittagong, Rajshahi and Bogra, is likely to start functioning from January next, according to the Telegraph and Telephone Board.

Work on the first phase of the NWD system began in February last and is scheduled to be completed by December next.

The second phase of the project, covering the rest 62 exchanges in the country, is scheduled to commence from January next and to be completed by December, 1984.

It may be mentioned here that after the introduction of the NWD system, any exchange will be able to contact other exchanges in the country.

The government is also considering to introduce digital electronic telephone system in Dhaka city from the end of the next fiscal year. The Telegraph and Telephone Board has already submitted a proposal to the government to construct an electronic telephone exchange with a capacity of 20 thousand lines.

Due to non-availability of cables and inadequate capacity of the different exchanges under the Dhaka Telecommunications Region, the number of applications for telephone connection pending before the regional authority has still remained high. The number now is about 21 thousand. The figure was 28 thousand in January last.

Most of the applications have been submitted seeking connections from the central exchange at Ramna which covers the major portion of old Dhaka area. At the central exchange, about 10 thousand applicants are a waiting new connection. About 5 thousand applications are pending at the Maghbazar exchange, and the rest 6 thousand at the Sher-e-Bangla Nagar, Mirpur, Tongi and Narayangonj exchanges.

Due to demand for new telephone connections, the authorities have taken up a scheme to construct telephone exchanges at Lalbagh, Zinzira and Faridabad. Construction of Lalbagh exchange, which will have a capacity of 5 thousand lines, will start from August next.

CSO: 5500/7152

FRENCH GET CONTRACT FOR BANGALORE PHONE IMPROVEMENTS

Calcutta THE STATESMAN in English 30 Jun 83 p 9

[Text] New Delhi, June 29--The French firm CIT-Alcatel, which had been given the contract for setting up a 500,000 lines-a-year electronic telephone switching factory at Gonda, in U.P., has been awarded yet another project for collaborating with Indian Telephone Industries in Bangalore to manufacture another 500,000 lines of electronic switching equipment. This is the second unit of its kind in the country.

Announcing the Government's decision here today, Mr T.S. Subramanian, member of the Posts and Telegraphs Board, told reporters that the offers of the nine other firms which had submitted their quotations for the second electronic factory now stand automatically rejected.

Asked if the French technology was the most modern in the world, the official said that while on paper (at the laboratory stage) some of the other firms' offers were suggested as better and more modern, the French system was the only one with proven technology and thousands of working lines.

The French technology would be chosen for the Palghat unit of ITI, where it is proposed to augment the capacity from 10,000 lines a year to small electronic exchanges of 150,000 lines, including the manufacture of electronic trunk automatic exchanges, rural exchanges and private automatic exchanges.

The cost of the Gonda unit was likely to be around Rs 140 crores, including a foreign exchange component of about Rs 70 crores. Both the units were expected to begin manufacture by 1985.

While the electronic technology offered by the other countries was not known to be in use anywhere outside their respective countries, the French technology, it was stated, was being used, besides France, in Sri Lanka and some Latin American countries.

In December 1980, the Government decided to set up factories to increase indigenous production of electronic telephone switching equipment. In 1981, the Government accepted the recommendations of the Srin committee on telecommunications to adopt digital electronic switching technology.

Last year, the Government decided to set up the first large electronic switching factory with a capacity of 500,000 lines a year at Gonda, even before taking a decision on the first electronic factory for which quotations had already been received.

The production of electronic equipment at Bangalore would be synchronized with the gradual phasing out of the manufacture of stronger electro-mechanical equipment at the Bangalore unit.

CSO: 5500/7161

DOE REPORT ON ELECTRONIC PHONE EXCHANGE UNDER STUDY

Madras THE HINDU in English 9 Jun 83 p 6

[Text]

NEW DELHI, June 8.

The cost of developing an indigenous system, including the making of prototypes, for manufacturing digital electronic telephone exchange equipment embodying the contemporary "state-of-the-art" technology for building the second factory has been estimated at Rs. 35 crores by the Department of Electronics (DOE).

The detailed report it has submitted to the Union Government is under consideration along with the two other proposals for either opting for the French Cit-Alcatel technology accepted for the first factory or for seeking fresh offers.

The cost of building the factory itself has not been precisely mentioned, but it will be over Rs. 150 crores at today's prices. The system could be developed in 28 to 30 months.

Electric telephone: The other proposal relating to the manufacture of a new model electronic telephone differs vitally from the one favoured by the State-owned Indian Telephone Industries. The ITI's proposal was that instead of importing the entire technology for making the telephone from Italy, the collaboration agreement should be limited to technology transfers for the four crucial components — the receiver, transmitter, push-button dial and the bell. It has also proposed that these items could be distributed to the State electronic corporations which could assemble the telephones.

The DOE has not accepted that the ITI should be farming out the four components to the electronic corporations for assembling the telephones.

On the contrary, its proposal envisages that the DOE should be given the right for the centralised purchase of technology for making the telephones by the electronic corporations. It has set up a technical group for handling the centralised purchase of technology. Though the DOE knows that such a proposal will not be acceptable to ITI, it hopes that the ITI would also join this group.

The ITI, however, is encouraged by indications that the hostility it had to court from the State electronic corporations over its monopoly in the manufacture of telephones is receding. Representatives of the four State corporations of Kerala, Tamil Nadu, Maharashtra and Karnataka who had visited the Bangalore factory of the ITI have requested it to give them the components for manufacturing telephones for an annual capacity of two lakh telephones for which they have been licensed.

Fears dismissed: The DOE has dismissed fears that the development of an indigenous system for producing digital electronic telephone exchange equipment with the help of Mr. Sam Pitroda, an expatriate Indian electronic exchange designer resident in the United States, would be a very futile exercise. When Mr. Pitroda evinced interest in developing a system suitable for India about a year ago, the DOE decided to adopt a "systematic methodological approach and the task was entrusted to a group of experts from different disciplines. The technical group visited the U.S. had di-

scussions with Mr. Pitroda and a few others and the manufacturing establishments in the U.S. which were in a position to supply manufactured items. It identified 13 leading firms which could supply such items.

The group which presented a detailed report to the Government concluded that the crux of the problem involved in developing an indigenous digital system related to the huge amount of software going into the system for which India, contrary to the situation in the U.S. was well-equipped in view of the existing and growing reservoir of trained manpower.

This is a point repeatedly emphasised in its report. In fact during its visit to the U.S. the group discovered that India's ability to extend software support was very much sought after

It has reported that in 28 months the basic prototypes for the digital system could be developed for field trials and in 36 months it should be possible to commence the project. India would need to buy from abroad certain items including the appropriate microprocessors.

Though the DOE feels quite confident about the capabilities available in India to develop the indigenous system, it does not seem to have dispelled the misgivings of the ITI. Even if its plans to develop an indigenous system are approved by the Government and are successful, this will not eliminate the dependence on foreign technology suppliers for certain crucial items. The State-owned Semi-Conductors Ltd (SCL) in Chandigarh is considering an offer from Cit-alcatel (France) for the sale of the LSIC and VLSIC (Large-Scale Integrated and Very-Large Scale Integrated Circuitry) for making the 8-bit custom-built chips for the electronic exchange equipment factory to be set up at Gonda (U.P.).

It is, however, not very sure that it should buy this technology at such a high price and is thinking of developing it indigenously by depending upon the research and development facilities at the ITI which is having its own misgivings in this regard.

CSO: 5500/7149

PLANS FOR DELHI TELEPHONE IMPROVEMENTS TOLD

New Delhi PATRIOT in English 14 Jun 83 p 10

[Text]

With the addition of 200,000 new telephone lines by 1986, the Delhi Telephones hopes to clear the present backlog of about 100,000 connections and another 100,000 in the next three years.

According to Delhi Telephones Additional General Manager M A Ramaswamy, a large expansion programme has been drawn up to balance the demand and supply by 1986.

However, the major problem, the Delhi Telephones has not been able to overcome and is not likely to do so during the next decade or so is 'giving a near perfect telephone system'.

Explaining the situation in an interview, Mr Ramaswamy said the Delhi Telephones were working on two fronts: Setting up new telephone exchanges or expanding them and the maintenance part of it, which includes cables.

As far as the telephone exchanges are concerned, he said the authorities were keen to have the latest electronic telephone exchanges. The electronic system did not have mechanical parts which put them to less wear and tear and thus could ensure longer life against the crossbar system which is mechanically operated and most of the exchanges are operated on this system.

Of the 200,000 new lines that would be installed by 1986, 135,000 connections will be on the electronic system he said. Of this, 45,000 lines would be on the digital system of France which is supposed to be the most advanced in the world.

As regards the maintenance, the Delhi Telephones had adopted two years ago ducting of the cables and their pressurization.

But, Mr Ramaswamy was candid enough to admit that the ducting or the pressurization of the cables would not take the Delhi Telephones very far since a large number of cables were decades old.

The total length of the telephone cables in the city was 12,000 kms and hardly 15 per cent of it had been pressurized and of the 23 kms of cables meant for ducting, barely eight kms had been completed so far.

Mr Ramaswamy said India was one of the few countries which was still using underground cables. But, he added, in view of the resources constraint it would not be possible to shoulder Rs 20 lakhs per km cost of ducting.

CSO: 5500/7158

FIRST REMOTE SENSING SATELLITE PLANNED FOR 1985-86

Calcutta THE STATESMAN in English 7 Jun 83 p 9

[Text] New Delhi, June 6--The first Indian remote sensing satellite, IRS-1A, will be launched by a Soviet launch vehicle during 1985-86, according to an official Press release.

It will be a semi-operational three-axis stabilized satellite in the 900 kg weight class. It will be placed in a polar sun-synchronous orbit and will have a design life of three years. Data from the satellite will be used for resources survey in agriculture, forestry, geology, hydrology and meteorology.

An agreement has already been signed between the Indian Space Research Organization and its Russian counterpart for the launching of IRS-1A.

Several major sub-systems such as the reaction control system, reaction wheels, inertial sensors, horizon sensors, communications system and vital components of the camera, proposed for use in the satellite are being indigenously developed in various ISRO units.

Fabrication of structural and engineering models of the satellite has also been taken up.

Reliable New Tool

Remote sensing is becoming the most reliable means of acquiring accurate inventories of resources like land, water, forests, oceans and minerals. It is also emerging as a powerful new tool in the evolution of a national natural resources management system.

Simply stated, remote sensing is the sensing of objects from a distance and recording their characteristics without actually coming into contact with them. We have the capability now of observing the earth from a distance and studying its natural resources or phenomena like floods and drought from a platform with the help of sensors--a term used for sophisticated instruments, such as cameras.

The sensors can be fitted in helicopters, aircraft, balloons, rockets and satellites.

Data collected by these sensors can be stored in a variety of formats--black and white or colour photographs or magnetic tapes. It is analyzed by visual photo interpretation or through computers for the relevant information.

Main Objectives

The objectives of India's remote sensing programme are to design, develop and deploy a three-axis stabilized polar sun-synchronous satellite carrying solid state pushbroom cameras operating in visible and near-infrared bands for acquiring imageries of earth resources; to establish and operate ground systems for mission control, data reception, progressing, generation and analysis of data products; and to enable user agencies in the country to utilize the data with complementary data from other sources for survey and management of natural resources.

The secondary objectives are to critically assess the application potentials of satellite remote sensing in vital tasks of monitoring and estimating agricultural resources outputs, inventory of forestry resources, geological mapping, monitoring and delineation of water resources, land use survey, planning and management of marine resources, survey and study of coastal processes, and to build indigenous capability in a variety of technologies in the space and ground segments, and the associated mission support and data products software for a modern satellite-based remote sensing system.

CSO: 5500/7147

DIGITAL SYSTEM FOR SATELLITE COMMUNICATIONS PLANNED

Bombay THE TIMES OF INDIA in English 18 Jun 83 p 7

[Text] Pune, June 17 (UNI)--India will soon be using the digital system in satellite communications with the expansion of the Vikram satellite earth station (VSES) next year.

The Overseas Communications Service (OCS) additional director-general, Mr P.K. Narasimhan, said yesterday that the expansion--which will cost Rs six crores--had become necessary because the International Telecommunication Satellite (INTELSAT) systems were switching over to the "time division multiple access" mode.

Mr Narasimhan was with the Union minister of state for communications, Mr V.N. Gadgil, who was visiting VSES, at Arvi near Narayangaon, 80 km from here.

He said the station was among the few selected for the purpose by the INTELSAT organisation.

Recently, extensive "refitting" work was carried out by the OCS to enable the station to handle latest fifth generation satellites. About 40 percent of the installed equipment was discarded, the VSES director, Mr Pramod Sarpotdar said.

The station handles about 500 telephone channels and accommodates other telex and telegraph services, leased to teleprinter circuits, television and other communication channels, making it the biggest in the country.

While the country's share in the INTELSAT satellites was proportional to its usage, the ratio in monetary terms had declined over the years from $30,000 per channel per year to $4,000 now, he said.

The possibility of another tie-up for the use of INTELSAT satellites would be discussed next month, he said, adding that if the deal was clinched India would be one of eight nations to use two satellites for international communication.

CSO: 5500/7155

WORKING GROUP STUDIES COMMUNICATIONS EQUIPMENT NEEDS

Madras THE HINDU in English 27 May 83 p 12

[Text] MADRAS, May 26.

A working group is examining steps to bridge the gap between the requirements and availability of indigenous technology in the field of telecommunication equipment.

The Delhi-based group, consisting among others of representatives of the Directorate of Telecommunications in the Department of Electronics (DOE), Posts and Telegraphs and manufacturing units has identified areas in the field of microwave UHF/VHF systems, both analogue and digital, where technology may have to be acquired from abroad.

Talking to THE HINDU here, Mr. M. N. Mathur, Director of Telecommunications of the DOE, said the group's effort was to ensure that the user-manufacturers got the right type of technology, which in turn would provide a sound base for the component manufacturing activity in the country. This in the long run will help reduce import.

The group was also keen to determine whether the incremental R&D efforts by different agencies indigenously or in terms of assistance from abroad could help reduce imports.

Mr. Mathur, who is also Managing Director of the Electronics Trade and Technology Development Corporation (ETTDC), during his stay here met entrepreneurs and R&D people in the electronics industry and heard their views on the future development of the industry and the role his organisation had to play.

Centralised purchase: Answering a question, Mr. Mathur said the working group had almost finalised details for the centralised purchase of technology/equipment for electronic telephone private branch exchanges. His directorate had cleared the purchase of two lakh electronic lines.

(Enquiries with officials in the city reveal that of the two lakh lines at least 25,000 lines will be for Tamil Nadu).

According to Mr. Mathur, the ETTDC would try to ensure that the electronic industry played its dual role of meeting the domestic market and developing exports. In this task the ETTDC would act as a catalyst to bring appropriate technology to the doorsteps of the industry even while playing the role of canalising agency for getting the critical components.

He as well as Mr. Subramaniam, Technical Director of the ETTDC, stressed that quality should be the watchword of the industry as in countries like Japan.

CSO: 5000/7137

POLICY ON TRIBAL AREA TELECOM FACILITIES LIBERALIZED

New Delhi PATRIOT in English 18 Jun 83 p 8

[Text] The Posts and Telegraphs Department has 'liberalised' the policy on provision of telecommunication facilities in rural, backward hilly, and tribal areas, reports UNI.

According to official sources, the decision has been taken as part of the Government's policy to extend telegraph and telephone facilities in these areas.

Out of a total 3678 block headquarters in the country, 3576 have been provided with telecommunication facilities. The rest 102 block headquarters cannot be provided such facilities by open wire due to inaccessibility. These are proposed to be provided with telecommunication facilities by using alternate media, the sources added.

During 1983-84, 2,000 long distance public call offices and an equal number of telegraph offices would be commissioned on open wire routes.

Five hundred more long distance public call offices (PCOs) and an equal number of telegraph offices would be commissioned on multiaccess, radio railway system.

The task force which has been set up in the P and T department to evolve proper technology to provide reliable and satisfactory telecommunication system in the rural, tribal and hilly areas, has summitted its report.

The task force has proposed an integrated telecommunication development plan for 18 such districts. During 1983-84, 2,650 lines are proposed to be commissioned in Agra district under the Integrated Development programme, the sources added.

Meanwhile, the five Metacenta type rural electronic exchanges gifted by the government of Norway under the Commodity Assistance Programme have been commissioned at Nainital, Almora, Ujhani, Ghaziabad and Jabalpur, the sources added.

CSO: 5500/7156

PLANS TO IMPROVE MADRAS TELECOMMUNICATIONS TOLD

Madras THE HINDU in English 17 Jun 83 p 11

[Text]

MADRAS

The telecommunications scene in Madras will get a boost through the next 18 months when an electronic telex exchange and an electronic trunk automatic exchange are set up here.

Mr. K. C. Ramadoss, General Manager of Madras Telephones, said in an interview that the Rs. 6.67 crore, West German Electronic Stored Programme Telex (SPC-Telex) equipment now coming up on North Beach Road would have 3,700 lines. It will be capable of handling 2,200 calls from any part of the country to any area in Tamil Nadu (transit calls). There will besides be available 1,500 local lines. When commissioned at the end of 1983, it will improve the telex service in Madras and also clear the waiting list for telex connections.

The 4,000-line Japanese SPC-Electronic TAX (Trunk Automatic Exchange) will be ready by the end of 1983 and will cost about Rs. 5.27 crores.

Engineers trained: Mr. Ramadoss explained that though the hardware as well as software were imported, any further modification to the software of the equipment could be done at the Advanced Level Telecommunications Training Centre (ALTTC) in Ghaziabad, U.P. Four engineers have already been trained in the suppliers' factories in Munich and Tokyo.

Air conditioners at the Telex and Trunk Automatic Exchange will need about 600 KVA for the former and 400 KVA for the latter.

An electronic exchange interprets the instructions stored in memory and completes a call right from the stage of identifying the calling condition of a subscriber. The memory contains the data necessary to locate the subscriber lines and operating instructions for the switching system. The input programmes, output data and operational indices each controls a particular phase of call processing under the overall direction of a executive control programme. The input programme provides information about subscriber/trunk line conditions, the operational programme examines it and decides upon the necessary action. The programmes permit translation of dialled digits, linking availability within the switching matrix and locating equipment which will be used for opening and closing communication paths within the network.

The central control unit serves as an interface between the call store and the programme store. It receives instructions from the programme store and data from the call store to perform the required circuit operations which ultimately results in providing a unique transmission path between the calling and called numbers.

The facilities available under the system include teleconferencing. In local exchanges teleconferencing could be provided among three subscribers. But the Ministry will have to decide whether to introduce the facility.

CSO: 5500/7154

'APPLE' COMPLETES 700 DAYS IN GEOSTATIONARY ORBIT

Bombay THE TIMES OF INDIA in English 22 May 83 p 1

[Text]

BANGALORE, May 21.

APPLE, India's first experimental geostationary communications satellite launched on June 19, 1981, successfully completed 700 days in orbit yesterday.

Parked at 102 degrees E, the spacecraft has been operating normally. Over 80,000 commands have been issued to the satellite and executed during this period, according to a department of space press release.

The primary aim of the APPLE mission was to acquire satellite technology and carry out a number of future programmes. To this end, the communications payload has been operated for over 5,100 hours during the last 23 months fulfilling all the requirements of the APPLE utilisation project.

A number of advanced communication technology experiments such as time division multiple access (TDMA), spread spectrum multiple access (SSMA), small communication terminals (SCOT) and TV with multiple audio have been completed.

Computer interconnection experiments are in progress and presently computers at the TIFR in Bombay and the Space Application Centre, Ahmedabad, are routinely accessed in an interactive mode from both ends via APPLE. A Bank of India. experiment for speeding up transactions through a satellite link is in progress between Bombay and Ahmedabad.

MANY EXPERIMENTS

A number of other experiments such as facsimile printing of newspapers, emergency communications during cyclone relief operations in Gujarat and TV hook-up for national events like Independence Day, Republic Day and other special events have demonstrated further the potential of space communication for operational systems.

The APPLE link was also used to transfer Bhaskara-II payload data from Ahmedabad to SHAR, to reduce turnaround time in payload data utilisation.

A few more experiments of special nature are planned for the next two months. These include (1) a one-day experiment in the first week of June for simultaneous telecasting of a short course on robotics via APPLE to the professional community at four locaitons (Ahmedabad, Bangalore, New Delhi and Madras) by a co-operative effort between ISRO, P & T and the Institute of Electrical and Electronic Engineers, and (2) a course on satellite communication via APPLE for the IITs.

The in-orbit management of APPLE has proved to be a demanding task in the light of thermal problems arising out of non-deployment of one of the solar panels of APPLE. Appropriate power and thermal management strategies and special manoeuvres were developed and adopted to ensure that the spacecraft would continue to function smoothly within the safe limits of its critical subsystems.

APPLE was designed for a nominal two-year mission life and all experiments were planned to be carried within this period. Based on the currently estimated fuel availability on board, the mission life of APPLE may marginally extend beyond two years.

Taking into account the already planned experiments over the next few weeks and the on-board fuel availability, the APPLE mission is expected to come to a close in September, 1983.

PTI adds: Space scientists at the Sriharikota mission control are making "vigorous efforts" to set right the anomalies encountered in the smart sensor camera of the Rohini-D2 satellite.

The operation of the camera was suspended on May 16 because of the anomalies.

CSO: 5500/7136

'APPLE' BEAMS FIRST SATELLITE-LINKED VIDEO LECTURE

Madras THE HINDU in English 5 Jun 83 p 1

[Text]

BANGALORE, June 4.

An audience estimated at 500 scientists and engineers located at Bangalore, Ahmedabad, Madras, New Delhi and Hyderabad were simultaneously introduced today to the intricacies of one highly sophisticated technology by employing another modern technology.

Starring in this show was the Indian Space Research Organisation's (ISRO), ageing prima donna, APPLE (Ariane Passenger Payload Experiment) the experimental telecommunications satellite which has completed over 700 useful days in orbit.

A five-hour video course on robotics, courtesy Institute of Electrical and Electronic Engineers (IEEE), U.S., was beamed to TV sets at the Space Application Centre (Ahmedabad), Indian Institute of Science (Bangalore), P and T Earth Station (Chengalpattu), Telecom Research Centre (Ghaziabad), ISAC (Bangalore) and Electronic Corporation of India Ltd. (Hyderabad) from the Ahmedabad earth station via the transponder aboard APPLE. The programme was organised by IEEE (India) in collaboration with ISRO and P and T.

This is the first time such a satellite-linked video lecture to audiences across the nation has been tried out. Except for a slight picture waviness caused by the drift of the satellite which is on its last legs, the transmission was adequate with the audio signal coming through loud and clear.

While the audiences at Ghaziabad, Ahmedabad and Chengalpattu, ECIL (Hyderabad) and ISAC (Bangalore) received the signals from APPLE through ground-based antennae, at the Indian Institute of Science (Bangalore), the signals were received through the antenna of a truck mounted transportable satellite earth terminal.

Crucial link: This terminal which was manufactured by Indian Telephone Industries (Bangalore) two years ago (it was used to inaugurate APPLE telecasts) is a crucial link in video networking using satellites. It is designed to receive and send one video and up to eight audio channels. It has its own diesel genset so it can be used in remote areas which are not served by the electric power network.

Very few countries possess the technical know-how to design and manufacture such transportable earth terminals.

CSO: 5500/7146

'APPLE' SATELLITE PROGRAM TERMED 'TOTAL SUCCESS'

Bombay THE TIMES OF INDIA in English 19 Jun 83 p 9

[Text] Bangalore, June 18 (UNI)--APPLE, the aging prima donna of India's satellite-based communication programme which completes two years in space tomorrow, is a total success.

The APPLE project director, Mr R.M. Vasagam, said today that all the mission goals of the three-axis stabilised geo-stationary experimental communication satellite had been accomplished. These included designing, building, testing and launching of the satellite, bringing it to station and in-orbit utilisation for advanced technical experiments.

He said the experience gained with technology created from APPLE would help India realise the second generation communication satellite of the INSAT system with confidence. APPLE was identical to satellites of the current generation of other countries, as well as INSAT.

Mr Vasagam said that although APPLE's estimated in-orbit life ended tomorrow, it would continue to be used till September. One major experiment planned next month was the beaming of a computer course to the students of the Indian Institutes of Technology. The computer inter-connection experiments would also be continued.

APPLE was used last month for beaming a course in robotics to select audiences in four states.

Earlier, a number of advanced communication technology experiments such as time division multiple access, spread spectrum multiple access, and small communication terminals were successfully completed.

He said space scientists had managed to overcome thermal problems created by the non-deployment of one of APPLE's solar panels through improvised special manoeuvres. This non-nominal condition of the satellite had not affected its functioning.

APPLE was also used for emergency communication during the Gujarat cyclone relief operations and for a national TV hook-up of certain important national events. A Madras-based newspaper used it for facsimile printing and a public sector bank used it to speed up transactions between Bombay and Ahmedabad.

CSO: 5500/7157

CALCUTTA COLOR TV TRANSMISSION BEGINS; OFFICIALS SPEAK

Calcutta THE STATESMAN in English 7 Jan 83 p 9

[Text] Inaugurating the colour transmission facilities of Doordarshan Kendra, Calcutta, on Monday, Mr H.K.L. Bhagat, Union Minister of State for Information and Broadcasting said the national TV programme aimed at achieving national integration. Its intention was to bring the States closer.

The Minister said that from now on about 25 percent of the programmes produced by the Calcutta Centre would be in colour. This would be apart from the colour programmes to be transmitted through the national network.

Speaking on the occasion, Mr Jyoti Basu criticized the national programme which, he said, should be reduced to an hour. He also felt that there should be a second channel. He criticized the screening of Hindi films, especially those depicting violence. He requested the Union Minister to set up a transmission centre on Tiger Hill in Darjeeling for the benefit of the people in North Bengal. The local film talents should also be encouraged in the production of programmes on TV, he added.

Later, the Union Minister told a Press conference that though he had full respect for the freedom of the Press and the Centre had no wish to curb this freedom, the Press should formulate a code of conduct for itself. He also repudiated the allegation of "partisanship" in the radio and TV coverages and made it clear that the national programme on TV which needed improvement would not be imposed on any State.

"No newspaperman should be harassed, intimidated or by any body, either in the Government or in private management," he said. Except for a small section, the Press, he said, had in general acted responsibly and done good work so far. He, however, felt that if all other professions had a code of conduct, the Press should also have the same.

The radio and TV, the Minister said, were working according to guidelines laid down by the Centre and had so far worked fairly and justly and had not discriminated against anyone. He said the allegation of partisanship had been made by Mr Jyoti Basu when he met him during the day. He had assured the Chief Minister that specific complaints would be looked into.

Mr Bagat admitted that there had been widespread complaints about the national programme on TV. Even Chief Ministers of different States had complained about the programme when he sought suggestions from them recently. The programmes, he felt, were good but there was scope for improvement. They had, however, not disagreed with the concept of such a programme but with its contents. He had instructed the authorities to project more programmes from the different States. "We want the national programme to be lively, attractive and acceptable to all in the country," he added.

The Minister said the Centre had plans to install a relay transmission centre for TV network in every town in the country having a population of over 100,000. An expert committee had been formed to study the ways through which the TV could be speedily developed in all aspects.

In West Bengal, Mr Bhagat said the new complex of the Calcutta Doordarshan Kendra in Tollygunge would be completed by the end of the 1982-83 while the transmission centre at Asansol would also be ready by that time, provided supply and erection of the 150-metre high steel tower were done in film. Another transmission centre was being set up at Murshidabad for which land had been provided by the State Government. The low-power transmitter at Malda which had been set up during the Asiad would continue to function, he said. With the installation of the Asansol and Murshidabad centres, TV service would be available to 60 percent of West Bengal's population against the expected national average of 33 percent by the end of the Sixth Plan, he said.

Mr Bhagat admitted that the films shown on TV had a demoralizing effect on the children and adolescents. But this was a world phenomenon. The problem, he said, was a difficult one to solve. About film censorship, he said, that opinion about it was divided and a new censor policy was likely to be announced soon. The Minister met people from the film world in Calcutta during the day.

CSO: 5500/7147

ENGINEER TELLS PLANS FOR DISTRICT RADIO STATIONS

Madras THE HINDU in English 18 May 83 p 12

[Text] TIRUNELVELI, May 17.

The Nagercoil station of All India Radio, one of the six district-level radio stations being set up in the country, would be commissioned in two months, Mr. K. G. Sankaran, South Zone AIR Chief Engineer, told newsmen here

The radio station, covering a transmission area of 30 km, would broadcast programmes mainly of interest to Kanyakumari district. Initially there would be only evening transmission.

A similar district-level radio station would be set up in Adilabad in Andhra Pradesh. Four more such stations would come up in other regions of the country.

Mr. Sankaran said the Government had allotted five acres of land for setting up the Nagercoil station. Work on the installation of the transmitter was going on. The total cost of the project was about Rs. 43.10 lakhs.

Work on the setting up of a full-fledged radio station at Madurai would be taken up soon. Work on the installation of the high-power transmitter at Cuddapah and Dharwar was on and studio projects were coming up at Tirunelveli, Cuddapah, Gulbarga, Bhadravati and Visakhapatnam.

National programmes: To improve the reception and broadcasting of national programmes by utilising the Insat-1B satellite, receiving terminals were being constructed at Bangalore, Coimbatore, Calicut, Pondicherry, Tiruchirappalli and Visakhapatnam in the south zone in the first phase and would be extended to other stations in the next phase.

To strengthen the external broadcasting services, two 500 kilowatt (KW) transmitters were being erected at Doddaballapur, near Bangalore.

TV coverage: Regarding improvement to television coverage in the zone, Mr. Sankaran said a 10 KW transmitter tower was being set up at Trivandrum. The TV station coming up at Trivandrum would cost about Rs. 4.5 crores. The telecasting channels would also be changed to channel nine so that it did not interrupt Rupavahini (Sri Lanka TV) programmes. A full-fledged TV station was also coming up at Bangalore on a seven-acre site.

The Chief Engineer said Madras TV would go colour in a year. The TV transmitter was colour-compatible, and some auxiliary equipment had been sought. The Trivandrum and Bangalore TV stations would also be equipped with colour telecast facilities.

Tirunelveli AIR bags award: Mr. Sankaran said the Tirunelveli AIR station had been awarded the first prize, instituted by the Central Government for the first time, for technical innovation. The award was given for the invention of a FM (Frequency Modulation) transmitter and an audio-mixing console.

While the FM transmitter is used to improve the quality of broadcast, the audio-mixing console is the nerve centre in the AIR studio set up.

The FM transmitter was designed and fabricated at a cost of Rs. 6,000 by Mr. S. Ganesan, Engineering Assistant, Tirunelveli AIR, assisted by Mr. H. Dharmaraja Iyer, Senior Engineering Assistant, and Mr. A. Sendurapandian, Engineering Assistant assisted by Mr. L. Sundaresan, Senior Technician. A shield and a certificate were presented to the station at a function organised by the AIR Tirunelveli and the Nellai Sangeetha Sabha, Tirunelveli on Sunday. The five engineering employees of the station, were given merit certificates.

Radio Sangeet Sammelan: Radio Sangeet Sammelan will be held on May 18 at Tirunelveli this year, for the first time under the auspices of the All India Radio, Mr. V. Appakutty, Station Engineer, AIR, Tirunelveli announced at the prize distribution function.

Out of the 85 stations of AIR, 15 stations, including Tirunelveli, had been chosen for the Sammelan.

Mr. K. Santhanam of the Southern Petro-Chemical Industries Corporation (SPIC) suggested the setting up of a 100 KW broadcasting station at Tuticorin with provision for commercial programmes.

Mr. Dalavai R. Ramaswami, Joint-Secretary of Nellai Sangeetha Sabha, urged that a Doordarshan station be located at Tirunelveli.

CSO: 5500/7135

REMOTE SENSING AGENCY SEMINAR DISCUSSES AIMS

Madras THE HINDU in English 14 May 83 p 7

[Text] HYDERABAD, May 13.

Five regional centres to make remote sensing data available to user agencies and evolve an interactive system in the field will be set up in the country.

The Departments of Space and Electronics, along with user agencies, had identified the specific areas for the purpose, Prof. M. G. K. Menon, member of the Planning Commission, said here.

He was briefing newsmen on Thursday at the end of a three-day seminar organised by the National Remote Sensing Agency.

He said the Indian Council for Agricultural Research would set up a regional centre in Nagpur, the Department of Science and Technology would develop its centre at Kharagpur and the Department of Mines, one in Bangalore. The Department of Space and the Department of Electronics will each set up regional centres in the western and northern sectors.

Experience sharing: The national seminar on 'National Natural Resources Management System' felt India should share its experience in remote sensing technology with the international community both for enhancing its own capabilities and assisting in its utilisation by developing countries.

Apex agencies involved in the use of remote sensing should provide a coordinated leadership in developing the many steps necessary for the maximum exploitation of this vital tool.

The seminar evolved a 16-point programme of activities for the coming years.

All agencies connected with national development should utilise remote sensing data. They should be enabled to appreciate the capabilities in this area and the need to systematically enhance these remote sensing applications. Well-planned experiments at the district, State and regional levels should be conducted for the enhancement of competence and for widening their use. Exchange of information among institutions engaged in the use of remote sensing techniques should be methodically expanded, the seminar felt.

Resource management system: The seminar resolved that a national natural resources management system should be established with interactive units at regional and State levels. As a vital component of the system, it was essential to implement a national resources information system through which continuous reception of data from existing and proposed earth resources satellites should be possible. Conversion of this data into readily usable data products and dissemination of the data to the widest cross-section of users at all levels should be achieved.

The Indian remote sensing satellites, the first of which is to be launched in 1985-86, will form the core and be supplemented by inputs from earth resources satellites launched by other countries.

Task forces: National task forces for specific applications should address themselves to questions of technical suitability, effectiveness, accuracy and the integration of remotely sensed data with traditional techniques. Work should be intensified to extend remote sensing to the hitherto little-used infra-red and microwave regions of the spectrum and the use of passive and active systems. Sustained use of this tool will be possible only if Indian industry is encouraged to produce, instal, operate and maintain equipment and software, the seminar felt.

Powerful tool: Prof. Menon said remote sensing had emerged as a powerful tool in the evolution of natural resources management system. Remotely sensed data had vital relevance in major sectors of the economy such as agriculture, forestry, irrigation, human settlements, geology, ecology and ocean development. To ensure optimal exploitation of the resources, a multi-disciplinary approach with the active interaction by users at every level was needed, he said.

IRS-I by 1985: The Rs. 65-crore, first Indian remote sensing satellite (IRS-I) is scheduled to be launched by the end of 1985, Prof. S. Dhawan, Secretary, Department of Space said. It would be launched from a Soviet cosmodrome.

The launching cost would be Rs. 10 crores, besides expenditure for ground station. Its life expectancy was three years. Successive launches would be possible by 1987-88, by which time the Polar satellite launch vehicle would be ready.

CSO: 5500/7133

COMMUNICATIONS OFFICIAL TALKS TO MADRAS PRESS

Madras THE HINDU in English 3 Jun 83 p 9

[Text]

MADRAS, June 2.

The Government is making all efforts to get the Kodaikanal television relay station commissioned before the end of the current Five-Year Plan (1984-85), the Union Minister of State for Information and Broadcasting Mr. H. K. L. Bhagat, told a news conference at Raj Bhavan today.

The station will have a range of 100 km and will be operated by a 10 kW transmitter tuned to channel seven.

While a lot of work had been completed on the site at Kodaikanal, the Minister was not sure that the erection of the transmitter and the 130 metre radiating tower and the laying of the exclusive microwave communication link, entrusted to the Posts and Telegraphs Department, would be over on time in spite of the Government's best efforts.

In the event of some delay in assembling these different factors, the Minister said, the Government's thinking was to get ready as an interim arrangement, a one kilowatt transmitter operating from a shorter tower and catering to a smaller area, and make it available for relay of the national programmes in the territory of its reach.

Mr. Bhagat said the permanent 10 kilowatt station at Kodaikanal, which could relay Madras TV programmes, would cover an area of 60,000 sq. km. and a population of 171 lakhs (both urban and rural) in the State.

Low power transmitters

His Ministry was examining expansion of TV coverage through low power transmitters, outside the Sixth Plan provisions. Some parts of Tamil Nadu would benefit by this move.

Mr. Bhagat said while two OB colour vans had been kept in the Delhi TV station and one each at Bombay and Calcutta, the Government was making arrangements to get one for Madras.

The Minister agreed that there was scope for improving the content and quality of the TV programmes. He had asked Doordarshan kendras to take steps in this direction.

On national programmes he said the aim was to reorganise them to project the ideal of national integration as well as the cultures of the different regions and also to have them broadcast in the various languages. Suggestions from the Chief Ministers including the Tamil Nadu Chief Minister in this regard were under the Government's consideration. He was also planning for sponsored programmes by private parties and for dubbing national programmes in the regional languages.

Increase in the duration of television programme was also under consideration, but it depended upon the availability of necessary software. A committee on software has been set up and it was now going into the question.

Efforts were being made to telecast an English feature film once a fortnight, and he hoped it would be possible to make a start from this month end.

The Minister was asked questions about what he felt about the Tamil Nadu's Chief Minister's reiteration to continue the controversial Press Act on the statuete book. All that Mr. Bhagat would say was that he noted the feelings of the pressmen on the enactment. He advised them to meet the Chief Minister for solving this problem.

'Don't feature me'

At the outset, when the cameramen of the Doordarshan and the State Films Division entered the venue of the news conference with their equipment, the Minister made a request to them not to feature him.

CSO: 5500/7145

BRIEFS

STD FACILITIES NEEDED--New Delhi, June 16--Even with limited imports priority emands for subscriber trunk dialling service could not be fully met during the current plan period according to an official assessment. The objective of priority STD on all eligible routes would require the establishment of more production facilities and manufacturing capacity for switching equipment, particularly of the electronic type. Two electronic switching equipment factories are to be set up. A decision has been taken on the establishment of and technology of only one which is to come up in Gonda on collaboration with CIT-Alcatel. No decision has been taken in relation to the second regarding whether there has to be foreign collaboration, if so with whom and where it is to be located. As many as 600 stations are eligible for STD because of heavy trunk traffic. The service has been introruced as on March 31 in 282 stations. It is estimated that more than 100,000 equivalent lines of stronger STD equipment and 120,000 lines of trunk auto exchange (TAX) equipment will be needed. The present availability of equipment from Indian Telephone Industry (ITI) is meagre--about 5,000 equivalent lines of stronger STD and 6,000 lines of TAX equipment ayear. Similarly, 326,000 lines of auto-exchange equipment are required to replace all manual exchanges. Automatisation is the first step necessary before the introduction of subscriber trunk dialling from these exchanges. But the supply from indigenous sources is not sufficient even for expanding the existing auto-exchanges. [Text] [Bombay THE TIMES OF INDIA in English 17 Jun 83 p 6]

NEW FACSIMILE SERVICE--Pune, June 14--Pune became the ninth city in the country today to get public facsimile photo transmission service between Delhi and the city, the Union Minister of State for Communications, Mr V.N. Gadgil said efforts were under way to set up direct telephone links with Malaysia, Hong Kong and Japan. Laying of submarine cables with Gulf countries was also in progress. Defending the decision to levy Rs 10,000 as deposit for telex connnections, the Minister said it was according to the Planning Commission's directive to the Department to raise internal resources while cutting its Plan expenditure from Rs 651 crores to Rs 511 crores. The levy was part of the Government's effort to wipe out losses incurred in areas like mailing of newspapers. "The Government subsidises the freedom of the press annually to the extent of Rs 12 crores by charging only five paise for mailing newspapers as against the operational cost of 42 paise," he said. The other cities linked under the facsimile service with New Delhi are: Ahmedabad, Jullundur, Lucknow, Bangalore, Patana, Trivandrum and Bombay.--PTI [Text] [Madras THE HINDU in English 15 Jun 83 p 6]

HUNGARIAN TELECOM OFFER--Hungary has offered cooperation in modernising the telecommunication network in the country, reports UNI. The offer was conveyed by a high ranking delegation of Budavox, the Hungarian Telecommunication Foreign Trading Company Limited, when it called on Information and Broadcasting Minister H.K.L. Bhagat, Deputy Communications Minister V.N. Patil and secretaries and officials of the two ministries here between 17 and 25 June. The delegation members said Hungary was interested in cooperating with Indian companies in the production, supply and technology of microwave links, low power television transmitters and sophisticated computerised quality network analyser system for telephone exchanges. [Text] [New Delhi PATRIOT in English 29 Jun 83 p 5]

TELEVISION STATIONS PLANNED--New Delhi, June 1--Sixteen TV stations will be commissioned by the end of the Sixth Plan, eight of them full-fledged ones, and the rest relay centres. All of them will be equipped with 10 KW transmitters having a range of 70 km and serving four to 10 districts each. With the commissioning of these stations the total number of stations in the country will go up to 57. The eight full-fledged TV centres are to be set up in Gauhati, Ranchi, Gorakhpur, Ahmedabad, Rajkot, Nagpur, Bangalore and Trivendrum. In some of these centres, an interim service comprising the relay of programmes from the nearest centres is already on. Bangalore and Nagpur are the two instances. The eight relay centres are to be located at Murshidabad, Asansol, Cuttack, Kasauli, Varanasi, Panaji, Vijawada and Kudaikanal. The Asansol relay centre is expected to start an interim service during the current year itself. It will serve six districts: Birbhum, Burdwan, Bankura, Purulia, Dhanbad and Santhal Parganas. The Murshidabad relay centre which will be commissioned in 1984-85, will serve Murshidabad, Burdwan, Malda and Nadia districts as well as part of Birbhum and Santhal Parganas. The Panaji relay centre in Goa is another instance where an interim service is already on. Officials say that the Government is keen to extend further the existing TV service and that various possibilities of doing so in the near future are being carefully examined with reference to the availability of financial and manpower resources as well as equipment. They add that in such expansion due priority will be given to border areas. [Text] [Calcutta THE STATESMAN in English 2 Jun 83 p 7]

NEW DELHI TRANSMITTER--A new and powerful radio transmitter has been installed in Delhi to overcome interference from the medium wave transmitters of Pakistan which are directed towards this country. Union information Minister H.K.L. Bhagat on Saturday formally inaugurated the 100 kw transmitter to augment the Delhi 'B' station of All India Radio. Delhi B, which broadcasts many popular programmes, so far has had a 20 kw transmitter with limited range. The transmitter had been installed in 1956 and over the years its power has declined. [Text] [New Delhi PATRIOT in English 27 Jun 83 p 4]

SURI TELEPHONE EXCHANGE--A 400-line new automatic telephone exchange was formally commissioned at Suri in Birbhum district on Saturday, according to a Press note issued in Calcutta on Monday. The exchange, which cost Rs 15 lakhs is expected to meet the entire demand for new connexions in the area by the end of July. [Text] [Calcutta THE STATESMAN in English 7 Jun 83 p 16]

MADRAS-SINGAPORE STD--Madras, June 9--International Subscriber Dialling has been introduced from Madras to Singapore with effect from today. The code of Singapore is '65.' To contact telephone subscribers of Singapore, the Madras subscribers have to dial '900' first and after getting a second dial tone should dial '65' followed by the area code and the subscriber's telephone number. This facility is already available to England and Australia with country codes '44' and '61' respectively. [Text] [Madras THE HINDU in English 10 Jun 83 p 9]

CSO: 5500/7151

BRIEFS

NEW RADIO TRANSMITTER--A new broadcasting center for Djibouti Radio-Television (RTD) will be opened on 26 June, probably by the head of state. This will make it possible to hear the leader's voice not only throughout the country, but also in almost all the countries in the area. The range of the two old 4-kilowatt transmitters, inherited from the French administration at independence, is limited to the capital's surrounding area. The new broadcasting center, which will go into operation on 27 June, is located at Dorale. It includes: one medium-wave 20-kilowatt transmitter for the international broadcasts (broadcasts in French language with a range of more than 1,500 kilometers); one medium-wave and one short-wave transmitter, both 20 kilowatts, for the national network (broadcasts in Somali, Afar, and Arabic covering the entire country); a transmitting tower 100 meters high for the two medium-wave transmitters, with a small terminals building; and installation, in the first phase, of a short-wave antenna oriented East to transmit to Ethiopia and Sudan, and later addition of a second antenna oriented south (Somalia). [Text] [Djibouti LA NATION DE DJIBOUTI in French 23 Jun 83 p 3] 9920

CSO: 5500/175

USSR PARTICIPATION IN INTERNATIONAL COMMUNICATIONS YEAR

Moscow RADIO in Russian No 4, Apr 83 pp 2-3

[Interview with Yuriy Borisovich Zubarev, USSR Deputy Minister of Communications]

[Text] On 19 November 1981 the General Assembly of the United Nations accepted a resolution dedicating 1983 as International Communications Year. The Soviet Union is participating with other countries in carrying out this major international event. A correspondent from the journal RADIO asked USSR Deputy Minister of Communications Yuriy Borisovich Zubarev to respond to a number of questions regarding International Communications Year.

[Question] Yuriy Borisovich, please explain to us the basic objective of holding the International Communications Year.

[Answer] Human life depends more today upon the operation of communications facilities than at any other time. There is essentially no area of human activity in which we do not deal with converting, receiving and transmitting information with the help of communications facilities. It can be stated confidently that communications is one branch upon whose operation depends the effectiveness of the economy of any country. Therefore, by proclaiming International Communications Year and placing emphasis on improving communications facilities, the General Assembly of the United Nations set an objective of promoting accelerated national economic progress, primarily of developing countries, and of making a comprehensive analysis of existing communications facilities and developing the prospects for further improvement.

The International Communications Union has been designated the responsible agency for International Communicaitons Year, and for coordinating the programs and activity of 16 specialized international organizations such as UNESCO, the International Postal Union, the International Meteorological Organization, the International Civil Aviation Organization, as well as

others which are already participating in implementing the plans and measures for this year.

At the plenipotentiary conference of the International Communications Union in Nairobi, governments of all countries adopted the resolution of the General Assembly of the United Nations announcing 1983 International Communications Year, and adopted an additional program for technical cooperation during that year. This program included such issues as finding the most effective operating methods for the International Communications Union, developing recommendations for constructing communications facilities in the developing countries and analyzing existing cooperation among countries in the area of communications and the prospects for its future development.

[Question] International Communications Year is being held under the banner of assistance to the developing countries. How will the Soviet Union contribute to this assistance?

[Answer] We are helping to develop communications facilities in the developing countries, of course, not only during International Communications Year. Our assistance has been, continues to be and will remain substantial. First of all, we help them to develop national cadres of communicators. About 700 students from 65 countries in Asia, Africa and South America are now studying in Soviet Communications Institutes. Over 500 specialists were trained earlier, during 1973-1982.

Secondly, we are providing technical cooperation to many countries in constructing communications facilities. Numerous examples of this can be cited. For example, with our help, ground stations have already been built for the "Intersputnik" space communications system in Cuba, Vietnam, Laos, Afghanistan, Iraq, etc. These stations support telephone-telegraph, photofacsimile and telex communications, as well as exchange of television programs with the countries belonging to the International "Intersputnik" space communications organization, as well as other countries. National radio broadcast stations developed with our assistance are already in operation in the People's Democratic Republic of Yemen, in Laos, Vietnam, Grenada, Cuba and Madagascar. Radio relay links have been built in Kampuchea and the Democratic People's Republic ofKorea extending 1350 km in the latter.

A major event in strengthening friendship and cooperation between the USSR and India was the construction of a troposcatter communications link connecting Moscow and New Delhi. This is a unique link in terms of length -- 697 km. Thus mountain peaks of the Hindu Kush have been overcome with its help. The design for the troposcatter link was developed in the USSR, and the equipment was manufactured and delivered to India. Soviet engineers and technicians helped their Indian colleagues to install it, set it up and put it into operation. Indian specialists developed the antenna. The

cooperation in constructing the link was authentically friendly and businesslike.

Soviet specialists also helped to modernize the city telephone system in Madagascar. A great deal of work is being done to deliver spare parts to facilities which were built many years ago. For example, the radio broadcast station in Guinea has been operating successfully for more than 18 years. Soviet communicators helped to build and operate it, and also helped with the subsequent modernization.

There are future plans to provide technical cooperation in constructing "Intersputnik" ground stations in Syria and Libya.

[Question] What is the program of measures to be carried out in this country in connection with International Communications Year?

[Answer] Every country participating in International Communications Year is organizing specific measures both at the national level and with the participation of foreign representatives. There are plans to hold two international seminars in the USSR. The theme of one of these is "Principles of constructing satellite communications and broadcast systems and effective utilization of geostationary orbit". Forty specialists from African countries will participate in this seminar. The seminar program includes a visit to the International Marine Communications Satellite Center.

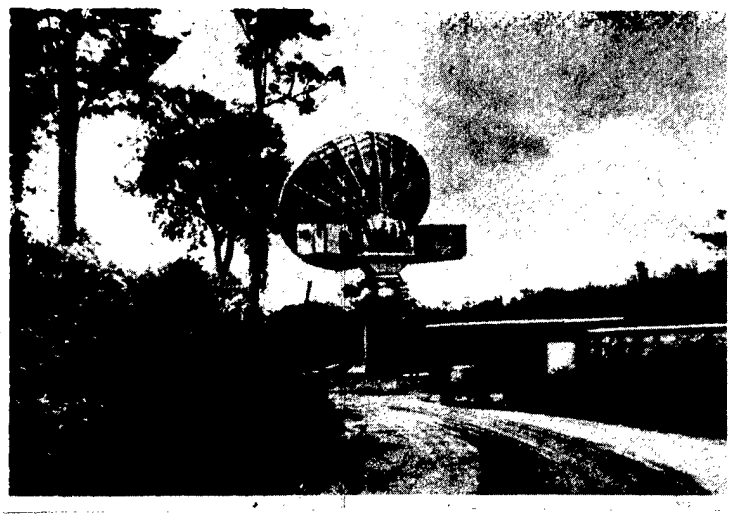


Figure 1. A "Intersputnik" ground station in Laos.

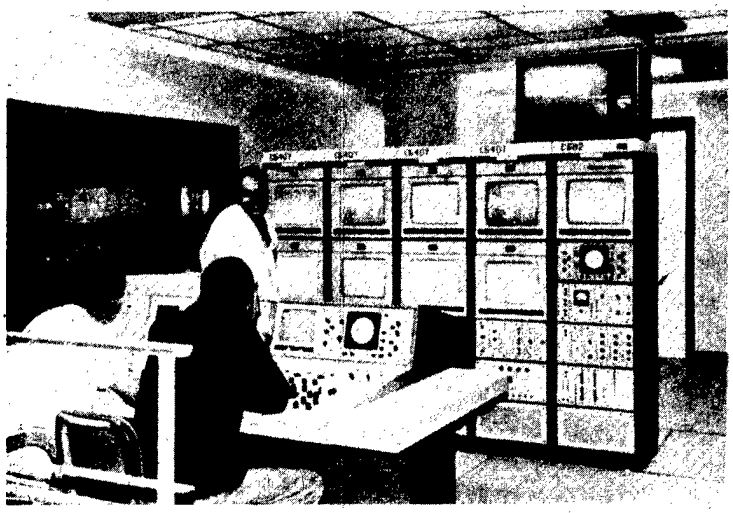
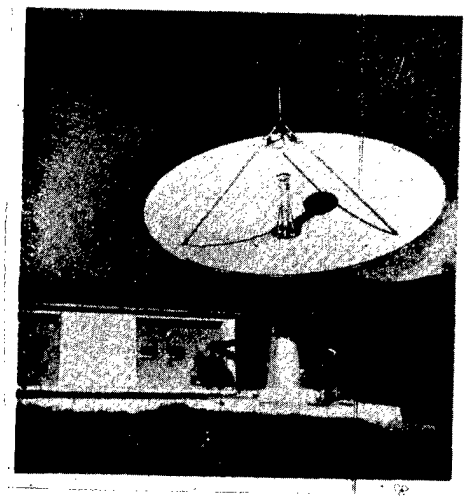


Figure 2. Equipment room at television center in Cuba built with technical cooperation of Soviet specialists

Figure 3. "Intersputnik" ground station in Algeria



The theme of the other seminar is "Organization and mechanization of production processes at USSR postal enterprises". Thirty communicators from Southeast Asia and the Pacific Ocean region will participate in this seminar. Both seminars will provide a major contribution to international cooperation and assistance to developing countries.

One of the basic objectives we are following in participating in the International Communications Year is to propagandize scientific and technical achievements in the area of communications. For this reason, a series of television and radio broadcasts will be set up this year; in addition, films will be produced and displays will be set up at the Exhibition of the Achievements of the National Economy devoted to International Communications Year. A new block of postage stamps will be issued, and a philatelic exhibition will be held where stamps on the theme of communications facilities will be displayed.

More than the usual number of sections devoted to problems of the development of communications will be working at the traditional session of the Scientific-Technical Society of Electrical Engineering, Electronics and Communications imeni A.S. Popov. At plenary sessions, the participants will hear reports on themes such as "The communications branch and computer technology", "Planning scientific prospects for television broadcasting in the USSR based on a new phase in the scientific-technical revolution", "Use of satellites to increase navigational safety and protect human life", among others.

The concluding phase of the International Communications Year will be the "Telekom-83" exhibition which will be held in Geneva. The Soviet exposition will acquaint visitors with space communications facilities and radio broadcasting and television equipment, with the accent of digital technology and fiberoptic communications links. The exhibits will include low-echelon mobile communications systems which provide effective management in various areas of the national economy. A substantial amount of space in our exhibit will be devoted to modern computer and measurement equipment, medical equipment for diagnosing and treating illnesses and radio components. The displays at the exhibition will talk about the help which we are providing to the developing countries and about the participation of the USSR in the international "Intersputnik", "Inmarsat" and "Sarsadkospas" communications systems.

[Question] Radio amateurs are included amoung the communicators. Will they also participate in International Communications Year?

[Answer] Yes, very actively. The Soviet program for International Communications Year includes two amateur radio competitions. These are the 12th USSR championship for UHF radio communications, to be held in Genichesk, Kherson oblast, and the first championship of the first IARU region for high speed radio telegraphy, to be held in Moscow.

In addition, Soviet UHF communicators, as well as those from other countries, will participate in the amateur scientific "Radioavrora" experiment, which your journal is holding in conjunction with the USSR

Academy of Sciences and the USSR Ministry of Communications. We hope that the results will provide experimental material which will help in studying the still poorly understood radio aurora phenomenon, and will be used practically to improve communications link design.

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CSO: 5500/1022

'RADIOAVRORA' AMATEUR-SCIENTIFIC EXPERIMENT

Moscow RADIO in Russian No 4, Apr 83 pp 4-5

[Article by USSR Academy of Sciences Corresponding Member V. Migulin, director, Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation of USSR Academy of Sciences; Candidate of Technical Sciences V. Minashin, chief, Scientific Research Institute for Radio, Lenin Prize Laureate; Doctor of Physical-Mathematical Sciences O. Rospopov, director, Polar Geophysical Institute of Kola Branch of USSR Academy of Sciences, and Doctor of Physical-Mathematical Sciences B. Bryunelli, deputy director, Polar Geophysical Institute, Kola Branch, USSR Academy of Sciences]

[Text] Dear friends! Creative cooperation between radio amateurs and scientists goes back many years. Radio amateurs had already done a great deal in the 1930's to utilize the shortwave and ultrashort wavebands, and later to investigate various complex phenomena in the atmosphere, such as "stellar rain", "radio echo", etc.

The participation of radio amateurs in 1957 in observing the radio signals from the first Soviet earth satellites hold a special place in the history of the radio amateur movement. Taking up the radio watch at the call of the USSR Academy of Sciences, radio enthusiasts gathered invaluable data for scientific integration.

Radio amateurs provided significant help to specialists in compiling the map of the electrical conductivity of soils throughout the USSR.

The findings from mass experiments conducted by a broad group of radio amateurs in accordance with special programs can today significantly augment the data obtained by professional investigators in the area of radio wave propagation.

At the suggestion of the journal RADIO, the Soviet program for International Communications Year includes the new mass

amateur-scientific "Radioavrora" experiment, which will be conducted by the board of editors in conjunction with the USSR Academy of Sciences and the USSR Ministry of Communications. The organizers of this experiment have set a goal of using long-term mass observations from various regions around the country and other countries to clarify the nature of the "aurora" and its connection with other geophysical phenomena, and to accumulate material for further study of radio wave propagation.

This type of anomalous radio wave propagation is being utilized successfully by ultrashort wave communicators, but is practically unused by professional communications. Communications practice urgently requires that it be studied.

In the 28-1000 MHz band, signals from distant stations appear during the "aurora" which interfere with the operation of existing ultrashort wave communications links. In addition, the overall atmospheric noise level increases. It is therefore important to learn to predict the "aurora" phenomenon and to determine its characteristics so as to be able to take technical and organizational steps in a timely fashion to ensure stable operation of communications links. It is quite possible that the "aurora" can be used for professional communications during periods of geomagnetic disturbances. In both cases the information which we obtain with the help of amateur radio observations will be extremely helpful.

For this reason, we are calling upon radio enthusiasts to participate actively in the "Radioavrora" amateur-scientific experiment, the program for which is presented below, and to continue the tradition of creative cooperation between the "popular laboratory" and science.

Objective of experiment: scientific -- study characteristics of anomalous radio wave propagation occurring due to scattering on heterogeneities caused by auroral ionization; amateur -- increase activity and skill level of ultrashort wave communicators.

Experiment participants -- all Soviet radio amateurs.

Foreign ultrashort wave communicators are also invited to participate.

Dates: During International Communications Year (from 0000 UT 1 January to 2400 UT 31 December 1983)*

Experimental program:

-- detect occurrence;
-- establish communications;
-- conduct scientific observations.

These include:

-- recording time of initiation, termination and interruptions;
-- determining maximum antenna azimuth in easterly and westerly directions;
-- determining optimal azimuth during a particular session, requesting such information from correspondent (QTF?);
-- likewise, for elevation plane, with request from correspondent (QTF EL?)
-- registering operation of correspondents who are farthest north, south, east and west;
-- measuring magnitude and sign of Doppler frequency shift of signals from beacons and stations for which frequency of emitted signal is known;
-- conducting tests with antennas with different polarization;
-- finding optimal parameters of various signals and determining required receiving bandwidth;
-- taking oscillograms of signals, e.g., while receiving carrier in time or frequency sweep, indicating operating conditions;
-- measuring precise signal/noise ratio while observing signals and measuring noise level;
-- finding methods for predicting the "aurora", including short-term ones (less than 1 hour);
-- recording pressure with help of barographs;
-- observing "aurora" and occurrence on short waves from signals transmitted by radio broadcast, homing, standard, marker and such stations;
-- simultaneous observations of auroral signals in 144 and 430 MHz bands;
-- observing "aurora" and troposcatter propagation by signals from beacons and ultrashort wave broadcast stations;
-- registering QSOs via amateur satellites indicating orbit number, time and received correspondents using "aurora".

Counting points and determining winners.

Kx10 points are awarded for detecting the "aurora" during one calendar day (UT).

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*The experimental program for Soviet participants was published in SOVETSKIY PATRIOT, 5 January 1983.

Auroral transmission is considered detected if at least one connection is made with its help. The coefficient K depends upon the geomagnetic latitude at which the participant is located. For example, for a geomagnetic latitude of 56° (approximately on the line joining the cities of Tallinn-Leningrad-Kotlas-Khanty-Mansiysk) K=1, for 54° latitude (Riga-Pskov-Rybinsk-Kirov) K=1.4, for 52° latitude (Kaliningrad-Kaunas-Moscow-Gorkiy-Sverdlovsk-Tyumen) K=2.3, for 50° latitude (Minsk-Tula-Chelyabinsk-Kurgan) K=4, for 48° latitude (Kovel-Chernigov-Lipetsk-Kuybyshev-Magnitogorsk) K=9, for 46° (Lvov-Belgorod-Kamyshin-Orsk) K=22, etc. The exact value of the coefficient will be computed by a jury for each participant separately depending upon his QTH locator.

One point is awarded for establishing communications with each new correspondent in the 144 MHz band for a distance of less than 1000 km, 3 points for 1000-1500 km, 5 points for 1500-2000 km and 10 points for over 2000 km; 30 points are awarded for the 430 MHz band regardless of distance.

The jury can award up to 50 points for conducting scientific observations, experiments and tests depending upon their value.

Intermediate experimental summaries will be made on 30 April and 31 August.

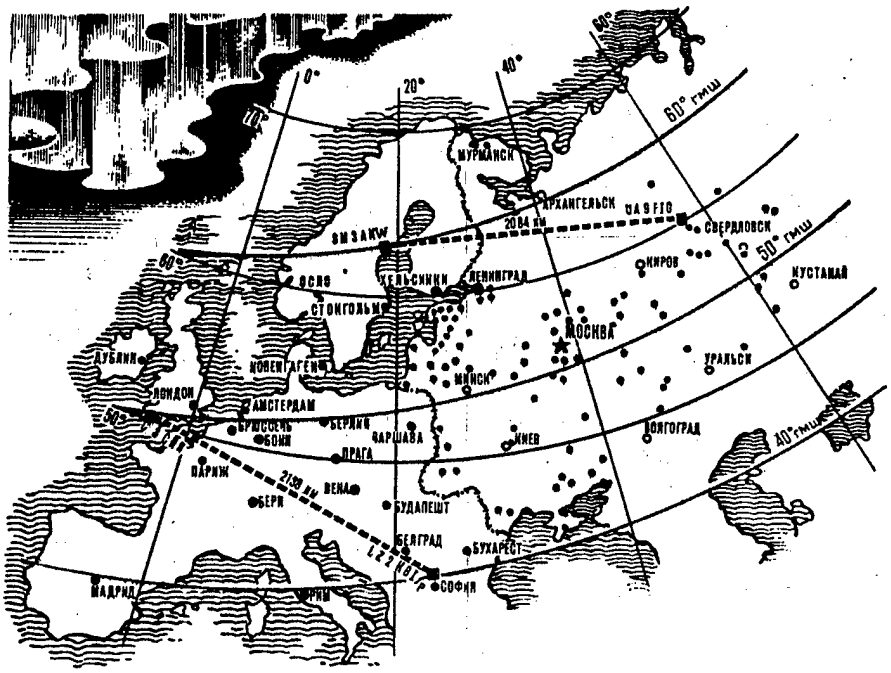
Winners will be determined in accordance with intermediate as well as final results. The jury will determine the absolute winners, as well as winners by activity zones for Soviet participants:

I -- UA1, UR2; II - UA2, UC2, UP2, UQ2 III - UA3E, G, L, P, Q, R, W, X, Y, Z; IV -- UA3A, D, I, M, N, S, T, U, V; V -- UB5B, C, D, F, G, K, N, O, P, R, S, T, U, V, W, X, Y, Z, UO5; VI -- UB5A, E, H, I, J, L, M, Q; VII -- UA4; VIII - UA6; IX -- UA9.

Once each month, the participants will report to the board of editors of the journal RADIO, using an envelope marked "Radioavrora".

The report can be drawn up using the reporting form for ultrashort wave competitions, which indicate sequentially the date and time (UT), callsign, transmitted and received RTS or RS, QTH locator, points for the contact, and a column for judges remarks.

Also indicated is additional data -- antenna azimuth and any other information -- which the participant feels should be included.



• cities where "aurora" has been registered
-- record "aurora" communications

Reports are drawn up separately by bands. In the monthly report an integrated sheet is drawn up on a short form (callsign, QTH locator, bands used, dates of occurrences detected). A complete integrated sheet (with demographic information) is presented only once, with the first report.

The most interesting experiments and current results will be published in a CQ-U section.

Awards to winners:

-- the absolute winners (according to total points awarded) among Soviet operators of individual and collective radio stations, as well as individual foreign radio stations will be awarded prizes and certificates from the journal RADIO; Soviet participants demonstrating the best results in their zone of activity (one team and one individual station each) will be awarded certificates from the journal RADIO;

-- RADIO certificates will be awarded to three Soviet individual and three team stations who are the winners in the intermediate stages;

-- superior scientific projects will be noted by prizes from the USSR Academy of Sciences and USSR Ministry of Communications.

6900
CSO: 5500/1022

FINLAND TO JOIN IN TELE-X SATELLITE NET WITH NORWAY, SWEDEN

Helsinki HUFVUDSTADSBLADET in Swedish 17 Jun 83 pp 1, 13

[Text] It was decided at yesterday's cabinet meeting that Finland will join the Swedish Tele-X project with an investment of between 30 and 50 million marks over a period of 4 or 5 years. The Finnish share will therefore be relatively small--only 3 to 5 percent of the total cost.

As is known, Norway has a 15-percent share in the project.

It was also decided at yesterday's cabinet meeting that Finland would participate in the preparatory work related to the Nordsat project through its conclusion at the end of March or beginning of April next year.

Those decisions do not in any way imply that a stand has been taken either on the implementation of Nordsat or on possible continued participation in the Tele-X project.

Participation in the Tele-X experimental satellite is being dictated primarily by considerations of industrial policy. It is regarded as important that Finland should take part in the technical development work that the project will involve.

Another reason is that the project will lead to subcontracting in Finland. Finland is assuming that its invested capital will pay a "dividend" of at least 60 percent in the form of orders for Finnish firms. The size of its contribution will depend on the results in terms of that "dividend."

Tele-X is a Swedish experimental satellite. The probable intention is to launch it in 1986. It will have a lifespan of from 5 to 7 years and six or seven channels, two of which can be used for TV transmissions. The others can be used for various kinds of data transmission.

It is expected that Sweden will take one TV channel and that Finland and Norway could then share the second one. Definite information on that point is not yet available. But Finland is not a party to the comprehensive agreement which was concluded between Sweden and Norway and which is concerned to a great extent with how the satellite will be used.

While the Finnish Government is going to invest between 30 and 50 million marks, this does not mean that deliveries by Finnish industry will also be worth that amount. The reason is that the satellite itself cannot be produced in Scandinavia. Its cost will amount to a little over half of the total cost, and that total will be divided up among the three countries.

But Finnish industry would be able to supply goods worth about 60 percent of the amount invested in the project by the Finnish Government. The previous offer provided for about 40 percent, so it is obvious that negotiation brought about some improvement in the share to be contributed by Finnish industry.

The Finnish firms interested in being suppliers are Nokia, Valmet, and Teleste. This would involve ground facilities, antennas, cable networks, and so on.

Last week the Norwegian Parliament unanimously approved Norway's ratification of the Norwegian-Swedish agreement on Tele-X. The Tele-X stations in Norway can be used in connection with the European Communications Satellite (ECS) system in southern Norway.

It was being said in government circles yesterday that the final position on the Nordsat project, which will probably not be considered until sometime in 1985, will depend to a great extent on what kind of agreement is reached concerning the apportionment of costs.

11798
CSO: 5500/2740

FINNISH FIRM GETS MAJOR CONTRACT ON SWEDEN'S FIRST CABLE NET

Helsinki HUFVUDSTADSBLADET in Swedish 22 Jun 83 p 10

[Article by Kaj Mickelsson]

[Text] Turku--This achievement is certainly at least the equivalent of a victory by Keke on the Formula One racing circuit. There is not the slightest doubt that a precondition for our participation was the Finnish Government's positive decision concerning Tele-X. Thank you, Sorsa, Taxell, and all the others! Erkki Backman, managing director of Teleste in Turku, is visibly pleased that in its competition with Philips, Bosch, and others, his firm has been entrusted with equipping the cable television system in Lund--the first to be built in Sweden.

Teleste will be responsible for about 75 percent of the deliveries for the Lund system, a project which will bring in about 5 million marks for the firm over a period of several years. What delights Backman very especially are the prospects opening up in connection with the Lund project. It has been estimated that cable system investments in Sweden will total 2 billion kronor in this decade, and the one with his foot in the door first will naturally have an advantage if the model network turns out to meet expectations. The network in Lund will have about 30,000 terminals.

Among other things, Teleste will supply the main repeater station, the central trunk repeaters, and most of the equipment in the network.

Teleste currently has about 40 percent of the European market for satellite receiver equipment in connection with cable networks.

Backman says: "The only problem is that some countries have clearly stated that they fully intend to promote their domestic industries. Because of that, the competition in connection with Lund was especially stiff among 13 firms."

Tele-X Opens Doors

Backman says: "For this industry, the importance of the government's decision on the Tele-X went far beyond that particular satellite. Our political decisionmakers showed Sweden their desire for international cooperation. Naturally, that also means good will in the opposite direction. And the domestic market

alone is not large enough today to allow us to keep up with product development, which in this field is everything."

The Swedish National Telecommunications Administration is building the facilities in Lund. Backman is assuming that the National Telecommunications Administration will be involved for quite a long time to come in the expansion of cable TV in that country. Since the telecommunications administration may not "be able to keep the pace" in response to the pressure that is going to increase extremely rapidly when various satellites begin flying over our heads, Backman believes that the Swedish municipalities may enter the picture.

In preparation for that expected boom in demand, Teleste is expanding its production at Teleste Antenna in Nousiainen. The firm currently has 350 employees. In addition to cable TV, Teleste is also concentrating on the production of educational equipment.

From 30 to 50 Networks in Finland

"We are already in the age of the information explosion. The European satellite that was launched in June means that the European Communications Satellite (ECS) will offer at least two channels (one French and one English), but it will probably have more with programs for those connected to the cable network," notes Backman. "The launching of Tele-X, for example, is planned for 1986."

It is completely possible, of course, to purchase a private antenna for receiving satellite transmissions in western Finland (a diameter of 5 meters is required) and in eastern Finland (where a diameter of 8 meters is required), but the total cost comes to over 200,000 marks.

Manager Pekka Ketonen says: "From 30 to 50 cable networks are currently being built in Finland, and we are producing plans to order for new networks at the rate of two or three a week. The Helsinki system will soon be able to pick up programs from the new ECS very comfortably."

Teleste's hometown of Turku, on the other hand, has not kept up with things from the firm's standpoint, since networks are being built there only for certain neighborhoods. This means that each will have to have its own antenna if an integrated network is not built. It should also be noted that every satellite in the future will require its own antenna.

Erkki Backman says he is unwilling to express an opinion on the ethical aspects of TV viewing--on whether, for example, it is important for viewers in Hitis to be able to watch French TV programs. Studies show that it is primarily viewers in early middle age and under who place the greatest value on having a choice.

Cooperation Between Sponsor Company and Beijer Investment

Teleste's chances of being a supplier to Tele-X have been further strengthened. The so-called Sponsor Group, to which Teleste belongs, has concluded a cooperation agreement with Beijer Investment, a Swedish investment company. Sponsor

is a Finnish development company that invests in companies showing growth possibilities.

The purpose of the cooperation agreement is to strengthen the competitive position in Scandinavia of firms belonging to their groups. Sponsor has purchased an interest in Beijer Investment, and Beijer has subscribed a minority interest amounting to 7 percent of Sponsor's increased capital stock.

Beijer Investment is one of Sweden's largest investment companies. The value of its stock portfolio stands at about 1.5 billion marks. This year's profit forecast indicates earnings of 100 million marks. Anders Wall is chairman of the firm's board of directors.

11798
CSO: 5500/2740

UNEXPECTED DEMAND FOR MOBILE RADIO CROWDS CHANNELS

Helsinki HELSINGIN SANOMAT in Finnish 12 Jul 83 p 7

[Article by Olli Ainola]

[Text] A time when not even a summer vacation will any longer prevent a person from trying to get in touch with a friend by phone is not very far off. Where copper cables ended just yesterday, even today digital bits are picking up where they left off without wires and seeking out one's conversation partner even though he may be in some hidden cabin way out in the middle of nowhere.

The number of radiotelephones in Finland is growing at dizzying speed. New radiophones go into operation every year at the rate of nearly a fifth of the previous year's total.

The increase even seems to be excessive. In its 5-year plans the Radio Department of the Post and Telecommunications Service still some time ago used to regularly estimate a point in time when this growth ought to peak out. In the latest estimates the breakoff point has now optimistically been omitted.

While a decade ago there were over 40,000 radio transmitters in Finland, there are now four times that many: 160,000. The quarter-of-a-millionth telephone mark will be exceeded in a couple of years time and it will be less than 10 years before the half-a-millionth is reached.

NMT Already Sounding the Busy Signal

At least the forecast is hardly an overestimation since this year one group of radiophone users is already worried about overly cautious growth estimates. Users of joint Nordic NMT (Nordic Mobile Telephone) automatic auto radiophones are becoming so numerous that phone connections into the system have been delayed and radio frequencies in congested Finland sound the busy signal during the busiest times of the day.

Suspecting defective equipment, infuriated NMT customers vent their anger on the manufacturers of their equipment who in turn direct complaints to Lauttasaari in Helsinki, the Post Office's Radio Department.

The Radio Department defends itself and makes an appeal to patience. The NMT's frequency shortage, development and the time it takes to connect equipment are "in the hands of the higher-ups": the Finance Ministry and the government's supplementary budget.

Integration of Auto Telephone Network Delayed

The NMT auto radiophone network has only been in operation for a little over a year now. At present it covers all of Southern Finland as far north as a line running from Vaasa to Jyvaskyla to Imatra. The goal is to extend the NMT network to all of Finland by the end of the decade but, if the meager allotment of funds continues, there will only be enough to patch up the present network.

There are already about 5,400 NMT auto radiophone owners. At the end of last year there were only less than half of that number. Most mobile individuals still depend on manual transmission auto telephones more than 10 years old. While the number of users is declining, there are ARP [auto radiophones]phones in over 30,000 cars.

The manual transmission ARP network will probably hold its own until as late as the 1990's. The new ARP services developed by the Post Office will extend its operational life. As early as the end of this year independent "poor man's" networks among others may be added to it. Only customers who have subscribed to the service can speak through an independent network and calls are transmitted through it automatically. In Keski-Suomi ARP is used to call taxis.

Ease of Use Is an Advantage with NMT

The automatic NMT's trump card and the reason for its being in great demand are above all its ease of use. Furthermore, a whole bunch of other services which a manual transmission auto telephone cannot offer can be added to it.

Among other things, an NMT call can be switched to another phone and in Sweden a secretary on the payroll of the Telecommunications Service, who takes down messages that arrive for telephone owners, serves users for a separate fee.

NMT calls cost 1.80 markkas a minute and the rate does not vary whether one is calling someone around the corner or another Nordic country.

Developed jointly by the telecommunications administrations of the Nordic countries, the system is also producing kronas and markkas for equipment suppliers. Auto phone systems adapted on the basis of the Nordic model have been ordered by many countries in Europe as well as Saudi Arabia and Kuwait, among others. The Swedish NMT manufacturer has also established a beachhead on the market in the United States.

European Network Generates Income

While the NMT network is marketed as a unique and fully developed system, the second generation of automatic auto phones is rolling into position. By the

beginning of the 1990's at the latest, Denmark and Sweden will have to exchange their current system for a new and larger one because of the overloading of the NMT.

European telecommunications administrations are right now trying to determine what kind of auto telephone system would be best suited to all of Europe. While the Nordic auto telephone industry will soon be in a good preemptive strike position, the venture can still fall through many times due to trade policy and protection of our own manufacturing industry, protectionism.

Automatic Portable Phone for State Railways

Alongside the NMT network, so-called closed radiophone systems and boat radios have also been selling fast.

Most of the total of about 40,000 radiophones are in closed and private networks. Among others the police, State Railways, taxis and trucking companies use closed, commercial radiophone systems.

The State Railways will soon start using a personal portable phone, often depicted in science fiction, since this fall it will get 200 light, automatic portable phones that have been developed in Finland.

Many communes have also solved the problems created by the rapid flow of information with their own radiophone systems, which were right from the start procured to meet civil defense needs. In normal times civil defense phones are effectively used at municipal energy installations, for example.

New Frequencies Facilitate Sea Operations

The number of maritime VHF radios is growing at the same rate as the number of home-accessory skippers. Most of the maritime VHF radios are indeed now on pleasure craft and the purchase price of a radio no longer puts a strain on a pocketbook that has already sacrificed tens of thousands for the boat alone.

There are already maritime VHF radios on about 3,500 boats. Even during the last sailing season, that number of radios put international VHF frequencies to the test, but the load on those frequencies was reduced by means of three new frequencies, intended only for pleasure craft use, that were put into operation early this summer.

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BRIEFS

CONTRACTS EXPECTED FROM TELE-X--Three Finnish firms, Nokia, Valmet and Teleste, are getting 25 million markkas in orders from the joint Nordic Tele-X satellite project. Nokia's share of the orders is the biggest. Finland will provide satellite ground stations. The technical agreement pertaining to the Nordic Tele-X satellite project was signed between the Swedish Space Company and the French Aero Spaciale Company in Stockholm at the end of the week. The final agreement is scheduled to be concluded with the international industrial combine at the end of next week. The Tele-X satellite will be built at the Aero Spaciale plant in Cannes. The combine, which includes Swedish, Norwegian, West German and French firms, will supply the parts. The Nordic television satellite, with the aid of which television images can be transmitted to all the Nordic countries, is scheduled to be launched into space in 1986 by means of a French Ariane carrier rocket. The full cost of the satellite project is estimated at a billion markkas. Sweden's share of the costs is 85 percent and the rest is to be divided between Finland and Norway. [Text] [Helsinki HELSINGIN SANOMAT in Finnish 13 Jul 83 p 23] 11466

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GOVERNMENT, INDUSTRY REACH AGREEMENT ON TELECOMMUNICATIONS

Milan MONDO ECONOMICO in Italian 15 Jun 83 pp 72-73

[Article by Beppe Caravita: "Telecommunications--Deal Closed"]

> [Text] Negotiations lasted more than a year. But now agreement seems to have been reached. Here is how the Postal Ministry and businesses in that sector will share power and administrative areas. Investments totalling 30 trillion lire are at stake.

Very likely, final agreement will be one of the next government's first official acts after the 26 June elections. But one thing is already certain: Renewal of agreements between the Postal Ministry and the companies (SIP [Italian Telephone Company] Italcable, Telespazio) that handle telecommunication services will be one of the most important industrial policy matters in recent years. With the new agreements, now in the home stretch, the entire Italian telecommunications system will be reorganized. Authority and administrative areas will be distributed in a division which, with the advent of digital switching and telematics, will attract public investments totalling about 30 trillion lire over the next 10 years. Private investment in the field is expected to reach a figure close to that. In short, this is megabusiness, which in recent years has aroused endless polemics among experts, politicians, ministerial and industrial centers. At the heart of the discussion (negotiations on the agreement have been going on for more than a year), is the need to achieve quickly a unified service system capable of dealing with technological changes--that is, the coming integrated networks--through a single center of investment and administration which will be distinguished internally according to national and international telecommunications. Therefore, it will unify the present dispersion of authority among ministerial enterprises (ASST [National Telephones State Board] and the Telex service) and the STET [Telephone Finance Corporation] concessionaires (SIP, Italcable, Telespazio). This involves 5 different realities which must function as a unit.

This is a terrible puzzle which ministerial and STET executives are trying to solve on the basis of a draft agreement. MONDO ECONOMICO here provides a preview of the essential features of that agreement.

Telephone Network. This is the point of least friction. Until now the situation has been as follows: The ASST controlled the primary telephone network (national hookups) while SIP handled only regional and urban installations. The change to electronics over the entire network instead will require a single center for investment planning, particularly for major switchboards (the "intelligent" nerve centers of the telephone network), the real key to the future integrated digital network. The following agreement emerged: SIP will control all switching, including the four main switchboards presently administered by ASST. From now on, in effect, the STET concessionaires will be entirely independent in evolving the structure of the telephone network which at the end of the decade will have achieved the first stage of integration (that is simultaneous voice, message, and data transmission).

Specialized Data Networks. Data transmission in coming years will be the richest segment of the telecommunications market: From now until the end of the decade, new users will total about 330,000 with an annual increase of returns, according to some estimates, of 22 percent in real terms. All three protagonists (SIP, ASST, the Telex administration) will in fact be developing their own data network to satisfy the new demand for telematics. The largest project is by Itapac of ASST, the national packet switching network which at the end of the decade is expected to have 100,000 subscribers (particularly the largest users of telephone data). To this network will be added an additional two components of circuit switching (adapted to less important traffic): the SIP voice-data system and the same Telex network which beginning next year will be equipped with the first electronic switches. Three networks, therefore, for a substantially single market. This involves the risk that the three plans will war with each other in battles over rates (Telex costs much less than telephone lines) and promotion policies.

The compromise solution contained in the agreement drafts is identical to that thus far adopted for the telephone network: the ministerial enterprises will control national hookups and SIP will have the terminal bands of the networks (which are indirect contact with users). For example in circuit switching of the telex network (telex-data beginning in 1984) there will be a link with the SIP voice-data network. The former will install hookups of a higher (national) order, the latter will provide regional service. Finally, only one problem remained to be solved: The structure chosen for Itapac, the national information transmission service via telephone lines. Since ASST already has installed six switching centers in the major Italian cities, the danger was that in the six major areas the users in future could be hooked up directly to the ASST switchboards, bypassing SIP which could operate in other regions. Thus, in order to avoid useless holy wars, the ministerial experts had to "invent" a compromise within a compromise: The ASST administration of the six areas will be only temporary (2 to 3 years) then all relations with users will pass to SIP.

Distribution of Income. The present regime gives ASST the proceeds from the rich long-distance traffic, and to SIP that from local calls which are much more burdensome in terms of investments in networks and are allowed far lower rates. Three years ago this led to adoption of the Compensatory Fund, a

mechanism devised to counterbalance the disparity between income of the various companies (last year SIP received about 330 billion lire from ASST, Italcable, and Telespazio in compensatory payments). With the new agreement the Compensatory Fund will disappear and be replaced by a system of percentage-sharing of proceeds.

Liberalization of SIP. This is the most reliable and innovative feature. SIP will be given the broadest freedom of action on the market of telematic terminals and above all in mixed private-SIP initiatives which in coming years will appear on the crest of the telematic wave. The basic principle is that, except for Telex, SIP will be the only company to maintain relations with telecommunications users. This leads to the possibility of selling telematic systems to private individuals (in the past SIP could only rent them) in direct competition with the builders in the sector. This leads them--SIP predicts--to the creation of a good number of their own partners (until now prohibited) in collaboration with whom they would like to launch their own telematic service in fields such as interbank, data bank and specialized communications services.

International Communications. The road to agreement between Italcable and ASST is still long. At the center of negotiations is the thorny question of links with the Middle East (Egypt, Libya, Tunisia, Algeria, and Morocco) until now administered by ASST at a loss of 5 billion lire. Italcable requires it transfer on the basis of a precise strategy: To transform its transmission center in Palermo into the major Mediterranean international telecommunications center, running the "Tat 8 data superhighway" and a large cable through it, which in 5 years will link the United States, Europe, and the petroleum-producing nations with fiber optic cable. The alternative is French domination of the sector: Tat 8 would have its terminal at Marseilles in case of failure to activate the Palermo switchboard. This led to the request by Italcable to which, until today, ASST replied offering the service to Morocco only (or, as an alternative) to Egypt.

Satellites. The new ministerial agreement would give Telespazio exclusive control of this type of communication. The point of major friction instead refers to the land-based antennas which Telespazio, ASST and SIP do not want to give up. The compromise could be translated into a case-by-case assessment on the basis of the technical-economic viability of entrusting individual projects to the various administrators. But on this point the Ministry of Government Holdings clearly stated that it wanted to give exclusive rights to SIP.

Consequences. The complex structure laid out in the draft agreement has two general objectives: to eliminate present administrative overlapping and to choose SIP as the single effective seller of services to the public. The drafters of the project tried to respect this plan as much as possible even though the task was not easy because in some cases they had to decide on the basis of the emergence of a conflicting reality with the plan of a single administrator. This is the case of data networks, where--experts of the Ministry of Government Holdings observe--the overlapping persists and could further delay development of advanced services. For this reason, top IRI

[Industrial Reconstruction Institute] and ministry executives have asked for further investigation of temporary solutions set forth in the draft (particularly regarding Itapac). It is estimated that a double administration, could increase the cost of Itapac from 50 to 65 billion lire.

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LABOR PARTY ORGAN ATTACKS MOVES TO END STATE MONOPOLY

Oslo ARBEIDERBLADET in Norwegian 28 Jun 83 p 4

[Editorial: "Langslet's Way Toward Goal"]

[Text] In the big Storting media debate on 10 May a number of important political signals were given, and also clarification of much of the uncertainty and confusion which has resulted from the media policies of the Conservative Government.

Among the clarifications which took place in Storting Hall less than 2 months ago was this one: A large majority want only NRK [Norwegian Broadcasting System] to manage nationwide or regional broadcasting operations. There is also a large majority in the Storting which wants to strengthen NRK by approving NRK plans for TV2 as a pay-TV channel through the satellite project. One-third of the conclusions of the debate were that a clear majority is opposed to advertising-financed Norwegian radio and TV transmissions.

We had hoped that these were signals which the political leadership in the Ministry of Culture understood and would base their further work on. Unfortunately it did not turn out that way. Already during the Storting debate Minister of Culture Langslet gave the impression of considering himself and the Conservative Party as the nation's guides through difficult terrain, where those who go first must expect some opposition before they reach the goal they have set for themselves. The minister of culture is therefore not busy putting together a media-political program which will suit the wishes of the existing Storting majority. He is more likely busy finding a course of action which can bypass the signals from the Storting majority.

We experienced this last Friday with the naming of still another national media committee. This time all sides of a new permanent nationwide TV channel will be investigated. The time frame for this report is 1 July 1985.

The time is important, because we assume that Langslet and company will use the report as a factor to postpone (which could read "stop") NRK's own plans for a TV2 channel financed by pay-TV.

The proposal for a TV2 channel which NRK has presented seems to us to be the only realistic possibility to have a nationwide channel soon under the direction of NRK.

Since it is clear that such an idea has a majority behind it in the Storting, and it is just as clear that a majority is saying no to other than NRK managing nationwide or regional broadcasting operations, one can surely question the intent of appointing a national committee to prepare a new report. The intent can not, however, be to form a new policy in agreement with the wishes that the majority in the Storting have expressed. It would be much closer to the truth to assume that the leadership of the Ministry of Culture in this way wants to maintain political uncertainty in the hope that time would work for the goals of the Conservatives. And there is no doubt about the goals of the Conservatives with regard to a future TV2 channel. The Conservatives want a private, nationwide and advertising-financed TV channel. It is toward this goal that the minister of culture is steering.

An entirely central question for future media development in Norway is the question of financing. Many of the interest groups which today are becoming involved, for example in cable TV, are doing so in the hope that there is money to be earned. Part of these hopes are based on confidence that Langslet and the Conservative Party will succeed in bringing advertising into radio and TV.

Even though it is clear that the Storting majority is against advertising financing, the Conservative Government has made it clear that it intends to maneuver the entire question away from a formal decision in the Storting. A definite no to advertising would have established a clarity that the Conservatives do not want.

In spite of that we hope that the Storting can soon take up, thoroughly discuss and take a stand on the advertising issue. It is important that the form of financing be set in a wider media-political perspective, which will include among other things a broad press model.

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NORWAY JOINING ECS SATELLITE PROJECT

Oslo AFTENPOSTEN in Norwegian 29 Jun 83 p 11

[Article by Peter Beck: "Norwegian Yes to ECS Satellite"]

[Text] "Great and happy news, both that the government finally said yes to leasing the capacity on this satellite, and that the Telecommunications Administration will pay 30 percent of the fees."

That was the reaction of the technical director of the Telecommunications Directorate, Per Mortensen, to the news that Norway has finally approved a 3-year leasing contract on the European Telecommunications Satellite ECS-2. Jan Mayen, Svalbard and the oil installations in the North Sea will next year be able to receive NRK [Norwegian Broadcasting System] TV programs--and the country will get TV2 programs if the government wants it.

The ECS satellite is mainly a so-called transponder, or amplifier. An ECS-1 was launched from French Guyana last week, after a previous attempt at launching with the Ariane rocket failed. This satellite transmits common TV programs between several West European countries. Norway is not a participant in ECS-1.

On the other hand we will be a participant in ECS-2, along with a number of other countries. ECS-2 will be launched later this year or early in 1984. This is the satellite which the government has entered a 3-year agreement on, and in which Norway has an option of amplifier capacity.

"We have no use for all the amplifier capacity for our test, but the Telecommunications Administration believes that we should accept the offer now that we have been so fortunate as to get a place," said Mortensen. "Later we will consider what we will use it for."

The Telecommunications Administration will pay for 30 percent of the lease, and the government will guarantee the rest, said Communications Minister Johan J. Jakobsen. It is too early to say whether that will lead to a TV2 or a Nordic combined channel. The lease cost 10 million kroner.

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POLL SHOWS MAJORITY FAVOR INDEPENDENT, COMMERCIAL TV

Oslo AFTENPOSTEN in Norwegian 2 Jul 83 p 10

[Article by Norsk Gallup Institutt and Norges Markedsdata A/S: "Majority for Independent Commercial TV"]

> [Text] A bare majority of the people are very or somewhat interested in a TV2 channel, and 42 percent believe that the channel should be financed by advertising commercials, according to this week's Gallup Poll. On the question of whether the new channel should be reserved for NRK [Norwegian Broadcasting System] or managed by others, opinion was split in the middle.

According to the poll which Norsk Gallup Institutt and Norges Markedsdata A/S conducted in May, 17 percent answered that they are very interested in a Norwegian TV2, 36 percent are somewhat interested, while 45 percent are not interested. Twenty percent believe that such a channel should be financed by an ordinary license fee, just as many want a system where for example one pays per month if one wants to receive the broadcasts. But 43 percent want the cost covered by advertising income.

Forty percent want other than NRK to manage a new TV channel, while 39 percent want NRK to retain its monopoly. Twenty-one percent have no opinion.

If the answers are cross-sorted, it is shown that among those who are very interested in a TV2 channel, 63 percent want other than NRK to manage it, and 62 percent of those want it financed with advertising.

It is especially the age group under 30 which is positive toward the TV2 channel, that it should be managed by other than NRK and that it should be financed through advertising.

Men are more interested in a new channel than women. On the other hand women are the majority saying that other then NRK should manage the channel.

"Do you believe that transmissions should be paid for with ordinary license fees from everyone who has a TV--or should it be a so-called pay-TV where one pays by the month if one wants to see the broadcasts--or should it be paid for with the aid of income from advertising at fixed times?"

Answers	All Asked	Men	Women	Under 30	30-59	60 and over
Ordinary license fees	20%	20%	20%	21%	18%	22%
Pay-TV	20	19	20	19	22	14
Advertising income	43	47	38	46	44	36
Don't know	17	14	22	14	14	28
Total percent	100	100	100	100	100	100

"Norway has the opportunity to guarantee itself transmission rights in a TV satellite--and then have a new, nationwide Norwegian TV channel in addition to the one that NRK has today. Do you believe that this extra TV channel should also be managed by NRK--or should it be managed by others?"

Answers	All Asked	Men	Women	Under 30	30-59	60 and over
By NRK	39	45	33	29	41	47
By other than NRK	40	38	42	55	39	24
Don't know	21	17	25	16	20	29
Total percent	100	100	100	100	100	100

"How interested are you in an extra Norwegian TV channel?"

Answers	All Asked	Men	Women	Under 30	30-59	60 and over
Very interested	17	20	15	28	15	10
Somewhat interested	36	40	33	43	40	21
Not interested	45	39	49	27	44	67
Don't know	2	1	3	2	1	2
Total percent	100	100	100	100	100	100

Among those who are very interested in an expanded TV offering, there are for example only 29 percent who believe that a new TV channel should be managed by NRK, while 63 percent believe that others should manage it. Sixty-two percent of those believe that the new transmissions should eventually be financed by advertising income.

Among those asked who are not interested, 43 percent believe NRK should eventually manage the new TV channel, while only 27 percent believe it should be managed by others. In that group there are 32 percent who believe that transmissions from a new TV channel should be financed with advertising income.

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END