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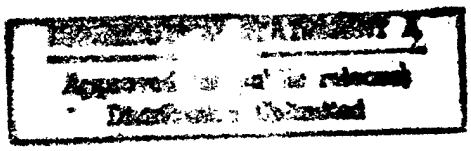

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Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 221

FBIS FOREIGN BROADCAST INFORMATION SERVICE

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BRIEFS

MOZAMBIQUE, CUBA COOPERATION--Under the agreement signed last year by Radio Mozambique and the Cuban Institute of Radio and Television, six Cuban cooperation workers for Radio Mozambique are expected in Mozambique this year. The exchange of radio programs will also increase. This was disclosed in Maputo today by the vice president of the Cuban Institute of Radio and Television, Jose Rodriguez Llaneras, shortly before his departure for home. Jose Llaneras expressed his satisfaction following contacts with Radio Mozambique and said Cuba will send monthly interviews given by Mozambique students studying in Cuba for broadcast by Radio Mizambique. [Text] [EA110200 Maputo Domestic Service in Portuguese 1030 GMT 10 May 82]

USSR, KAMPUCHEA BROADCAST ACCORD--Today for the first time a long-term agreement and protocol were signed in Moscow on cooperation in radio broadcasting between USSR state television and Radio and radio Voice of the People of Kampuchea. They provide for an exchange of radio material on the life of the peoples of the USSR and the People's Republic of Kampuchea and reciprocal assistance in preparing program on major events in the life of the two countries. The documents were signed by Yuriy Viktorovich Orlov, deputy chairman of the USSR Committee for Television and Radio Broadcasting and (Van Sun Heng), acting general director of Radio Voice of the People of Kampuchea. [Text] [LD301118 Moscow Domestic Service in Russian 1000 GMT 30 Apr 82]

BROADCASTING ACCORD WITH KAMPUCHEA--Budapest, 13 May (MTI)--A 5-year cooperation accord was signed by Jozsef Bocz, vice-president of Hungarian Radio, and Van Sunheng, deputy director-general of Kampuchean Radio, here today. The document provides for exchanges of political, economic, cultural and musical programmes, mutual visits by radio crews, technical assistance and reciprocal commemoration of national days. [Text] [Budapest MTI in English 1733 GMT 13 May 82]

'KCNA',BANGLADESH AGENCY AGREEMENT--Pyongyang, 16 May (KCNA)--An agreement on news exchange and mutual cooperation between the Korean Central News Agency and the Bangladesh News Agency was signed in Pyongyang on 15 May. It was signed by Kim Song-kol, general director of the Korean Central News Agency, and Abul Hasehm, director general and chief editor of the Bangladesh News Agency. [Text] [SK160921 Pyongyang KCNA in English 0853 GMT 16 May 82]

USSR, FRG BROADCASTING PROTOCOL--In Moscow today a protocol was signed for 1982 on cooperation between the USSR State Committee for Television and Radio and West German Television and Radio. Relations between the two organizations are being expanded. Exchange of television and radio materials and the shooting of television programs on major events in the life of the USSR and FRG are envisaged. The protocol was signed by Chairman of the USSR State Committee for Television and Radio Lapin and Director of West German Television and Radio Huebner. [Text] [LD191740 Moscow Domestic Service in Russian 1500 GMT 19 May 82]

HUNGARIAN-KAMPUCHEAN COOPERATION ACCORD--Phnom Penh, 19 May (SPK)--A cooperation accord between the Hungarian and Kampuchean radio stations was signed recently in Budapest (capital of Hungary). Under the terms of this 5 year accord, which was concluded at the end of the visit to Hungary by Van Sun Heng, deputy director general of the Radio Voice of the Kampuchean People, the radio stations of the two countries will exchange political, cultural and musical programs and the experts. [Text] [BK200724 Phnom Penh SPK in French 1436 GMT 19 May 82]

'TASS,' TUNISIAN AGENCY COOPERATION TREATY--Moscow, 18 May (TASS)--A treaty on cooperation between the News Agency of the Soviet Union (TASS) and the Tunisian News Agency--Tunis Afrique Press (TAP) was signed in Moscow today. Fitting into the framework of the existing inter-governmental agreements on cooperation between the USSR and Tunisia in the sphere of culture, the treaty envisages establishment of a direct bilateral communication line and expansion of the information exchange between TASS and TAP and also determines forms of professional cooperation between the two news agencies. The treaty was signed by the TASS Director-General Sergey Losev and TAP president, General Director (Beshir Tual). Ambassador of Tunisia in the USSR Mohamed Habib Cherab, who attended the treaty-signing ceremony, highly spoke of its significance. He described the treaty as an important contribution to consolidation of inter-state relations between Tunisia and the Soviet Union. [Text] [LD181900 Moscow TASS in English 1822 GMT 18 May 82]

CHINA TO HELP TUNISIA--Dar es Salaam, 18 May (AFP)--China will help Zanzibar's government build a 60-kilowatt short-wave radio station to enable the island's radio programmes to be heard outside Tanzania, it was reported here today. The project, the details of which have not been made public, would be carried out by Chinese experts. Twenty-one of the experts have already arrived in Zanzibar, and 29 others were expected later. The new radio station is being built under a bilateral agreement, which calls for Zamzibar to meet the local costs for the project, the island's information and broadcasting minister, Issa Mohamed, said. Mr Mohamed also said there were plans to build a 50-kilowatt medium-wave radio transmitter to replace an ageing station that was unable to effectively serve the whole country. [Text] [AB181457 Paris AFP in English 1425 GMT 18 May 82]

MOSCOW TO LAUNCH INDIAN SATELLITE--The Soviet Union which put into orbit three Indian-made satellites during the past few years is to launch another Indian-built satellite in the mid-1980's. An agreement to this effect was signed in Moscow yesterday between a team of Indian experts led by Dr Satish Dhawan and a Soviet space agency. [Text] [BK220935 Delhi Domestic Service in English 0830 GMT 22 May 82]

CSO: 5500/2228

BRIEFS

'XINHUA,' 'KCNA' NEWS EXCHANGE ACCORD--Pyongyang, 30 Apr (XINHUA)--An agreement on the exchange of news and cooperation between XINHUA and the Korean Central News Agency (KCNA) was signed here today by Deng Gang, deputy director-general of XINHUA and head at the visiting XINHUA delegation, and Song Pong-sun, vice-director of the KCNA. XINHUA and KCNA signed a similar agreement in 1960. Before the signing ceremony, the Chinese XINHUA delegation had been received by Chong Chun-ki, alternate member of the Political Bureau of the Central Committee of the Workers' Party of Korea and vice-premier. The XINHUA delegation arrived here on 13 April. It will leave for home tomorrow. [Text] [OW301312 Beijing XINHUA in English 1209 GMT 30 Apr 82]

DATA NETWORK ACCEPTED--A New Zealand concept of an information network around Asian and Pacific nations has been accepted by a 29-nation conference sponsored by the United Nations in Manila. The concept was put forward by the Minister of Science and Technology, Dr Shearer, at a ministerial conference on the application of science and technology in Asia and the Pacific. Dr Shearer said the network would be set up by linking the computerised information services of member nations. Planning of the project had been entrusted to the United Nations Economic Scientific and Cultural Organisation, and a meeting was planned towards the end of the year, said the minister. New Zealand's Scientific and Technological Information Service, a computerised service run by the Department of Scientific and Industrial Research, already has links with its counterpart in the United States. The Australian equivalent is known as the Commonwealth Scientific and Industrial Research Organisation. The project could involve building an information centre for the region. [Excerpt] [Auckland THE NEW ZEALAND HERALD in English 5 Apr 82 p 4]

CSO: 5500/9029

OPPOSITION LEADER SAYS GOVERNMENT WITHHOLDS FUNDS FROM TELECOM

Brisbane THE COURIER-MAIL in English 5 Apr 82 p 12

[Text] CANBERRA--The Federal Government was accused yesterday of deliberately restricting Telecom's access to borrowing on the money market, creating serious shortages of funds for development.

The Federal Opposition Leader, Mr Hayden, in his weekly radio braodcast, said Telecom was being denied adequate access to long-term borrowings and was trying to pay for necessary capital expansion from its own revenue.

Mr Hayden said six years ago Telecom funded its operations on the basis of 55 percent from revenue and 45 percent from loans.

"Now it raises only 27 percent from borrowings and a massive 73 percent from its own revenue," he said.

This was "extremely high" in comparison with telecommunications operations in other countries, other Australian public enterprises and private firms.

"The losers in this exercise are the Australian public," Mr Hayden said.

"Existing telephone subscribers and users have to pay a lot more than they should, and Telecom is less able to expand into new services or to extend existing services."

"For example, Telecom now has great difficu-ty in meeting demand for new telephones, particularly in coastal New South Wales and growth areas in Queensland."

He claimed the current borrowing restirctions imposed by the Fraser Government would lead to higher charges.

"Already, government policies have caused a serious rundown in Telecom's ability to operate an efficient and modern communications system," he said.

"Clearly the next step under Mr Fraser's mismanagement of Telecom will be a new round of higher telephone charges and fees which will penalise all Australians, particularly country people."

CSO: 5500/7536

BRIEFS

SATELLITE COMMUNICATIONS SYSTEM--The federal government has given the go-ahead for the national communications satellite system which should dramatically improve television, radio and telephone service throughout Australia. The minister for communications, Mr Sinclair, told Federal Parliament the system should be operational by mid-1985. He said the government expects to have two satellites launched by the United States space shuttle or Delta rockets by mid-1985. An American firm, Hughes Communications International, has won the contract for the three [as heard] satellites and two ground control stations together with launch arrangements and launch insurance. Aussat PTY Ltd, the company formed by the government to own and operate the satellite system, won't have exclusive use of it. Mr Sinclair told Parliament private organizations would be free to establish their own earth stations to gain access to the satellite. [Text] [BK051215 Melbourne Overseas Service in English 1130 GMT 6 May 82]

SATELLITE COMMUNICATIONS CONTRACTS SIGNED--Contracts worth $166 million have been signed for Australia's planned domestic satellite, Aussat. The contracts are with the Hughes Aircraft Corporation of the United States. They provide for three satellites and two tracing and control stations. The chairman of Aussat, Mr (Stan Owens), said the satellite would mainly benefit people in isolated rural areas. [Text] [BK181100 Melbourne Overseas Service in English 0830 GMT 18 May 82]

CSO: 5500/2228

GOVERNMENT'S TELEVISION POLICIES DISCUSSED

Boring Programs Termed Problem

New Delhi INDIA TODAY in English 31 May 82 pp 26-32

[Article by Sumit Mitra and Anita Kaul]

[Text]

1984. It is a television boom the like of which India has never seen. From the slopes of the Malabar Hills in Bombay, to lush green pastures of Partapur near Meerut and the sprouting urban jungle of New Delhi's Defence Colony, the fashionable New Alipore area of Calcutta and the trusty old Anna Salai Road of Madras, it is the same spectacle of thousands of TV aerials sticking up in haughty silhouette.

The Indian channels are humming with cascading electromagnetic waves—some skimming along the earth, others ricocheting back from the two truly Bharatiya pies-in-the-sky hovering 26,000 km above the ground. Giant microwave towers have been set round the nation like stiff giants.

The TV commercial section never had it so good. The three daily Chitrahaars, with three 10 minute slots on sale, are each fetching Rs 2,000 per second. All film-based programmes command 95 per cent viewing. But, since no non-film programme is viewed by more than 5 per cent, the prime minister's daily appearance on screen has to be timed between the Chitrahaars.

THE SCENARIO is comic, conjectural, satirical, emphasising the dark side to the millennium; but it is not one bit improbable. Rolling itself out of a Rip Van Winkle slumber, the Government is suddenly rushing to make up for lost time in expanding the tentacles of Doordarshan. The sizeable swelling of Doordarshan's budget in 1980-81 to 1982-83 (Rs 5 crore to Rs 14 crore) reflects the will, the determination and the tenacious effort of the Information and Broadcasting (I & B) Ministry to find resources for the state-monopoly television network's mushroom growth.

The list of projects on hand, which have been recently completed or are nearing completion, makes impressive reading. Most of them are in the form of long-term investments in electronic hardware, and Doordarshan engineers are working overtime along with their counterparts in the Indian Space Research Organisation (ISRO) as well as the Posts & Telegraphs (P & T) Department, to realise a grand vision of the Indian global village.

Vasant Sathe, 57, the ebullient I & B minister, is currently calling the shots in nearly all matters of hardware expansion. If the plans go according to schedule, by the end of the year microwave circuits capable of two-way picture transmission will skirt the country linking Madras, Bangalore, Bombay, Jaipur, Kota, Delhi, Lucknow, Kanpur, Patna and Calcutta. Later, the microwave circuit will meander right back to Madras, taking in its stride Bhubaneswar and Hyderabad.

Quantum Leap: The microwave linkage will firstly eliminate the physical difficulty in sending and receiving pictures between two stations simultaneously. So, technically, there will be fewer difficulties in showing live coverage of events at all centres connected by the linkage at the same time. This is surely the germinal point of a national hook-up. Simultaneously, INSAT-1B, the earth satellite which will go up on the heels of INSAT-1A, will have, like its predecessor, two transponders beaming to every square inch of Indian territory every picture transmitted.

These beams can then be strengthened by a string of low power—and low cost—relay transmitters for channeling through home TV sets. "The pictures will be extremely good and can be picked up throughout the country," says U.R. Rao, director of ISRO's satellite centre at Bangalore.

On the threshold of the colour age, by end 1983, 120,000 homes will brighten up with colour TV and makers of colour TV sets are cheerfully predicting sales of 10,000 sets every year. Said Sunder Vachani of Weston Electroniks: "India is a large, untapped market for colour TV. It is a pity that the Government did not wake up to it till very recently." There is a large rainbow-coloured bubble looming in front of the TV industry today. Will the bubble burst?

It has to. By a quirky political decision, the bumbledom of Doordarshan is all of a sudden saddled with the onerous task of having to generate software three to five times more than at present. In plain words, the Government's Leviathan which runs the country's television network will have to gear itself to finding eight hours of programmes a day instead of the average four now—and keeping its audiences hooked. There will be hook-up programmes for the entire country, two-way microwave exchanges between stations and on-going needs of terrestrial (local) stations as well. To all intents and purposes, it is a quantum leap, the biggest ever in Indian broadcasting. It is also likely to be a leap in the dark.

The haphazard rise of Indian television has come to symbolise one aspect above all others: that the "idiot box" confirms not the idiocy of its viewers but its originators; that Doordarshan's sole achievement in its two decades of existence has not merely standardised mediocrity but institutionalised it; And that today, on the brink of its Great Leap Forward, it is as far removed from its charter of providing education, information and entertainment—in that order—as it can reasonably expected to be in the year 1985. For as the humblest, but nonetheless avid, viewer of Doordarshan's telecasts will confess: the nightly spectacle is neither particularly edifying, nor informative, and the only entertainment worth watching is when the Bombay movies come on. As one cynical observer points out: "Indian television's only noticeable achievement has been that it has emerged as the newest poor relation of Bombay's commercial cinema." For education, Indians continue to depend on their sages, for authentic news and information on newspapers and perhaps the BBC overseas service, and for entertainment on Hindi films or excerpts from them.

Bare Facts: Shailendra Shankar, Doordarshan's balding and none-too-assertive director-general, is therefore naturally reticent about how exactly he is going to fill the air hours as the network expansion begins to send its after-shocks down the production line. And at a conference of Doordarshan station directors held in New Delhi last fortnight, it was manifestly clear that the authorities, from Sathe downwards, had little idea of how to fill the increased programme timings. The realisation that, however belatedly, dawned on the TV bosses was that:

- not a single non-film based and non-sports programme compels more than half of the country's 1.3 million TV set owners to switch them on;
- there is no way of increasing transmission time or improving the quality of transmission without earning more;
- the key to higher revenue is to have more film-based programmes;
- The total duration of film-based programmes put out by Doordarshan now, is seven and a half hours a week, of which the Bombay film industry alone accounts for nearly three hours 45 minutes. There are plans for increasing transmission time to nearly eight hours a day, including the second commercial channel to be introduced in Bombay. The other plan is to begin a second Chitrahaar/Chhayageet (a string of song and dance sequences from Hindi films), consisting of chunks from current billings in movie theatres and charging producers Rs 5,000 per song for the extra mileage such a broadcast offers in terms of box-office sales. The present practice is to pay producers Rs 250 for each song presented in Chitrahaar.

Doordarshan has every reason to hobble along on the crutches of the film industry. Its own TV Audience Survey, published in December last year, brings out the programme "rating" (the percentage of TV sets actually switched on) of each programme put out by each station It shows the pathetic tilt towards films and the abysmally low ratings of Doordarshan's own general programmes. In Delhi, for instance, as few as three sets are turned on per 100 sets when the weekly 30-minute programme for industrial workers, Hamare Kamgaar Hamare Udyog is on the air.

The rating for Krishi Darshan, the rural programme put out five times a week, wavers between just four and just two per cent. The 13 to 15-minute documentary made on developmental themes, is watched by only 10 per cent of viewers; the news in English by 13 to 15 per cent on a week-day; the magazine programme on science by a modest 29 per

cent and the Saturday children's programme by a rock-bottom 2 per cent.

Popular Programmes: On the other hand, Phool Khilen Hain Gulshan Gulshan, the interview of Bombay film personalities —an unabashed plug for them—laced with syrupy smiles from its popular hostess Tabassum, had a cheerful rating of 68 per cent in Delhi and a dizzy 83 per cent in Bombay. The weekly Hindi film drew 84 per cent in Delhi, 81 per cent in Bombay and 73 per cent in Calcutta. Chitrahaar was rated 84 per cent in Delhi, 86 per cent in Bombay, and 81 per cent in Calcutta. It was indeed the tail that wagged the dog. Said J.M. Singh, controller of commercials, Doordarshan: "We do have difficulties in selling slots other than film slots. It's tragic, but that is the reality of Doordarshan."

The whole point of stretching out on the film-based programmes now is to carve out more and more of such highly profitable (super A) prime time slots as the 10 minutes preceding Chitrahaar fetch a cool Rs 400 per second and is likely to go up soon. Recently, there were rumblings at Doordarshan that some smart executives had really been arranging advertisements within the slot so that they had a still higher "recall value", thus carving out an unofficial super A1 slot. In Delhi there is a scramble to buy blocks of super A prime time and then sell them, often at a 100 per cent premium.

Thanks entirely to the popularity of film-based programmes, Doordarshan's advertisement revenue, which was Rs 4 crore a year ago, is likely to touch Rs 16 crore at the end of this year. All of a sudden Doordarshan's cash register had started ringing and the advertising agencies have woken up to this new and untapped medium. Muses Sathe: "Let us earn more from TV so that we can spend more on development." Echoing Sathe's view, Suren Chawla, media controller of the country's top billing (Rs 80 crore) advertising agency, Hindustan Thomson Associates, says: "Film and film-based programmes have to be on top in TV. As a media man the importance of films sometimes frightens me. Films sustain television and radio. Take films away and both will collapse."

The strategy may be workable, but not all media pundits support Sathe and Chawla. Says Iqbal Malik, a former deputy director-general of Doordarshan, whose scathing newspaper columns on Doordarshan are one of the I & B Ministry's major sources of insomnia: "It is ridiculous that Indian broadcasting, after 55 years, is as subservient to the film producers as those film extras are. Doordarshan is mortgaged to the Bombay film industry and the bureaucracy of Shastri Bhavan (which houses the I & B Ministry) in that order." Ridiculous but inevitable for an outfit which in ostrich-like fashion shunned commercialism till six years ago and is now belatedly trying shortcuts. And the appalling boredom induced by most Doordarshan programmes is indicative of the long distance that must be travelled.

WHY DO Doordarshan's non-film programmes put people off? Elucidates Amita Malik, Iqbal's wife and a veteran film and TV critic: "The Doordarshan shows are poor not because the subjects are always poorly chosen, but because nobody makes any effort to present them with imagination." Her weekly columns in *The Times Of India* which now appear in the *Indian Express* called Sight and Sound chronicle the ham-handedness of the men and women who put out programmes on the box. The prickly column recalls a continual string of goofs; the newscaster girl who spoke Hindi till the other day, pronouncing mausoleum as ma-say-os-leem-um; Sathe hogging TV time himself on the pretext of holding some sort of a Diwan-e-am with teleclub members; viewers' letters being sifted to keep the unflattering ones out; Sunday films being chosen to favour the current billing of a *sarkari* film maker who is on the board of the National Film Development Corporation (NFDC).

The list goes on and so do the excuses by Doordarshan and the ministry. Sathe in his characteristic cocksure manner reels out the reasons which are, according to him, dearth of proper equipment. He has a point there. The hardware problem is all-embracing in Doordarshan. Says news producer Harsaran Bir Kaur: "Working here is almost a miracle. It's like shooting *Star Wars* in Edison's studio." Kaur is hardly exaggerating. Doordarshan studios all over the country are dungeons which look more like junkyards than cradles of creativity.

At the Bombay Doordarshan Kendra there is just no fixed place for rehearsals, despite the stream of entertainment programmes churned out by the centre, and which need to be painfully rehearsed. Senior Producer B.K. Giri sits in a 4 ft by 5 ft cubby-hole, Assistant Director Yakub Syed sits in a converted passage boarded up with plywood. There are no sound recording facilities and artistes record sound one day and then when a studio is available are taken to the Kendra, where they mouth the songs so that the sound-track can be grafted on to the film later.

In Calcutta the Doordarshan Kendra is located, since its inception seven years ago, in a condemned studio which used to roll out technically inferior films. It is a minor miracle of broadcasting that the whole station has been operating all these years from an outstation broadcasting (OB) van. The transmitter tower is yet to be rigged up.

Bureaucratic Sway: Everywhere in Doordarshan the babus hold sway. By a bureaucratic fiat, the use of portable lights (sun guns) has been banned on outdoor day assignments. What does a producer do when the aesthetics of his art require a subject to be back-lit? "Wait till the sun actually dips, or rises the next day, depending on where the subject is," says Kamaleshwar, former additional director-general of Doordarshan whose services were recently terminated. Newscasting at Doordarshan is oddly studio-bound, and a big yawn generally because its 103 news stringers do not turn in adequate footage. They take it easy because Doordarshan pays the abysmally low rate of Rs 8 per foot of non-synchronised film.

Foreign visuals are almost non-existent, because Visnews, the London-based TV syndicate to which Doordarshan subscribes, has switched entirely to three-quarter inch video transmission of pictures as against its earlier practice of hooking across film pictures to India. But since Doordarshan did not acquire the receivers, despite being forewarned about it as far back as 1980, transmission of foreign pictures has totally stopped since April 1, this year. The 30 minutes of newscasting are static, non-visual, and almost an extension of the All India Radio (AIR) news. It is really so because Doordarshan news, by a strange convention, is written in AIR's newsroom, with no feel for the visible twitch of the facial muscles, the smile, the dramatic movement of the eyes and heads—in short, the video perception.

Doordarshan isn't much more imaginative in dealing with independent documentary and programme makers who, in a country abounding in celluloid talent, could enrich its programmes no end. Yet, there is a criminal neglect of individual, non-staff talent. "The Doordarshan people cannot hope to improve the quality of their programmes as long as they stick to their present style of functioning," says S.S. Oberoi, managing director of the Bombay-based Art Commercial which specialises in making ad films and TV commercials. What Oberoi has in mind is Doordarshan's going rate for commercials, which can be as high as Rs 24,000 a minute, compared with the miserly Rs 60,000 to Rs 70,000 they pay for a 10 to 15-minute feature programme. If a one-minute commercial can cost several lakhs to produce, "How can they expect good quality programmes at that price? You can't be rigid in a field like showbiz. One documentary may take one day, another may take six months. They have to be practical if they want to get better people, better programmes and better facilities."

Doordarshan's bureaucracy allows little talent or creative instincts to survive. There are few chances for people who are chosen for posts at the production or the organisational level to create, or for that matter, organise anything even remotely presentable. The salary scales for "staff artistes" are abysmally low, consequently inviting little talent or creative faculty. Their basic requirement for artistes is an arts degree with an "artistic background".

The hierarchical structure in Doordarshan, with its corresponding salary scales, itself provides an insight into the material at hand for producing presentable software. Starting off with the director and the assistant station director, who are selected through the UPSC examinations and receive a salary of Rs 2,200 and Rs 1,600 respectively, pay scales dip dramatically at the actual creative level, which is several rungs below. Producers of programmes earn Rs 900 with production assistants getting a meagre Rs 600 per month. A cameraman draws Rs 800 and so does a technical man like the film editor or sound recordist. A glamorous post like that of a casual newscaster would fetch an embarrassing Rs 75 per reading. Television in India is not exactly a haven of high incomes.

The crux of the matter is that Doordarshan, which could easily become the most creative, influential and exciting of institutions, continues to run like a slack, inexorably slow and malfunctioning government department, no different from

the local passport office or a government-sponsored super bazaar.

Its bureaucratic, suffocatingly *sarkari* machinery is controlled by the same file-pushers, influence-peddlers and self-seekers that crawl out of the woodwork of any other ministry; the corridors of Akashvani Bhavan in New Delhi—or any other centre—are occupied by the same puny, gutless babus desperate to ingratiate themselves with their political bosses, obsessed with their salary grades and allowances, and hopelessly tangled in their intrigues of self-promotion that have come to represent the entire government enterprise.

Divided Staff: Doordarshan is run by a set of people straight out of a Kafkaesque bureaucracy: faceless, purposeless, formless and utterly disheartening. By strange official rules, the production team of any Doordarshan programme is divided by a barricade—the engineering staff and the production staff, the twain that shall ne'er meet. Technically, the man who operates the dolly (the rail on which the camera moves) is engineering staff, while the cameraman belongs to production. What happens when the producer asks for the camera to dolly forward or backward? The cameraman stays a good two yards away from the camera because the dollyman won't let him touch it after it is placed on the dolly.

The sound recordist is production staff, but the mixer is not, so the recordist's duty ends after shooting because the engineering staff won't let him come near the instruments when mixing of sound tracks is being done at various levels. Doordarshan is as amorphous as a caste-ridden Indian village

It is best evidenced in the posting of officials in Doordarshan. In the now-off, now-on appearance of an over-powerful additional director-general, in stagnation at middle levels and the spectacular strides of its well-connected officials. There is no provision for an additional director-general in Doordarshan; nevertheless Kamaleshwar was brought along and in course of time became the weightiest of mandarins in Mandi House, the unimpressive New Delhi Doordarshan headquarters. The official reason for the non-renewal of tenure is as prolix as a bureaucratic mind can think up: apparently, Kamaleshwar's papers had not been put up before the Union Public Service Commission (UPSC) in time. But Sathe, while taking to INDIA TODAY, coughed up the true answer. Said he: "Doordarshan treats a newcomer like a human body treats an invading germ. The body either throttles the germ or gets infected by it. In Kamaleshwar's case the germ was killed."

As far back as 1970, Doordarshan was separated from AIR and its director-general given the status of an additional secretary in the I&B Ministry. But, as an old Doordarshan hand said: "Their divorce seems to be still on probation." The entire top brass of Doordarshan, barring only two fresh entrants from the Indian Administrative Service (IAS), is drawn from AIR. Shankar is a living relic from the audio era and so is Chief Engineer R.B.L. Srivastava.

THE FAILURE of equipment and the grip of bumbledom is still a part, and only a part of the story. The more real failure is writ large on the human aspect of the organisation, whose 5,000-odd employees look upon themselves—and are looked upon—as just government servants. They somehow manage to put the Government's seal on everything they produce. A lot of freshers join Doordarshan bubbling with enthusiasm, but end up in the twisted corridors of the Government as lifeless puppets. A retired station director told the working group on the autonomy of broadcasting, headed by journalist B.G. Verghese, that he "joined Akashvani a fearless man, but retired a timid person". This is equally true of Doordarshan.

Their programmes are naturally of two kinds: downright banal or prostrating to the Government of the day. Just how banal a Doordarshan programme can get was evident from a documentary shown on the summer exodus and the railways put out by the Delhi station on May 10. Two tense-faced railway bureaucrats with double chins did all the talking at the speed of express trains. Within 10 yards of the office there must have been a thriving black market in seat reservations. But that is controversial and Doordarshan wouldn't touch it with a barge pole.

Indian TV avoids controversies because, as Verghese said, "It's afraid of the

real issues. It broadcasts only such news which is safe for the Government of the day." Thus the news of Maneka Gandhi's expulsion from the prime minister's house was ignored (*see interview*). Thus the Antulay *faux pas* went unreported until its waves lapped the walls of Parliament.

Dynamic Broadcasts: It's hardly surprising then to find a steadily rising popularity in India of TV broadcasts filtering in from neighbouring countries. The three neighbours with strong station signals—Pakistan, Sri Lanka and Bangladesh—have all evolved a system of lively, visually-oriented, dynamic broadcasts. Even a small network like Bangladesh subscribes to two international TV syndicates—Visnews and Columbia Broadcasting Service (CBS)—while India takes just one, Visnews. Transmissions from Dacca are extremely popular in Calcutta, where many TV owners have fitted their sets with booster antennae (price: Rs 1,500). News from Dacca is accompanied by satellite-transmitted films, say, of Sadat's assassination, obtained through CBS link-up.

Pakistan TV broadcasts are watched in border districts of Amritsar, Ferozepur and Jammu, as well as Jullundur, Kapurthala and Simla. The signals are visible, with the help of booster antennae, as far as 150 km into Indian territory. The Pakistani programmes rich in Urdu humour, such as *Fifty Fifty* and *Bade Mian,* are extremely popular in India. The only reverse traffic is Indian films and film-based programmes.

In Madras, Doordarshan officials may soon be the only ones watching the TV programmes, as a wag quips. Sri Lanka TV, with its special broadcasts in Tamil, English and Hindi, called *Rupavahini*, has dominated the TV scene. As distinct from Doordarshan's hash of programmes, Sri Lanka broadcasts Tamil plays, classical music, old Tamil films and the latest films in English, Hindi and Tamil—all in colour.

Madras film producers are perturbed by the popularity of *Rupavahini*. Said one: "It is the biggest threat to the Tamil film industry because it beams the latest Tamil films." Last month the NFDC Madras branch, protested to Sri Lanka TV and there has been a suspension of Tamil films.

Interference: Yet, the whole machinery of Doordarshan, under its veneer of neutrality, often serves as a crude propaganda tool of the party in power. On February 16 this year, Mrs Gandhi addressed a rally at Brigade Parade Ground in Calcutta. Union Energy Minister A.B.A. Ghani Khan Chaudhury, a worthy from West Bengal, who had been present at the rally and later saw a 30-minute show of it on Calcutta TV, burst out in anger to find that the crowd scenes had not been adequately shot. He got in touch with Sathe and hey presto, the producer was shifted to a non-news department.

Later on, the Calcutta TV Station Director, Shiv Kumar Sharma, decided to blacklist its stringer Durgadas Chatterjee, who had covered the occasion. His letter to Chatterjee, dated March 1, 1982, and marked "confidential" D.O. No. Cal-TV 2 (N)/82-PM, knocks the bottom out of Sathe's specious argument that Doordarshan is free from political interference. Sharma showed the way: "You had been specifically briefed by our producer to provide sufficient footage of shots of the big crowds assembled for the meeting. Except for one shot, that too of a small section of a crowd, the roll exposed by you contains only the arrival and dance reception given to the prime minister." A significant charge!

Yet more appalling instances, albeit recent ones, of Doordarshan's slavish eagerness to please the powers that be or play it safe include a total black-out of the Maneka-Mrs Gandhi episode, a peremptory dismissal of one of its popular, freelance English newscasters, Komal G.B. Singh when she became involved in a totally unrelated dispute with Delhi Police (her services had to be restored at the behest of Sathe himself), and once again a noticeable lack of the Opposition's campaign in the forthcoming Assembly elections.

So supine is Doordarshan, so complete and octopus-like is the stranglehold of the Government on it, that it readily surrenders its role as an information medium. Last March, it sent its most senior newsman with Mrs Gandhi on the trip to London. At her press conference, the correspondent was conspicuous for not asking a single question. Reason: radio and TV correspondents are government officers first, and cannot ask questions to the head of the Government.

Vexing Problem: All this, of course, leads to the vexed question of the autonomy of Doordarshan and AIR. Mrs Gandhi herself provided the answer when she reiterated recently that the aim of her Government was to ensure "improvement in the quality of programmes" but that the broadcasting agencies should stay under the control of the Government. However, the

election manifesto of the Congress(I), Mrs Gandhi's triumphant party, despite paying lip-support to the freedom of the press, did not contain a word about AIR and Doordarshan. Later on, the media advisory committee was appointed, headed by former diplomat and Mrs Gandhi's freewheeling aide G. Parthasarthy to advise the Government on bringing about structural changes in radio, television and film units "under the ministry of I&B". "Under" is really the catch-22 word, and the Parthasarthy Commission's brief falls far short of removing it.

Yet Sathe's money-making promises are a shade starry-eyed, if not prone to disastrous consequences. The stations, the lone network and the main producers of programmes—the entire network—are all under the sprawling umbrella of the Doordarshan administration. The obvious pitfall for a monopoly television agency trying to commercialise itself is that it will abdicate its social responsibility. Yet the two are not incompatible ends. Some of the most successful TV around the globe is entertaining and educative, a workable mix of education, information and entertainment.

Forgotten Promises: The Verghese Committee, in its marathon two-volume report showed the way for making broadcasting viable without surrendering its basic obligation to the society. It recommended the creation of an autonomous corporation, Akash Bharati, and suggested that the freedom of broadcasting should be regarded as freedom of expression and be enshrined in the Constitution as a part of the catch-all Article 19 (A). However, the very Janata government which appointed the Verghese Committee went back on its promises and brought before the Parliament a watered-down version of the committee's report.

Apparently political parties never intend to part with control over media as important as radio and TV. Last fortnight, when the British Foreign Secretary Francis Pym publicly cribbed about the British Broadcasting Corporation (BBC) showing the Argentine viewpoint as well in its coverage of the south Atlantic war, the BBC Managing Director, Richard Francis, quietly reminded him that "it is not the BBC's role to boost British troops' morale or to rally British people to the flag."

For the babus filling the corridors of Doordarshan, such sentiments will be utterly beyond comprehension. Said N.L. Chowla, head of the television working group of the Government-appointed Media Advisory Committee: "The present Government never pledged to make broadcasting autonomous; so this is not even being considered at any level."

Against such a bleak background, the commercial push of Doordarshan might eventually throw up the Hobson's choice between the video ghosts of Lata Mangeshkar or Mrs Gandhi. Sathe can at best splash them in the lurid colours of his own fantasy.

State Control of TV Criticized

New Delhi INDIA TODAY in English 31 May 82 pp 28-29

[Interview with Vasant Sathe, information and broadcasting minister, by Summit Mitra: "Our Ethics Are Different"]

[Text] *VASANT Sathe, the Union Information & Broadcasting minister, is a man of impeccable etiquette. He is also a modern man who loves all sorts of gadgets, including colour TV and video recording instruments. He is ready to go along with even his critics, but is tough and unyielding when it touches his basic belief that the broadcasting media should remain a part of the Government. Sitting in his New Delhi bungalow,* INDIA TODAY *Correspondent* SUMIT MITRA *spent three hours chatting with him on wide-ranging issues. Excerpts:*

Q. *A lot of people, both within and outside the Government, say that you are pursuing questionable objectives, such as colour TV. Any comment?*

A. Yes. I am aware of the criticism though I don't know how much of it is informed or unmotivated. Before racking our brains over whether we should have colour TV, we must ask ourselves whether it was justified to have TV in the first place. My mind is absolutely clear on this. Our culture is an audio-visual culture; our traditions and rituals are all based on sights and sounds. In the past, communication took place through roving minstrels, through folk dance and music that demanded body action. Now, it is TV which has to be the main communicating medium. And, our critics should make a note here. TV all over the world today is synonymous with colour TV, just as airplanes are synonymous with jet planes.

Q. *But jet propulsion by itself did not increase the cost of flying whereas colour TV is a costly proposition and you are taking a quantum jump.*

A. Not at all. Just look at the cost. In foreign countries, you can buy a colour TV set with 20-inch screen off the shelf for as little as US $300 (Rs 2,700). Now, our manufacturers are capable of making TV sets here for only Rs 2,600, provided you remove taxes and other levies and let them import a tool kit of US $80 (Rs 720) for every set. But the Government somehow wants to earn at least Rs 5,000 for each set by way of taxes, and that escalates cost and restricts sale. I think our basic attitudes with regard to consumer electronics suffers from certain mental inhibitions.

Q. *Can you please explain that?*

A. You see, the four tiny island states of Taiwan, South Korea, Hong Kong and Singapore now export Rs 1,200 crore of consumer electronics whereas this land of 685 million people, having the world's third-largest concentration of technical personnel, does not export even 12 crore worth of consumer electronics. I have a feeling that the growth of consumer electronics in India has been systematically crippled by somebody somewhere.

Q. *Well, the prime minister is herself in charge of electronics.*

A. I am sorry to say that the prime minister has not always been correctly advised in this regard. But I don't want to restrict myself to electronics alone. What I mean to say is that communication has not received the required priority in this country. Be it colour TV, be it high-power transmitters for radio— the stock reply that I hear is: "OK, Sathe Saab, what you're saying is fine. But where is the money?" It is shameful that you can't hear the Bombay station from Calcutta, the Calcutta station from Madras, or the Delhi station

from anywhere. If I don't have 1000 kilowatt transmitters how do I stop our people from listening to powerful broadcasts from neighbouring countries? Am I expected to stand on top of Mt Everest and blare out the message of Akashvani through a speaking horn?

Q. ***With regard to television, what exactly are your plans?***

A. My plan is to make a VCR (video cassette recorder) with 10-foot projection facility available to each electrified village of the country by 1985. The colour TV is really the VCR monitor. Programmes can be canned and run through it, and, when projected on a 10 feet screen, at least 5,000 people can watch it. It will replace the cinema, which has just about 10,000 outlets. Once you have it you can literally bombard the mind of the public However to start with, we are going to have colour transmission as well as extension of programme time up to eight hours a day. There will also be a second commercial channel, in Bombay, to start with.

Q. ***Very spectacular plans indeed. But what is the software with which you intend to reach the masses?***

A. Mostly our own programmes. School programmes during the day, rural education programmes during the early evening and entertainment-oriented programmes in the late evening. Even at this moment, Doordarshan has about 500 hours of software in cans.

Q. ***Pardon me for saying so. But don't you feel that the 500 hours of software you are mentioning here may not conform to the idea of entertainment or instruction?***

A. (With a smile) Yes, you're quite right. Some of our programmes really have a dull format.

Q. ***So you'll have a yawning gap between hardware and software.***

A. That may not be entirely true. One thing I did at the behest of Shrimati Gandhi was to go in for improvement of software. She gave me the most important suggestion that TV should go to the masses. Then the tele-clubs began, made of regular TV watchers. We began a process of evaluating their suggestions, and incorporating these in programmes.

Q. ***Yet the programmes are dull and pointless. The newscasting is amateurish...***

A. Oh, these are technical deficiencies. There are very few visuals to go with news because we don't yet have ENG (Electronic News Gathering) cameras. After the microwave links and the satellite link-ups are complete, we shall have no difficulty getting visuals.

Q. ***But I'm not talking about technical excellence. I'm talking about the Doordarshan's concept of news.***

A. What is wrong with that?

Q. ***It projects only Mrs Gandhi and her party.***

A. That's not true. You are not the first person to say that either. I've worked it all out. On an average Shrimati Gandhi gets 1/15th of newstime on TV. But show me a national newspaper which does not allocate that much of front-page space to her every day.

Q. ***Frankly I think she gets much more time on TV. Whenever she cuts a ribbon, flies in or out, meets visiting dignitaries, lays foundation-stones—the TV follows her.***

A. Because she is news. Because her cutting ribbons has an intrinsic news value. Because she makes policy statements very often. Because she draws crowds. And because the TV needs her more than she needs the TV.

Q. ***OK, she is news. But what about her family members? Are they news too?***

A. Not as family members. On individual merit—yes. You must know why we did not cover the news of Maneka Gandhi's leaving her mother-in-law's house: because it was a strictly personal matter.

Q. ***Do you think that broadcasting should enjoy autonomy in India?***

A. We want autonomy—functional autonomy. And the Doordarshan is already enjoying it. In day-to-day matters they have full discretion and absolutely no interference from the top.

Q. ***Why does the Doordarshan avoid controversies?***

A. Well, just look at what the press is doing. Going by the press, the general impression one gets is that there is a total break-down in law and order in the country, that civilians are totally corrupt, that politicians are totally corrupt. This

has a fragmenting effect on the country. There are forces of parochialism everywhere. If they have failed to break up this country, it is only because we have a charismatic leader like Shrimati Gandhi.

Q. ***. . . and also because of the government-owned media's firm resolve not to report these things?***

A. You see, the newspaper-wallas report what sells. We don't want our media to be parts of a consumerist society. Your ethics and our ethics are entirely different. There are certain things we can never allow. We cannot allow programmes that incite violence and racial hatred just as much as we cannot allow liquor and cigarette ads.

Q. ***But putting out scanty information about communal unrest often encourages rumours, which are worse.***

A. We really do not avoid controversies. We merely do not overplay them.

Q. ***In 23 years of television broadcasting, we haven't had a single TV talent.***

A. Why, there are a lot of talents. That brilliant actress, Smita Patil... She was with TV.

Q. ***She was and that's the whole point. She made her mark elsewhere, in the film industry. Why can't TV retain talents?***

A. Because we can't pay the kind of money the film industry can pay. But things are changing now. As you know, Satyajit Ray has made a film for TV. A lot of people objected to the film, but I've told everyone that Doordarshan must keep its gates open to talent from outside, I really want it to be the meeting point of all disciplines—art, sculpture, film, music, literature—all. And colour will really make all the difference. You see, the Nature is in colour, not in black-and-white. *Yeh bat in kambakhton ko kaise samjhaen?* (How can one explain this to idiots?)

CSO: 5500/5808

TELETEXT BROADCASTING SYSTEM CONSIDERED

OW141045 Tokyo KYODO in English 0010 GMT 13 May 82

[Text] Tokyo, 13 May (KYODO)--The Posts and Telecommunications Ministry is planning to enforce the teletext broadcasting system from fiscal 1983 beginning next April now that the Diet has passed the bill for revision of the broadcasting law.

The teletext broadcasting formula is a new information media in which a small space between wavelengths already allotted to TV broadcasting stations is used to send fixed images, such as characters. Under the system, news, weather forecasts, information on sports events and other matters can be telecast and received by TV receivers.

The bill for revision of the broadcasting law to make possible the practical use of the new system was passed by the House of Councillors on Wednesday. The House of Representatives approved the bill earlier.

The revised law is expected to be put into force in December.

Since the Japan Broadcasting Corporation (NHK) is planning to engage in teletext broadcasting at an early date, the new system is expected to make its debut in Tokyo and Osaka as early as in the summer of next year.

But commercial TV broadcasting companies are taking a cautious stand on adoption of the system due to technological reasons and some time is believed required before it is carried out on a nationwide basis.

The revised law also paves the way for third parties other than broadcasting firms to engage in teletext broadcasting.

In addition, it carries stipulations on restricting ownership of stocks in commercial TV broadcasting companies by foreigners.

CSO: 5500/2231

FERRITE RADIO WAVE ABSORBER DEVELOPED

OW141011 Tokyo KYODO in English 0451 GMT 14 May 82

[Text] Tokyo, 14 May (KYODO)--Nippon Electric Co. (NEC) said Friday that it had developed a highly efficient ferrite radio wave absorber, claimed to be the first of its kind in the world.

A company spokesman said that NEC would market the product at yen 100,000-150,000 ($425.53-638.29) per square meter within this year.

The new product has been developed to counter electro-magnetic wave interference in the private sector, but could be diverted for military purposes, he said.

The spokesman said that absorption is seven to 10 times greater than conventional high frequency range products since it can absorb 99 percent of the radio wave. It features a combination of transformer and absorber layers that collect radio waves, he said.

The transformer layer consists of ferrite and epoxy resin while the absorber layer is made up from short metal fiber and epoxy resin, he explained.

The spokesman said that the new product can, by changing thickness, cover the 1-20 gigahertz frequency range now being used in radar and microwave communications.

The United States and the Soviet Union have been developing radio wave absorbers for airplanes and ships.

Earlier, the U.S. State Department asked for samples from TDK Electronics Co., which has developed similar products.

The new product has been developed by NEC's Resources and Environment Protection Research Laboratory, the spokesman added.

CSO: 5500/2231

INTERNATIONAL GATEWAY EXCHANGE--PROGRESS REPORTED

Karachi DAWN in English 14 May 82 p 16

[Article by H. A. Hamied]

[Text] The International Gateway Exchange which was established in July 1980 at a cost of Rs. 120 million (foreign exchange component Rs. 60 million) is earning an average Rs. 12.6 million annually including the equivalent of Rs. eight million in foreign exchange.

It helps mature approximately 469,000 calls per month — 381,000 incoming calls and 88,000 outgoing calls.

According to Mr. A. R. Qureshi, General Manager, Overseas Telecommunication Region, about 24,000 telephone subscribers all over Pakistan are billed every month for overseas calls, and about 205 telephone operators, including 90 females, are providing the service. Additional staff is being recruited.

Expansion of the Gateway Exchange from the present 300 to 600 circuits is also planned.

Out of the present capacity of 300 international circuits, 280 are for automatic or semi-automatic service. The remaining 20 circuits are for manual service.

It currently covers 19 countries (212 circuits). Additional 120 countries can be contacted through these 19 countries.

International Subscriber Dialling (ISD) service is available at 24 exchanges for 14 countries. These are: Bahrain, UAE, West Germany, Kuwait, UK, Oman, Iran, France, Italy, Saudi Arabia, Singapore, Ireland, Switzerland and Japan.

ISD service to the United States is expected to be introduced by the end of June.

When the subscribers are unable to get the foreign destinations such as United States, they should not hesitate to seek help from top officials including himself, the General Manager said.

About the calls not maturing from Saudi Arabia to Pakistan, he explained it might be owing to heavy traffic.

Prior to July 21, 1980, the overseas telephone service was being provided by conventional manual trunk exchange at Karachi. Only 22,000 outgoing calls and 25,000 incoming calls were being handled each month. Under the new system, the incoming calls have gone up by 15 times.

Decision to provide ISD facilities was taken in late sixties but firm order could not be placed until June 1976.

Subscribers having NWD/STD facility telephone can book an overseas calls by dialling 0102. Inquiry in respect of such calls is 0104 during busy hours, about 16 positions are reserved for booking and inquiry.

About 25 circuits provide incoming facility to the subscribers of Karachi for making ISD calls and for booking/inquiry of their calls through operators. About 65 circuits can also be provided from other parts of the country for similar use.

Thus, out of a total of 190 circuits for ISD and booking/inquiry, about 16 subscribers can be attended to simultaneously for booking and enquiries, 16 others are given ring back tone and are placed in queue as soon as any operator's position is free. Beyond this, five subscribers are extended busy tone.

It is advisable to continue holding the line if ring back tone is heard. No indication is given to the Gateway operators for such subscribers waiting in queue, but they are connected to the operator on their tune in queue. Repeated attempts when ring tone is heard may cause excessive delays.

The charges for ISD service are lower and are counted on 1+1 minute basis as compared with 3+1 minute basis for operator service.

Booking and inquiry by subscribers not having NWD/STD telephone, may be done on 102/104 in Federal/Provincial capitals and on 109 at other stations where automatic exchanges are functioning.

CSO: 5500/5801

MONTHLY RADIO, TV MAGAZINE TO BE PUBLISHED

OW080115 Beijing Domestic Service in Mandarin 1200 GMT 5 May 82

[Text] The ZHONGGUO GUANGBO DIANSHI [CHINA RADIO AND TELEVISION] magazine, China's first comprehensive national monthly magazine to report and comment on radio and television, will start publication in July this year for public distribution at home and abroad. Subscriptions are now being promoted by post offices throughout the country.

The magazine will be sponsored by the Ministry of Radio and Television, edited by the editorial department of the ZHONGGUO GUANGBO DIANSHI, published by the Broadcasting Publishing House and distributed by the Beijing Newspaper and Periodical Distribution Bureau.

The ZHONGGUO GUANGBO DIANSHI will be characterized by its being ideological, informative and entertaining. It will be rich in content, varied in form, excellent both in writing and in pictures, and exquisitely and tastefully printed.

Its main columns will include: "Special Radio and Television Commentaries," "Radio and Television Review," "Radio Spring and Autumn" and "Television Historical Records" which will present historical facts on radio and television, "Radio and Television Personalities," "Radio and Listeners," "Television and Viewers," "Readers Forum," "Artistic Study and Appreciation," "Radio and Television Calisthenics," "International Radio and Television Window," "Radio and Television Trends," "Radio and Television Information," "Radio and Television Education" and others.

CSO: 5500/2228

NINGXIA EXPANDS TV BROADCASTING NETWORK

HK200751 Yinchuan NINGXIA RIBAO in Chinese 8 May 82 p 1

[Report: "Television Develops Rapidly in Ningxia"]

[Text] The Ningxia Hui Autonomous Region has made rapid progress in developing TV broadcasting over the past few years, establishing four high and medium-power TV relay stations and 20 low-power ones. Thus a complete TV broadcasting network has almost been set up in the region. In 1981, 76.6 percent of the regional population could watch TV, an increase of 28.5 percent compared with the rate in 1978. This has greatly enriched the people's cultural life in rural and urban areas.

Before 1978, TV broadcasts could be received only in Yinchuan Municipality and Dawukou County. But since 1979, the departments concerned have taken various measures in order to expand TV broadcasting in the region. They made use of the main lines of microwave communication to improve the work of relaying the programs of the central television station from Beijing. In addition, the regional government has made a financial allocation totalling 9.3 billion yuan in this area of work. In accordance with the geographic features of the region, the Ningxia Broadcasting Administrative Bureau rationalized distribution in setting up a TV broadcasting network in the region and took good care of the funds. Finally, the Ningxia television station was successfully rebuilt and expanded in Yinchuan District and some relay stations were set up in Shizuishan, Yinnan and Guyuan prefectures. All this has increased the broadcasting power and enlarged the coverage of the TV broadcasting network. In the past, the old Ningxia television station, being poorly equipped, could not broadcast too far; and its programs could be viewed only in Yinchuan Municipality, and Yongning and Helan counties. However, having been newly equipped since 1979, the Ningxia television station can now extend its broadcasts to many parts of Pingluo, Lingwu, Qingtongxia and Taole counties. Moreover, since the Luoshan TV relay station in Yinnan Prefecture went into operation, people now can get much clearer reception in Tongxin and Zhongning counties and in many parts of Wuzhong and Yanchi counties. In recent years, the municipal and county authorities and some enterprises in the region, with a total of 500,000 yuan of funds raised by themselves, have built up 20 low-power TV relay stations for improving the TV reception in some areas. Nowadays, from Baili gold mine in the north of the region to the high Liupanshan Mountain

in the south, people can easily watch programs relayed directly from the central television station in Beijing. At the end of 1981, the Ningxia television station set up a new channel, providing more programs for TV watchers.

As a result of the expanded TV broadcasting network, TV sets are now in good demand. In the past few years, a total of more than 60,000 TV sets have been sold throughout the region. The sales volume from 1979 to 1981 was 10 times more than the total volume in the 8 years preceeding 1978. An incomplete estimate made at the end of 1981 shows that there are more than 34,000 TV sets in Yinchuan Municipality (including Yongning and Helan counties), that is to say, more than 60 percent of the families in these places have TV sets. Now people like to enjoy their leisure time by watching TV news and varieties of recreation programs. This facilitates the building of socialist civilization.

CSO: 5500/2237

BRIEFS

BROADCAST STATIONS--According to GUANGMING RIBAO, broadcasting stations have been set up in all of China's municipalities and counties. Seventy-two percent of the production brigades and 65 percent of the production teams have rediffusion facilities. Loudspeakers have been installed in 49 percent of the rural households, totaling approximately 90 million in number. Wire broadcasting is a major means of propaganda in the countryside. [Text] [OW141011 Beijing Domestic Service in Mandarin 0900 GMT 11 May 82]

CSO: 5500/2231

BRIEFS

RADIO THAILAND TRANSMISSION POWER--Radio Thailand will increase the transmission power of its internal service to 1,000 kilowatt beginning on 3 May. Public Relations Department Director General Kamchat Kiphanit says that the establishment of the transmitting station is aimed at providing better reception for people in the rural areas of the country. Radio Thailand has been broadcasting with a transmitting power of 100 kilowatt. The budget of about 126 million baht was spent on the setting up the station which is located in Saraburi Province. [Text] [BK301333 Bangkok Domestic Service in English 0000 GMT 28 Apr 82]

NEW TV TRANSMISSION STATION--A new colored television transmission station was officially opened on 25 April at Nakhon Ratchasima in the northeast of Thailand. This new transmission station will relay programs from the station in Khon Kaen Province through Channel 6 which can be received in Nakhon Ratchhasima and nearby provinces. This will enable the transmission of TV broadcasting by the Public Relations Department to cover all the 16 provinces in the northeast. The government's Public Relations Department now operates four television stations in the north, the northeast and the south of the country. [Excerpt] [BK301333 Bangkok Domestic Service in English 0000 GMT 27 Apr 82]

CSO: 5500/2230

WIDESPREAD USE OF CABLE RADIO REPORTED

Kathmandu THE RISING NEPAL in English 5 May 82 p 5

[Text] Hanoi--While some countries weigh the likely effects of cable television, Vietnam is trying to extend its cable radio network. Started in 1956 after the war against the French, the network now covers the whole of North Vietnam. Nearly every house has its set, linked through a village or commune centre to one of 60 local receiving stations over which comes news, propaganda, music, early morning exercise classes, drama, instructions and advice.

A strong local flavour is given by the commune relay which adds its own programming to the centrally produced material. In some places, reports and requests by the village committees are relayed over a phone linked to the cable to the district party or cooperative headquarters.

Ly Van Sau, director of the service, claims that Vietnam's recent good harvest is proof of the network's effectiveness. New methods of cultivation were used, farmers following instructions given over the cable and yields rose significantly, he says.

Radio has been part of Vietnamese life since it was started in the jungle over 30 years ago. Mr Sau was there. "We had two elephants and we used to load up the transmitter every morning and move. The French never found us. Afterwards the elephants got a medal." Radio Vietnam has been off the air for only nine minutes since then--on Christmas Eve of Dec. 24, 1972, the US bombing of Hanoi.

Cable was adopted as a low-cost alternative to a "wireless" system under which every family would have had to buy their own radio. Plans for expansion include extending the service to the southern provinces and more programming. A new unit has been set up to produce programmes on agriculture, health and family planning with the help of the United Nations Children's Fund (UNICEF) and the United Nations Fund for Population Activities (UNFPA). The unit will shortly set up sho in Ho Chi Minh City and expand its present offices in Hanoi. With UNFPA help, 30 trainees spent three months at the Development Training and Communications Planning (DTCP) in Bangkok.

TV will not be a big force in Vietnam for some time yet. It airs for only two hours in the evening from 7 p.m. to 9 p.m. and the most popular programmes are sports, beamed by satellite from the USSR or Eastern Europe. The local programming, especially drama, professionally acted and produced, suffers from poor facilities. Hanoi's TV studios are housed in a converted rice warehouse and a melange of equipment from all over the world.--Depthnews

CSO: 5500/5805

BRIEFS

'PAP'-'ADN 'COOPERATION--Berlin, 29 Apr (ADN)--Agreements on the development of cooperation between the news agencies of the GDR and the People's Republic of Poland were signed in Berlin by the director-general of ADN and the editor-in-chief of PAP, Janusz Roszknowski. The head of the Polish News Agency was received for a friendly talk during his stay by member of the SED Central Committee, Heinz Geggel. [Text] [LD300418 East Berlin ADN International Service in German 1854 GMT 29 Apr 82]

CSO: 5500/2229

BRIEFS

NEW TRANSMITTER--On 12 May a new medium-wave radio transmitter was put into operation in the radiocommunications center in Brno-Komarov. It transmits the program of the Prague Radio Station on the 900 KHZ frequency, that is on the medium-wave 333.3 M. [AU151913 Prague RUDE PRAVO in Czech 13 May 82 p 2]

CSO: 5500/2237

WIEWIOROWSKA BOOK ON SATELLITE TELEVISION REVIEWED

Warsaw SPRAWY MIEDZYNARODOWE in Polish No 7, Jul 81 p 168

[Review by a. z. of book BEZPOSREDNIA TELEWIZJA SATELITARNA. STUDIUM PRAWNOMIEDZYNARODOWE [Direct Satellite Television. A Study in International Law] by Krystyna Wiewiorowska, Polish Scientific Publishers [PWN] Warsaw-Lodz, 1981, 126 pages]

[Text] The prospect of implementing direct satellite television, envisioned by the year 1985, has evoked the need to consider the political and legal problems connected with the preservation of the rights of sovereign states under conditions of direct transmission of information from certain states to others without the possibility of controlling the content of this information. The UN has begun negotiations aimed at establishing special legal principles regulating the use of artificial earth satellites for direct tansmission. The author of this work shows the extent to which the broadcast of direct satellite television programs is regulated, and indicates the new problems demanding special legal regulation which are created by such broadcasts, pointing out the directions of the required regulation. The concludes that the proposal to adopt the principle that broadcasts into the territory of third states can be implemented exclusively on the basis of previous agreement is the only one which is not supported by standing international law or law of outer space. The other questions can be regarded as regulated or partially regulated in standing international law. However, this statement should not diminish the significance of the negotiations aimed at working out the principles of direct satellite television, for it is necessary to affirm other principles.

CSO: 5500/3010

BRIEFS

SATELLITE NEWS PLAN--The Royal Gazette newspaper has applied to the Development Applications Board for planning permission to erect a satellite dish on the roof of its Par-la-Ville Road offices to improve the quality of its international news services. General Manager of the newspaper Mr. Keith Jensen confirmed yesterday that the application had been made. He noted, however, that no firm decision had been taken on whether or not to proceed with the setting up of a dish if permission were granted. "The application was made as part of a feasibility study investigating means of improving the quality of our international news gathering capabilities," said Mr. Jensen last night. He declined to elaborate until the Development applications Board had considered the application. The Royal Gazette at present receives foreign news copy through the Reuters and United Press International services from New York. The newspaper also receives world photographs via the United Press International wire photo service--pictures are printed by a machine which picks up radio wave transmissions from New York. [Hamilton THE ROYAL GAZETTE in English 21 Apr 82 p 2]

CSO: 5500/7535

'ANN'S' PLANS FOR INTERNATIONAL EXPANSION EXPLAINED

PA241434 Managua BARRICADA in Spanish 18 May 82 p 5

[Article by Edgard Barberena S.]

[Text] With the upcoming opening of offices in Panama and New York, the New Nicaraguan News Agency (ANN), the official spokesman of the Sandinist revolution abroad, will take an important step forward in its daily efforts to neutralize the transnational news agencies' campaign against Nicaragua.

Next week, the New Nicaraguan News Agency--founded 32 months ago--will open its offices in the Panamanian capital, in an effort to expand the voice of the revolution internationally. Carlos Humberto Castillo and Francisco Hernandez Segura are the director general and assistant director of the information agency.

Approached by BARRICADA, ANN Information Director William Gribsby Vado told us that ANN will also open new offices in the UN building in New York, which will permit the revolutionary process to project itself more effectively.

"Our purpose," Gribsby said, "is to open offices in the primary Latin American and European countries and to establish channels of cooperation with various news agencies that permit us to reach other nations of the world."

ANN's General Directorate also intends to open offices in Canada, Venezuela and the FRG before the end of 1982 and in Moscow by 1983. The latter office will serve as the headquarters for the socialist bloc of nations, which will allow better communication between those countries and the Sandinist revolution.

Gribsby said that it is important to note that the agency already has a translation department for the French and English languages, which conveys information from Nicaragua to the noted French newspapers LE MONDE, L'HUMANITE, LA MATIN and to French magazines, as well as to Canada.

English transmissions are sent to Europe, where they are channeled daily by the different committees of solidarity with Nicaragua to 100 Western

information services. Transmissions are also sent to the Scandinavian peninsula, where the progress of the Sandinist revolution is revealed through many information organizations from Iceland, Norway, Sweden and Denmark, including the official Swedish radio.

In addition, ANN is published in Costa Rica, Mexico and Honduras, through the effort of its correspondents, who report daily to ANN's central editing office in Managua. The greatest percentage of ANN publications are used by the Mexican newspapers UNO MAS UNO, EL DIA, EXCELSIOR and UNIVERSAL, and in the Mexican cultural radio, television, Channel 11 and various Mexican magazines. These publications use 20 0/0 of ANN material, as compared to other news agencies.

Another means that ANN uses to project the revolution internationally is the nonaligned pool of agencies. The information transmitted is received daily by over 90 member-nations. In addition, ANN is currently a member of the National Information Systems Activity (ASIN), which groups official agencies from Mexico, Venezuela, the Dominican Republic, Cuba, Guyana, Costa Rica, Panama, Peru, Ecuador, Grenada and Jamaica, using the Inter-Press Service (IPS) transmission channel.

ANN was founded on 19 October 1979. It was first located on the seventh floor of TELCOR's Zacarias Guerra building. At present it is located at the former French Alliance installations and has a staff of 75 people who work daily to disseminate information on Nicaragua.

ANN has signed agreements with other international news agencies, such as PRENSA LATINA (PL), TASS, Bulgarska Telegrafna Agentsiya (BTA) of Bulgaria, Magyar Tavirati Iroda (MTI) of Hungary, Czechoslavenska Tiskova Kancelar (CTK) of Czechoslovakia, Polska Agencja Prasowa (PAP) of Poland and the Allegemeiner Deutscher Nachrichtendienst (ADN) of the GDR.

In addition, ANN's news exchange has extended to the Thong Tan Xa Vietnam (VNA) of Vietnam, the Choson Chungang Tongsin (KCNA) of the Democratic Republic of Korea, and the Inter Press Service (IPS) of Italy.

This service includes the cooperation of international organizations, such as the Canadian Overseas University Service (Servicio Universitario Canadiense de Ultramar--CSUCO), which donated $70,000 to ANN; and the governments of Libya and Cuba, which also helped in the development of the New Nicaraguan News Agency.

Several ANN journalists have received technical training courses in Italy, Cuba and Nicaragua, and there are three ANN technicians currently in Moscow, taking courses on electronic and telegraphic communications, in order to maintain the revolution's complex communications structure.

Gribsby pointed out that there a-e plans to expand ANN's photography department. For this purpose, negotiations with international organizations are already underway, in an effort to obtain the financing required to allow

the agency to send photographic images of what is happening in the country to various countries.

"We know that our work is difficult, but we believe that we will forge ahead through daily effort and with the encouragement offered us by the consolidation of the revolutionary process. Thus we will overcome the obstacles and difficulties ahead," William Gribsby concluded.

CSO: 5500/2237

BRIEFS

NEW TELEVISION RELAY--According to a Central News Unit report, thanks to collaboration between the staff of the technical repair and maintenance unit of the Voice and Vision of the Islamic Republic of Iran in Mashhad Center and the group engaged in extending the television network of the Voice and Vision of the Islamic Republic of Iran, the 'Aliak television relay system was set up on 9 April this year and officially started work as of 29 April. The relay system transmits the first programs of the Vision of the Islamic Republic of Iran on channel No 7 with a power of 10 watts and brought the 'Aliak, Moshkan, Soltanabad, Robat-e Jaz, (Boroaban), Chahak and (Anbarestan) regions between Heyshabur and Sabsevar under the coverage of the Vision of the Islamic Republic of Iran. [Text] [LD300506 Tehran Domestic Service in Persian 1630 GMT 29 Apr 82]

RADIO-TV CHIEF RETURNS--According to IRNA, MP, Mohammad Hashemi, supervisor of the Voice of Vision of the Islamic Republic of Iran, returned to Tehran this morning from a visit to Yugoslavia, West Germany, Libya and Algeria during which he studied mutual cooperation with various radio and television stations. Mr Hashemi had fruitful discussions with high-ranking Algerian officials, including the ministers of education and information and the head of the Central Committee [as heard] of the Algerian National Liberation Front. In an interview with the IRNA correspondent in Algeria, the supervisor of the Voice and Vision spoke of the purpose of this trip, saying: Our main aim is to evaluate the technical equipment which may be of use to us in various countries, as well as to purchase some of the items needed by the Voice and Vision of the Islamic Republic of Iran. He added: Our other aims are to exchange television and cinema productions with friendly Muslim countries, as well as with countries of the Nonaligned Movement, to coordinate our views on international radio and television conferences and to coordinate purchases with these countries. The supervisor of the Voice and Vision of the Islamic Republic of Iran said: Another important matter discussed was making use of Algerian radio transmitters to strengthen the Voice of the Islamic Republic of Iran, so that in this way we can send the message of the Islamic revolution in Arabic to those countries that do not receive the Voice of Iran. [Excerpts] [LD281802 Tehran Domestic Service in Persian 1030 GMT 28 Apr 82]

DIRECT TELECOMMUNICATIONS LINKS--JOMHURI-YE ESLAMI's correspondent has reported from the Iran Telecommunications Company that recently direct communication links without the assistance of an operator have been established with the following countries, using the following codes: Singapore 006, Norway 0047, Finland 00358, Denmark 0045, Sweden 0046, Syria 00963, Luxemburg 00352 and Ireland 00353. [GF171700 Tehran JOMHURI-YE ESLAMI in Persian 3 May 82 p 5]

CSO: 5500/2229

BRIEFS

TELECOMMUNICATIONS AGREEMENTS SIGNED--Two agreements on telecommunications were signed today in the office of the Post, Telegraph and Telephone minister. The first agreement was signed with (Funun and Tgbahyan) Company to provide the telecommunication corporation with services and equipment in order to expand means of communication. The U.S. (Harris) Company will provide the project with technical equipment worth 432,285 Omani riyals. According to the second agreement, which is signed with the Mustafa and Jawad Company, the corporation will be provided with 650 English telex machines in addition to 350 Arabic-English telex machines. The (OKI) Japanese Company will manufacture these machines, which are worth 785,550 Omani riyals. [Text] [GF131430 Muscat Domestic Service in Arabic 1300 GMT 13 May 82]

CSO: 5500/2230

BRIEFS

SOLAR POWER FIBEROPTICS--Saudi Arabia has ordered optical fibre equipment which will be powered by solar energy. During the next 18 months or so, Plessey, for which this is the first overseas success in that product range, will install and commission the terminal and line equipment. This will provide six 34 megabits-per-second optical fibre systems, each capable of carrying 480 telephone channels simultaneously. The equipment is being supplied to BICC Metals, on behalf of the central region of the Saudi Consolidated Electric Company, based in Riyadh. BICC Metals will supply its "fibral" overhead conductor, which has been designed to replace the earth wire on the 92 kilometres of power line. [Text] [GF011228 Manama GULF MIRROR in English 1 May 82 p 10]

CSO: 5500/2230

BRIEFS

NEW TV CHANNEL--Mr Abdullah al Nuweis, under-secretary of the Ministry of Information and Culture, has announced that trial transmission from the second channel of Abu Dhabi TV will start on Saturday on UHF-48. It will be a daily 3-hour transmission, beginning at 8:00 pm. The trial period is scheduled to last a couple of months, but, from 1 June, the transmission will be extended to cover al-Ain on UHF-35. The eastern region and the islands will also be gradually covered when the necessary booster facilities are completed, he said. It is understood that the second channel 5, though, mainly meant for expatriates as is the trend in the other Gulf states, will not, however, be completely foreign-oriented. The programmes will include Arabic feature films, documentaries, plays and folklore. The announcements will also be in Arabic, with sub-titles in English, and vice versa. [Excerpt] [GF131146 Dubayy KHALEEJ TIMES in English 13 May 82 p 3]

CSO: 5500/2230

BRIEFS

RADIO EXPANSION PLANS--Radio reception in Taita Taveta District will be improved when the 26 million shillings VOK mediumwave transmitter station at Voi is operational. An assistant minister for information and broadcasting, Mr Khasakhala, stated this when he toured the station. Mr Khasakhala said that the government was improving radio and television reception throughout the country. [Excerpt] [EA210044 Nairobi Domestic Service in English 1400 GMT 20 May 82]

CSO: 5500/2237

DETAILS ON SMD DESIGNED RADIOS GIVEN

Johannesburg ARMED FORCES in English Feb 82 pp 13-15

[Text]

This article traces the history of one of the key manufacturers of strategical communications equipment in the Republic. The article reveals that South Africa was a world leader in the design and production of the vital frequency hopping technique. The standard of the equipment has been publicly demonstrated by the communications system used by the Uruguay Yacht Race guard ship Howard Davies. The daily reports broadcast by the South African Broadcasting Corporation were transmitted on a TR15B transceiver.

Ask this question of almost any civilian in Pretoria, which is where Grinaker Electronics and its predecessors have been located for about twenty years, and the most likely answer you will get is "Never heard of them", yet the company's products are well known in Defence communications and the company's history in this field can be traced back to World War II.

The original ancestor of the present company was SMD Manufacturing Company (Pty) Ltd of Pinetown, Natal. This company produced a lowpower amplitude modulated mobile transceiver during World War II, which saw service with the South African forces in North Africa and Italy. One of these sets, affectionately known as the "Golden Glory", was still being used as the control station in the road network run by radio amateurs at the Kyalami racetrack well into the 1970's. After the war, SMD reverted to the manufacture of domestic radio's, but, in the late 1950's was chosen by the National Institute of Telecommunications Research to produce ten prototypes of the revolutionary communications receiver invented by the late Doctor Trevor Wadley. These prototypes worked well enough to prove the Wadley principle, but were not suitable for quantity production. Demonstrations to the leading receiver manufacturers in England produced a unanimous negative response – the Wadley receiver was too complex for production, but the Royal Air Force were sufficiently impressed by the prototype to award a small development contract to a little known company, Racal Engineering Ltd, to engineer a production item. That they were successful is now history; the Racal RA17 was born and Racal itself was set to develop into one of the largest group of electronic companies in the world.

The late 1950's saw the advent of the transistor and also the shift to single side band systems in the high frequency communications field. SMD Engineers kept up with the state of the art and produced the world's first Mobile H.F.SSB transceiver which was fully trasistorized except for the final transmitted stages, the RT422B. Many hundreds of these sets were made and sold over Africa. RT422B's are still in service in many countries from the Sudan to South Africa. The set was adopted by the South African Defence Force as the C14 and was fitted to defence vehicles of the period, which have, of course been phased out of service.

A unique feature of the RT422B was the use of speech processing which increased its "talk power" by a factor of at least 4. It was the first commercially available transceiver to use this system, which has been used in all subsequent transceivers developed in Pretoria.

SMD represented Racal in Southern Africa and as sales of Racal products increased, especially with the sale of the UK designed TA127 1kW ISB transmitter and AFV communications to the SADF, it was decided that local manufacture should be undertaken. A new company, Racal SMD (Pty) Ltd was established in 1963 Racal UK being the major shareholder. In order to be near its major customers, premises were acquired in Struben Street, Pretoria, which became the new company headquarters.

The next design breakthrough came about this time with the development of the RT14 solid state manpack SSB transceiver. Up to this time, changing the frequency of a transceiver channel was a complicated business, involving the fitting of different coils and re-tuning many of the receiver and transmitter circuits. The RT14 introduced the wideband techniques which are now standard practice in SSB transceivers worldwide. The power output of the RT14 was only 5 watts p.e.p. and this proved to be insufficient to provide reliable long distance communications in Southern Africa, especially during the summer, when high levels of static interference exist, so the RT14 did not go into production here However, it performed quite adequately in more temperate climates and Racal UK developed it further into the "Squadcal" series of transceivers, which enjoyed such large sales worldwide that a separate company, Racal Mobical Ltd, was set up in England for its manufacture. Another version of this transceiver was manufactured by Racal in their US plant and supplied to the American forces for use in Vietnam.

Meanwhile, in Pretoria, a higher powered version of the RT14, with 25 watts p.e.p. output, was developed. This became the TR28 (SADF number B16) of which several thousand were made. Besides South Africa the TR28 saw service in Rhodesia, Angola, Mozambique and Guinea-Bissau. To supply the Portuguese requirement, production lines were set up in Lisbon and then Lorenco Marques. Further development yielded the TR15, a 100 watt mobile SSB transceiver. This initial model the TR15L was a channelised equipment, requiring a frequency determining crystal for each channel and it had a short production life as the advent of the frequency synthesizer in the later versions rendered channelised equipment obsolete.

Frequency synthesizers small enough to be used with mobile and portable transceivers became possible with the availability of TTL integrated circuits and operators could set a transceiver to any frequency in its operating range, with an accuracy of a few

cycles, in a matter of seconds. To use this rapid timing facility to best advantage, automatic antenna tuning units were developed. The first models used sensors to determine the amount of mismatch between the transceiver and the antenna and generate signals to drive small electronic motors which adjusted variable inductors and capacitors until an obtimum match was achieved These units could tune a system in 15 to 30 seconds and the principle is still in current use, especially with high power transmitters. Later, the relatively slow motor operated system was replaced by logic circuitry operating reed relays and tuning times of less than one second are now standard. These ATU's are much smaller than the motor driven versions and can be incorporated into the transceiver case as in the current versions of the TR15.

By the early 1970's, Racal Electronics South Africa Ltd, the manufacturing subsidiary of Racal-SMD, was producing a complete HF SSB system for the SADF which included 1 kW base stations (many of which were fitted to mobile shelters), 100 W mobile transceivers and 20 watt manpacks. All of these incorporated frequency synthesizers and were fully solid state.

In 1978 a deal involving the purchase by Grinaker Holdings of Racal's entire shareholding and the establishment of the 100% South African company Grinaker Electronics (Pty) Ltd (Grinel) was effected.

Modern radio detector equipment can determine the geographical location of conventional fixed frequency transmitters in a matter of seconds, making them easy targets for enemy air attacks and jamming. Both these problems can be overcome by the use of frequency hopping techniques. By 1979, Grinel had developed and had in full production a system using these techniques.

In the frequency hopping system developed by Grinel, the transmitter frequency is determined by a frequency synthesizer which can generate any frequency within a wide band of frequencies and which can be switched rapidly (in milliseconds) from one frequency to another. The synthesizer is controlled by a microcomputer which switches the frequency in a pseudo-random sequence, changing the frequency every few milliseconds.

As many as a million different codes can be selected by the operator. Only a receiver fitted with a synthesizer and microcomputer set to the same sequence can detect the transmission, which is inaudible on conventional receivers.

It was not until late 1981 that a British company offered production quantities of frequency hopping equipment – which they claimed as a world first in their advertisements – two years behind Grinel.

Although Racal Electronics South Africa Ltd, was nominally an autonomous member of the international Racal group, planning decisions made in South Africa were always subject to possible veto by group headquarters in England, who naturally put group interests before those of individual companies. R & D pro-

grammes were rationalised to prevent duplication of effort and the South African company frequently had to put equipments into production which were designed overseas, not specifically for Southern African conditions. With the Racal control removed, Grinel engineers have designed a range of equipments which are ideally suited to local requirements, both environmentally and technically. Grinel now boasts the largest private R & D facility dedicated to military communications in the Southern hemisphere.

A more recent world first was the UHF/SSB medium range frequency hopping equipment which is presently in production.

The factory at Waltloo is equipped with modern machinery – numerically controlled metal working machines, tape controlled component insertion stations and flow solder machines etc. Environmental test equipment is available to test equipment to the most stringest Defence Specifications for shock, vibration temperature and humidity. Strict Quality Assurance programmes are laid down and all equipments are soak tested before despatch from the factory. Production management planning is such that large or small orders can be put on line in minimal time and Grinel prides itself on the short delivery times it can quote to its customers and its ability to adhere to them.

Since its beginning in Natal twenty years ago, the company has developed into an organisation with over a thousand employees which can provide South Africa with much of its requirements of modern radio communications equipment better than that available anywhere in the world, a fact which is borne out by steadily rising export sales.

The TR400 frequency hopping VHF manpack with tactical E.W. evasive communication range up to 300 km.

The TR 48S Manpack is a high performance, low-cost military or civilian HF communications transmitter receiver.

The TR 62H 100 watt frequency hopping HF/SSB transceiver. The TR 62H is both detection and jamming resistant and with 1 million selectable codes supplies secure communications.

CSO: 5500/5810

USE OF SATELLITE PHOTOS TO IMPROVE FARMING CONSIDERED

Harare THE HERALD in English 6 May 82 p 6

[Text] The use of satellite photographs can improve Zimbabwe's agriculture and overcome the problem of water shortages in some parts of the country, says a senior geologist.

In an interview in Harare yesterday, a geologist and national coordinator on remote sensing in the Department of Geological Survey, Mr Ambrose Made, said satellite photographs provided information about the earth's surface and clearly showed how it looks.

"From a satellite picture you can determine what type of soil dominates a particular area and so the farmer can find out which crop will do well on that type of soil."

He said one could also work out the yield expected from a particular area from a satellite picture and this was already being done in other countries, for example the United States.

Mr Made said other advantages of using satellite pictures were that:

Details

--The country would know its surface in detail by identifying geological features like faults, fractures and joints in the rock bed;

--Since it has been geologically proved that dams and boreholes do well on joints and faults, the Government could build water sources on such features;

--They could be used for mineral exploration;

--They could be used to predict natural disasters such as volcanoes and earthquakes; and

--They could be used to update and upgrade maps.

"The science of satellite pictures can be used for multi-disciplinary purposes," he said.

Following independence, Zimbabwe now had access to the world and consequently to the various technologies that had been developed.

Mr Made said that because of the large amount of information that could easily be got from satellite pictures, remote sensing had to be part and parcel of every Government development programme.

Remote sensing is the science and art of obtaining information about an object or area through the analysis of data acquired by a device that is not in contact with the object.

The devices normally used were aircraft and satellites.

He said it was important for Zimbabwe to join the African Remote Sensing Council because there were many advantages.

"The major advantage is that if Zimbabwe joins the council, it can be seriously considered as a sub-regional trainer and user centre and would have people from the sub-region coming to train here."

The main objective of the council was to promote the development of remote sensing activities and improving the exploitation and development of natural resources that were of economic interest to member states.

Mr Made said that by becoming a member, Zimbabwe would have access to the well equipped workshop in Nairobi for repairing and servicing optical and electronic equipment at a cost normally one-third of that charged by a private company.

CSO: 5500/5802

DEPUTY MINISTER OF COMMUNICATIONS ON RADIO DAY

LD101040 Moscow Domestic Service in Russian 0807 GMT 7 May 82

[Interview with Gennadiy Georgiyevich Kudryavtsev, deputy minister of communications of the USSR by correspondent Lev Barshchevskiy, on Radio Day in USSR--live]

[Excerpt] [Kudryavtsev] At the present time, radio broadcasts and programs cover the entire territory of our country and are available to all our population. The country's television transmission network is the most widespread, and one of the biggest, in the world. Good reception of the first program is available on over 87 percent of the territory on which the country's population lives. In October 1980, five-zone transmission was introduced for the first program of television so that people living in the different time zones of the country can see Moscow television programs at times convenient for them. The educative role of television is increasing in connection with the introduction of the second all-union program. It can be seen by over 100 million people.

It is known that nowadays space equipment is widely used for the needs of radio and television. Artificial earth satellites have come to be widely used for the needs of radio and television. Artificial earth satellites have come to be widely used for transmitting of television, radio, telephony and facsimile transmission of newspapers. At the present time, a multipurpose communications network has been established on the basis of geostationary satellites of the Raduga, Gorizont and Ekran types. Interesting possibilities for full coverage of the country by television transmissions have appeared with the creation of the Moskva satellite distribution system. In the long term, it is intended to create and bring into use new satellite systems in the 12 Gigahertz band, which will make possible the expansion of multi-channel central and republican television broadcasting.

Communications has today become one of the responsible branches of the national economy, providing the technical capability for the transmission of information of various kinds necessary for managing the country and its economy. It has become an integral part of many production processes and provides opportunities for business and personal contacts between people.

[Barshchevskiy] Gennadiy Georgiyevich, it is known that technology in the field of radio, television and communications is developing very rapidly. We should like to hear what novelties in this field await us in the coming years. What are the prospects for the development of radio and television technology in the 11th FYP?

[Kudryatsev] The contemporary scientific-technical revolution has touched on all forms of electrical communications from the oldest to the newest. More and more apparatus units of cable, radio-relay and satellite communications lines are being built on the basis of micro-electronics. There are radical changes in information technology. The traditional relay electromechanical systems of commutation are being replaced by program-controlled electronic systems. The assimilation of new frequency bands in satellite communications system with directional aerials, and the processing of signals on board the satellites, fiber-optic cable systems, the widespread introduction of electronic computers, and a number of other scientific-technical problems, have to be solved in the 11th FYP, in the interests of setting up a unified automated communications system for the country.

CSO: 5500/2228

NEWSPAPER FACSIMILE TRANSMISSION DESCRIBED

PM141425 Moscow SELSKAYA ZHIZN' in Russian 7 May 82 p 3

[Reportage by A. Gusev, scientific editor of the Journal Radio, under the rubric "Today Is Radio Day, the Holiday of the Workers in All Communications Sectors": "Newspaper Transmitted Through Space"]

[Text] Radio communications, radio broadcasting, television--these words have become part of our lives. Radio has become a customary prefix to the names of a number of sciences. Radar [radiolokatsiya], radioastronomy, radiophysics, radiometry and many more radio sciences have won the rights of "full representatives" of radioelectronics. All the same, every time you come across the ubiquitous radioelectronics, you cannot help wondering at its rapid development. It has, so to speak, firmly seized a bridgehead and is extending it--it is mounting a successful attack on all sectors of science and technology.

Take publishing, for instance. Until quite recently people living in remote cities in the country received the central newspapers the following day at best. Now they can read them at the same time as Muscovites. Radioelectronics takes the credit for this. A system of transmitting newspaper pages by phototelegraphy has been created and is operating successfully. The matrices from which the newspapers are printed are being shipped by electromagnetic waves instead of aircraft.

A print of the newspaper page is placed in the phototelegraphic apparatus. And its special analyzing device analyzes what it sees and converts it into electric signals, gradually, one narrow strip after another, like a combine in the fields at harvest time. If there is a light section in the strip, one signal is given, and if it is dark, another. These signals pass along land and space communications lines, undergoing various transformations en route, to the local printing houses, where there is another phototelegraphic apparatus, the receiver.

Here everything goes strictly according to schedule and without interruptions--the printers and communications workers work harmoniously. And that is understandable: For the time taken to transmit a newspaper, short though it is (one page takes about 2 minutes), it is necessary to interrupt communication on 60 telephone channels.

The reverse task is resolved at the point of reception: The signals received are translated into visible form. By exposing the film to electric light in sections in the phototelegraphic apparatus it is possible to reconstruct the transmitted pages. They then develop the film, make prints from it, prepare the matrices and start printing the newspaper without delay. In the morning it reaches the reader.

Thus newspapers cross hundreds and thousands of kilometers in a matter of minutes, thanks to radioelectronics. Sixteen central newspapers, including SELSKAYA ZHIZN, are sent in this way to Khabarovsk, Irkutsk, Tbilisi and other centers--in all, to more than 40 major cities in the country. In the current 5-year plan the delivery of newspapers through space will be extended. This will be made possible by the new Moskva satellite communications system with its compact ground equipment.

Satellite communications systems are a young, rapidly developing sector. Thanks to this sector 15 years ago the inhabitants of a number of cities in Siberia and the Far East were for the first time able to see live television coverage of the Red Square parade by way of a space linkup through the Orbita system.

Now three space communications systems are operating in our country--Orbita has been joined by Ekran and Moskva. It is through them that the main task in the sphere of television development is being implemented in the 11th 5-year plan--the transmission of the first and second all-union programs to five broadcasting time zones at convenient times for television viewers. They have already made it possible to extend the television coverage zone and reach 86.5 percent of our country's population.

Together with professional communications workers, the holiday is being marked by the many thousands of radio enthusiasts, or, as they are still called, the experts of the "people's laboratory." The range of their creativity is very great--from the simplest radioelectronic toys and receivers to space relay stations.

Yes, it has by the hands of radio amateurs in the USSR Dosaaf Space Technology Laboratory that the Radio-3 to Radio-8 satellites, put in orbit late last year, were created. Hundreds of radio amateurs--shortwave and ultrashortwave--communicate successfully through them.

The amateur radio designers also make a great contribution to our national economy. They respond with concrete deeds--the creation of new instruments, devices and adaptations--to the party and government appeal for new ways of improving production efficiency and quality and ways of reducing the expenditure of electricity, materials and labor.

CSO: 5500/2231

BRIEFS

TV RELAY STATION--In Ordzhonikidze central TV programs and local studio transmissions can now be received by builders of a highway across the main Caucasus range thanks to a powerful relay station which has been commissioned today. There are now 24 powerful relay TV stations in North Ossetiya. [LD080008 Moscow Domestic Service in Russian 1400 GMT 7 May 82]

MOSKVA STATION--Reportage on the May Day demonstration was seen for the first time today in the village of Koyda in Arkhangelskaya Oblast. On the eve of 1 May a Moskva system receiving station came into operation. This station receives a signal from an earth satellite, amplifies it and transmits it via a retransmitter. In the coming years more Moskva system installations will be commissioned in many remote villages and settlements in Arkhangelskaya Oblast. [Text] [LD020048 Moscow Domestic Service in Russian 1230 GMT 1 May 82]

'COSMOS-1366' LAUNCHED 18 MAY--Moscow, 18 May (TASS)--The Soviet Union today launched another artificial earth satellite in the Cosmos series "Cosmos-1366." The satellite carries scientific instruments for the further exploration of outer space, and experimental equipment operating in the super-high frequency band and intended for retransmitting telegraph and telephone information. The satellite has been launched into a circular orbit with the following parameters: Distance from the earth's surface--35,820 kilometers, the inclination to the plane of Equator--1.5 degrees, the period of revolution--23 hours 57 minutes. Apart from scientific and retransmission equipment the satellite carries a radio system telemetric system for transmitting back to the earth the data concerning the operation of instruments and scientific equipment aboard. The equipment aboard the satellite is functioning normally. The coordination computer center is processing the data transmitted by the satellite. [Text] [LD181736 Moscow TASS in English 1730 GMT 18 May 82]

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PROGRESS TOWARD JOINT NORDIC TV SATELLITE EXAMINED

Helsinki SUOMEN KUVALEHTI in Finnish 2 Apr 28 p 26

[Article by Arja Laitinen: "Nordsat's Slow Progress"]

[Text] Already more than 10 years have been sacrificed on the joint Nordic tv-satellite project. Several million markkas have been expended for reports on Nordsat even though the official research phase is only now beginning.

Time is by-passing Nordsat at a rapid rate since Western European tv-satellites are flooding the markets with programs and thus the accomplishment of this expensive Nordic venture may seem to be a complete waste with or without the principle of rotating program responsibility.

It may also happen that the planning of Nordsat will continue to remain in principle only: the Nordic Council continues to be replete with concerned speeches about an alarming flood of stupefying entertainment coming into the culturally unique households of the Nordic countries.

An important meeting in the history of Nordsat was to be held in the beginning of March in Helsinki when the Nordic Council was to have made an official decision on the commencement of a 2-year research and planning phase for Nordsat. The Nordic Ministerial Council made this recommendation to the Nordic Council when it convened in Copenhagen last November.

However, in February Denmark's new government announced that it will not participate in this joint Nordic satellite project. Denmark justified its decision on the basis of the expense of the project. And it is indeed true that so far no one has at least publicly dared to estimate the cost of Nordsat. It is only said that "a billion markkas will not be sufficient".

After this, it became urgent to present a membership proposal to the Nordic Council for the continuation of the Nordsat project among the four remaining Nordic countries; Iceland, Norway, Sweden, and Finland. Denmark's share of the funding, approximately 23 percent of the expenditures, will now be divided between the four remaining Nordic countries.

The Nordic Council's Education Committee approved the membership proposal, which will be signed by all the parties representing Finland. The committee's Danish members will refrain from voting.

After a vote at a full session the Nordic Council decided to recommend the continuation of the Nordsat project between the four remaining Nordic countries. Thus the annoying episode caused by Denmark was left off the agenda.

At the end of March the Finnish Government gave its guarantee for the continuation of the Nordsat project. And in the final week of March the Nordic Ministerial Council adopted a new decision in Stockholm to begin a 2-year research and planning phase.

The intent during this 2-year period is to determine the actual expenditures of a joint Nordic satellite, the format for programming to be transmitted by satellite -- the Swedes have proposed a so-called principle of rotating program responsibility, which no one knows what this means in practice -- as well as the necessary agreements for accomplishing this project.

The games that are being played around Nordsat would even be amusing if it were not for that fact that they are so impossibly serious. The accomplishment of Nordsat even today, in the year 1982, does not appear to be very credible in that there are so many opponents to the project.

"Nordsat Nearly Senseless"

Managing Director Erkki Backman of the Teleste Corporation and Professor Martti Kiuri of Helsinki Technical College were able to make public through Minister Jacob Soderman during his appointment to the Nordic Council a letter in which they consider the Nordsat plan to be nearly senseless at this time. Backman and Kiuri base their arguments on the high cost of a joint satellite.

In the opinion of Backman and Kiuri it would make considerably more sense to use already existing or planned small-capacity satellites for experiments. Small-capacity satellites are considerably cheaper than the large-capacity satellites (such as Nordsat). Small-capacity satellites could be used for experimental use on one or two tv-channels. Each country would thus procure its own transmitting equipment and would transmit programs on alternating days. For example, Sweden's Tele-x is representative of this kind of small-capacity multiple use satellite.

The Nordsat project has also encountered political opposition. In Finland a portion of the People's Democrats, former Communications Minister Veikko Saarto, among others, oppose the Nordsat project because of its cost and also for programming policy reasons.

In Sweden the Social Democrats have opposed Nordsat for a long time, their favorite being the Swedish Tele-x-satellite, which has even received support in Finland. It will be launched into space after 4 years.

If the Social Democrats win Sweden's parliamentary elections next fall, it will certainly mean the final deathblow for Nordsat. One can hardly expect that Iceland, Denmark [sic], and Finland will then continue to support the Nordsat project.

Sweden's Tele-x-system is naturally of interest from the point of view of Swedish development in this area, and even though a rather positive attitude is expressed toward this satellite project in Finland, there are some here who consider participation in this project to be somewhat questionable since decisionmaking power with respect to the use Tele-x would remain with the Swedes.

It is clear that the Nordic broadcasting corporations have adopted a rather indifferent attitude toward the Nordsat project since the actual expenditures of this large-capacity satellite are still obscure as has been stated many times.

Instead, the Finnish Broadcasting Corporation as well as Norway's radio have had a positive response to the development of Sweden's Tele-x-satellite. On the other hand, Denmark's radio is not interested in this satillite either.

The Finnish Broadcasting Corporation is interested in the Tele-x-satellite for the reason that in last year's budget the parliament approved an appropriation for the preliminary planning of the so-called coastal channel. The planning group was given the task of determining program distribution opportunities that might be opened up by Tele-x for the Swedish-speaking population of Finland as well as Finns living in Sweden. In the opinion of the work group permanent programming cannot be achieved by means of Tele-x, but data and experience for the future could be obtained. For this reason the Finnish Broadcasting Corporation also intends to participate in the planning of programs for a Tele-x channel.

At the same time that games are being played around various satellite alternatives in the Nordic countries and issues concerning decisions in principle are being deliberated, elsewhere development has progressed much further.

There should be six Western European satellites in space by the year 1986. In 2 years there are plans to launch into space the joint European L-SAT satellite, a multiple use satellite, SAT-TV satellite, a tv-satellite from the Federal Republic of Germany, the French tv-satellite TDF-1, LUX-TV, which is a tv-satellite from Luxembourg, TEL-SAT, a private Swiss-English tv-satellite as well as Sweden's Tele-x. Nordsat's schedule extends to the end of this decade.

All the satellites will initially have from two to five tv channels, which will later be increased.

Helsinki Television is already transmitting programs from the English Satellite Television satellite.

There are no legislative obstacles to the transmission of satellite programs in Finland since the radio law in effect is from the 1920's when it is doubtful that people even dreamed of satellites. A radio and television committee is presently deliberating new legislation, and it is expected that the committee will complete its work in a couple years.

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GOVERNMENT BROADCASTING AGENCY REGRETS CABLE TV START

Helsinki SUOMEN KUVALEHTI in Finnish 2 Apr 82 pp 34-37

[Article by Martti O. Hosia: "Helsinki Television's David Challenges Finnish Broadcasting Corporation's Goliath"]

[Text] Helsinki Television, HTV, has now linked 74,000 homes with cable television in the capital city to a commercial European entertainment network.

English films, rock concerts, and soccer matches will be transmitted into the apartment buildings of Helsinki from Eira to Haaga and from Lauttasaari to Kumpula from a satellite floating thousand of kilometers above the equator.

"The first in Europe," emphasizes HTV.

Managing Director Heikki Saraste, 30, of Helsinki Television admits that he has bought a pig in a poke. "I am not completely certain of the content of the programming. However, it is of the above-mentioned nature."

This secrecy is a result of the fact that the transmitting company, the English Satellite Television, has not yet wanted to make its final programming public. For the time being, "entertainment programs" are being transmitted, at least until the middle of April.

HTV's operating facilities in the basement of a concrete building are not especially impressive: offices for 44 employees, walls covered with maps of Helsinki dotted with red and black pins. The engineering and studio facilities are crowded into the basement of a neighboring building. A disc antenna with a large diameter directed toward space shines as a harbinger of a new era.

However, cable television may be the key to opportunities of the future. This is the belief of the Sanoma Corporation, which 1 year ago acquired control of 80 percent of Helsinki Television's shares.

This is also the belief of HTV's "chief opponent", Director Matti Anderzen of the Finnish Broadcasting Corporation. "The Finnish Broadcasting Corporation must become involved in satellite transmissions, cable television, and the video markets. We must not be left behind," thunders Anderzen.

Six Channels

Helsinki homes with cable service now receive six different channels.

The Finnish Broadcasting Corporation's TV I and II are transmitted along cables. Television from Tallinn can, in principle, be seen in color and is reinforced with sound. Frequently, the color does not come through, but the fault is on the other side of the gulf according to HTV.

HTV's three channels are the Helsinki-channel, the information channel, and the entertainment channel.

The free Helsinki-channel broadcasts serial films such as a police series from England and the already nostalgic American Bonanza. The programming time amounts to a modest 6 hours a week.

However, in its own area of operation the Helsinki-channel can boast of surprisingly large viewer figures. According to a recent viewer rating conducted by Finnpanel the proportion of Helsinki-channel viewers is more than one-third, 37 percent. TV-I's proportion was 36 percent and TV-II's share was 27 percent.

According to Saraste the Helsinki-channel's share could even be better if the viewers knew what is being offered. The newspapers in the capital city have not provided any space in their columns and even the flagship of the owner company, HELSINGIN SANOMAT, has placed HTV's programming information "somewhere under Vyborg [Viipuri] television".

The fare offered by the information channel, which operates around the clock, consists of the day's programming information, muzak, and incidental announcements. The satellite transmissions now beginning will be accommodated on the information channel.

HTV's special offering and hope for the future is an entertainment channel, for which payment will be required and which will have a weekly programming of approximately 30 hours. Movies and light musical entertainment can be seen by paying a 440-markka hook-up fee and an additional annual fee of 300 markkas.

The hook-up fee, which seems expensive, is according to Saraste an error of the former management of HTV, but the fee can no longer be rescinded. In spite of this fee, the "black box" needed for access to this channel has been purchased by more than 13,000 families in Helsinki.

Programming Amounts to Tailor's Work

The entertainment channel, for which payment is required, separates Helsinki Television from all other cable companies in Western Europe. The closest corresponding cable television operations are found in the United States from where the model for "pay-TV" was obtained.

Saraste, who has directed Helsinki Television for only a year and who before this was the planning chief of the Sanoma Newspaper Group, is full of ideas about developing "pay-TV".

Saraste talks long and earnestly about how important it is to make a difference between the management of a distribution network and programming operations. At this time HTV manages both, which has confused the views of politicians as well as the man on the street with respect to cable television.

"We would hope that we are seen as a distribution network as, for example, the joint distribution of newspapers," emphasizes Saraste.

As far as the future plans of HTV are concerned programming operations can be taken care of by all those who are interested in it and ready to pay. Presently, HTV takes care of its own programming because of existing conditions or -- as Saraste says -- "historical reaons".

Saraste cites sports and theater as examples. "One could even imagine that HIFK could videotape all sports events. These events would be timed for viewing on HTV the following day. Those who have purchased a 'season ticket' from HIFK would be able to watch these sports events. The ticket could cost 100-150 markkas, for example. The aviation club could, on the other hand, send its members a program of its annual competitions. The theaters in Helsinki could tape their shows and transmit them to those who have purchased a season ticket. The possibilities are innumerable."

At the present time the "black box" is being developed in such a way that it will only transmit programs that have been paid for and subscribed to separately. According to Saraste development work will be complete in a couple years.

This is the same goal of the Sanoma Corporation's recent offer to the capital city's party newspapers that they become part owners of HTV. At this time the minority owner of HTV is made up of a group of numerous large enterprises. "More than half of Finland's 100 largest enterprises owns shares in HTV," states Saraste in answering a question concerning ownership.

There Is Room for Growth

HTV's current 74,000 hook-ups mean that there are approximately 170,000 possible biewers. HTV hopes to find new viewers from among those 50,000 households which, for the time being, have said no thank you to HTV's offer. There are an exceptionally large number of black pins on HTV's maps in the eastside working class districts of Helsinki.

This year HTV will extend beyond the city limits of Helsinki for the first time to Espoo, Tapiola, and Olari. The connection from Helsinki to Espoo will by accomplished by HTV's own link.

In the next 10 years HTV intends to continue to install cables in Helsinki's suburbs in Espoo and Vantaa. "A possible area of operations will be within

the limits of Ring Road III. In this area there are approximately 300,000 households that can be connected to cable," explains Saraste. There is room for internal growth in the cable network itself, which could presently handle 12 television channels. A transition to fibreglass cables would in time increase the number of channels to hundreds and even thousands.

"Yhtyneet Kuvalehdet [United Pictorials], SUOMEN KUVALEHTI, or even you yourself could purchase time from us for your own programming," states Saraste in describing the opportunities of the future.

HTV's plans are extensive, especially for a company which only a year ago was on the brink of bankruptcy and was saved only by the efforts of the Sanoma Corporation.

"This is still not a good business. We are only good consumers," admits Saraste, but also emphasizes that a business-like manner of thinking is now a part of the company. There is also a good feeling even with respect to job security.

Among the mistakes made by the previous management of HTV was, among other things, the belief that when the network is sufficiently expanded, advertisers will come by themselves. This did not happen. Also the preparation of its own programming along with local news was a mistake.

"Everyone says that documentaries and local news are desirable, but in practice they are not watched. On the contrary, those who have paid for the entertainment channel are extraordinarily satisfied with the programming," notes Saraste.

In the United States cable television and the satellites transmitting programs to them have created a frantic area of growth, which is being pursued by small as well as large entrepreneurs.

"In the United States the cable companies pay approximately 1,000 dollars for a hook-up. Calculated in this way our network would be worth more than 300 million markkas. In the United States we would be the 14th largest cable television company," calculates Saraste. However, as far as sales are concerned HTV is not a big company. A modest 13 million markkas is transacted annually through the company.

From the point of view of the Sanoma Corporation HTV is primarily considered to be a foot in the door, an opportunity for the future, and not a business investment for the present.

Even though cable television embryos, joint antenna systems, exist throughout the country, only Turku and Varkaus have in addition to Helsinki broadcast their own programs on a small scale. The joint antenna systems of the coastal cities along the Gulf of Bothnia have specialized in cable service for viewers of programs from Swedish television.

Among the large publishers Kirjapaino or AAUMULEHTI in Tampere have perhaps gone the furthest in the establishment of cable television.

However, the publishers have been more inclined to adopt the telset system, which transmits data to business enterprises along telephone cables. Telset is already operating in the large cities, and the telset-paper companies established by the telephone companies and local publishers have spread like wild fire thoughout the country.

If the squandering of forests for the production of newspaper print must be stopped someday, new channels of mass communication will, however, be found in cable television rather than in telset.

Satellites Will Usher in New Era

Helsinki Television does not expect the impossible from its newest venture, satellite programs. Initially, programming will amount to 1 hour a day, later 3 hours. There will be no Finnish subtitles for the programs.

However, the significance in principle is much greater. The satellite era has begun, whether we want it or not. After 3 years West Germany and France will lanuch their own satellites into space and they will be followed by the commercial Radio Luxuembourg. The Soviet Union has already launched one satellite. Also Nordsat will become a reality in form or another.

HTV's programs will come from the English Satellite Television Company, which is a purely commercial venture obtaining its capital from London City. The satellite itself is a European test satellite, from which Satellite Television has leased one channel. The remaining life span of the satellite is 1 to 2 years.

Satellite Television's transmissions will be seen initially only in Finland, Norway, and Malta, but the company's basic commercial goals are the joint antenna networks in Holland. England is not in their plans since that country's cable network is not developed. It is expected that income will be generated from advertisements for the multinational corporations.

"Tobacco and alcohol will not advertised. Norway is even stricter than Finland in this respect," promises Saraste.

The satellite experiment will not cost much for HTV. The rights were obtained through other countries and the receiving antenna is being leased from the postal service.

The opportunity for HTV to conduct transmissions from Swedish television directly into Helsinki's cable network would be perhaps more attractive than satellite transmissions. Technically this would be easy even without a satellite, but the obstacle for the time being is the problem regarding copyrights.

Cable transmissions will be inexpensive for the consumer since satellite antennas purchased separately would cost several thousand markkas. Antennas suitable for satellite reception to be transmitted to small-capacity link-up stations cost 200-300,000 markkas.

An Indifferent Finnish Broadcasting Corporation

The Finnish Broadcasting Corporation has not looked upon this rapid growth "in its own backyard" very favorably. The swords of the two companies crossed most recently when HTV obtained a permit for its connection to Tapiola and Espoo from the Postal Administration. Director Matti Anderzen of the Finnish Broadcasting Corporation issued a statement which could be interpreted to mean that this action was illegal.

"I would say that the granting of a permit was a questionable act on the part of the Postal and Telecommunications Administration. However, the intended link-up is not against the law," emphasizes Anderzen.

"What makes this matter questionable is that legislation concerning cable television is not yet complete. The postal service should not anticipate the expansion of networks.

"And if the expansion of networks is approved, then what will follow? They already exist in several localities, Tampere, Pori, Rovaniemi... If they are then joined together, a questionable situation could occur quite suddenly," states Anderzen in amazement.

HTV's Saraste's opinion of the Finnish Broadcasting Corporation is unequivocally caustic: "The Finnish Broadcasting Corporation has become accustomed to a comfortable monopoly situation. There they have become accustomed to the fact that the number of subscribers increases by 100 people a year. Now the world has changed and its monopoly is crumbling: cable televison and video have arrived. Therefore, they treat us as if we were an anathema."

However, the Finnish Broadcasting Corporation does not intend to just sit on its hands. Its board of directors has already proposed that it expand its operations into cable television and video cassettes.

The Finnish Broadcasting Corporation intends to build its cable network together with the postal service in densely populated areas. According to preliminary outlines the programming could consist of reruns and local productions so that the whole nationwide network will not be burdened with it as it is now.

The Finnish Broadcasting Corporation opened up the video markets by purchasing all the rights to 150 old films from Suomi-Film. It also intends to make video versions of its own programs. The intended video markets would include, among other things, ships, foreign construction sites, embassies, various institutions, and so on. It does not intend to enter into actual kiosk-type retail business according to Anderzen.

The long-term goal of the Finnish Broadcasting Corporation is a library service, in which video cassettes could be loaned out from libraries in the same manner as books.

Legislation Coming

Society also wants to extend a guiding hand over cable television. A partial report of the Radio and Television Committee directed by Chief of Presidential Staff Juhani Perttunen is now being completed.

According to the report cable television would have controls placed on it by "a nationwide parliamentary cable television committee" to be established by the Council of State. Also local committees would be established as needed. The task of the committees would be to make certain that cable companies observe the regulations of a cable television law.

The points of conflict in the report are, among other things, proposals to limit advertising to 7 percent of the programming time of each channel as well as the proposal to ensure that the domestic level of programming would be at least 40 percent. Even though these demands could kill cable television, they are negotiable questions on which a compromise can be reached.

A conflict of principle concerns whether cable television is similar to the operations of the Finnish Broadcasting Corporation or of the press. HTV's stand is the latter. In an ideal situation the company would only be a "printing shop" or "distribution office". The programs would be transmitted by others, who would also appoint an editor-in-chief in the manner of the newspapers.

"The concept seems to be so difficult that a picture must be drawn for people and even then they do not understand or do not want to understand," laments Saraste.

Anderzen's position is naturally different: "In my opinion an appeal to Gutenberg technology is quite weak. A new more effective technology has been developed. It should be placed under the control of society in some form since the Finnish Broadcasting Corporation is also under such control."

The owner's stand is conciliatory: "I do not see any reason for total criticism of the report, but I consider it to be an appropriate premise for advancing this matter," states Managing Director Vaino J. Nurmimaa of the Sanoma Corporation. Legislation will be created on this basis.

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MINISTER ATTACKS AGENCY FOR ALLOWING SATELLITE-TV FROM UK

Helsinki HELSINGIN SANOMAT in Finnish 9 Apr 82 p 13

[Article: "Postal Service Transmitting Commercial TV Entertainment"]

[Text] Communications Minister Jarmo Wahlstrom (Communist) criticizes the Postal and Telecommunications Administration for the fact that it has become involved in the transmission of cable television entertainment without thoroughly investigating the issue when the postal service concluded an agreement with Helsinki Television on experimental satellite transmissions. The Ministry of Communications stipulated in a letter sent on Thursday that the postal service discontinue its reception of satellite transmissions.

The postal service and HTV concluded an agreement on a satellite experiment in January. HTV is receiving the programs of an English company, which are transmitted via a European satellite, and then it retransmits the programs to the viewers of Helsinki's cable television network.

The first satellite programs appeared on Helsinki Television's channel at the end of March. Regular satellite programming should commence at the end of April. Such English-language programming is now being broadcast 1 hour a day.

The Ministry of Communications received an opportunity to interfere in the transmission of these satellite programs when the postal service requested 160,000 markkas from the ministry for experimental Nordic satellite transmissions. The intent is to conduct these experiments on an antenna being presently used by HTV and a joint antenna in Rovaniemi. The money was requested from funding intended for the coastal channel.

The Ministry of Communications has now announced that the money requested will not be granted since the money is reserved for improving the Swedish-language services of the Finnish Broadcasting Corporation in areas along the coast.

In addition, the ministry announces in its letter that the experimental Nordic satellite transmission and the joint experiment with HTV planned by the postal service require more detailed clarification.

The Ministry of Communications also states that legislation regarding cable television is now being prepared and it would not now be appropriate "to initiate new forms of cable television with the consent of the state".

In the letter from the ministry the Postal and Telecommunications Administration is required to discontinue the reception of satellite transmissions begun with Helsinki Television and Nordic experiments should not be initiated and no applications should be made for this purpose for the time being.

"The Postal and Telecommunications Administration must inform the Ministry of Communications about the measures it intends to take as a result of this letter," stipulates the ministry at the end of the letter.

Government advisor Kai Tornblom of the Ministry of Communications states that the letter stipulates that the postal service must take such measures "which will bring an end to the reception of satellite transmissions resulting from an agreement concluded with Helsinki Television". The method in which it is to be accomplished will be determined by the postal service, but "the reception of transmissions must come to stop". according to the stand of the Ministry of Communicatons.

Finnish Broadcasting Corporation Behind Decision

Communications Minister Jarmo Wahlstrom gives one to understand that the initiative for discontinuing satellite transmissions came from the Finnish Broadcasting Corporation. Members of the radio committee involved in the preparation of a cable television law also interfered in this issue.

"Since a cable television law is presently being prepared in the ministry, it seems quite inappropriate to initiate new forms of cable television with the consent of the state," states Wahlstrom.

"No clarification has been made of the role of the Postal and Telecommunications Administration in this kind of activity, which does not entail the actual reception of signals for the Finnish Broadcasting Corporation, but is primarily an activity for commercial television entertainment. For this reason, this kind of operation is not appropriate," states Wahlstrom. He notes that the premise of the radio committee has been to maintain and even protect the level of domestic television programming "from this kind of commercial entertainment".

Wahlstrom states that he has not seen any of the satellite programs transmitted by HTV, but it is a question of principle with respect to the manner in which programming transmitted by satellites will be managed.

According to Wahlstrom the joint operations of the postal service and HTV are "clearly of a nature corresponding to the activities of the Finnish Broadcasting Corporation" and "it does not seem to have been well-considered in light of the fact that new legislation has not yet been adopted".

Postal Service Will Not Yet Take a Stand

Director Keijo E. Toivola of the radio section of the Postal and Telecommunications Administration did not want to take a stand on the ministry's letter on Thursday since it had not yet been officially received. He could not say

whether Helsinki Television's satellite programs will be discontinued. If the agreement is rescinded, there could be a demand for compensation "and who will pay for this compensation", stated Toivola.

Toivola considered it remarkable that the ministry is attempting to limit technical experiments of the postal service. He suspects that the experiment on Nordic satellite transmissions will not come to a halt because of the fact that the ministry did not provide any funds.

"A Surprising Decision"

Managing Director Heikki Saraste of Helsinki Television considered the decision of the Ministry of Communications to be surprising since HTV is experimenting with operations suitable for cable television. The ministry wants to enact a cable television law without knowing the results of the experiment.

Saraste surmises that the Finnish Broadcastng Corporation fears that there will be competition for its programs and, therefore, it wants to prohibit satellite transmissions.

Saraste states that there has been a positive response from viewers to this satellite programming. According to Saraste the postal service has only been involved in the transfer of data in this experiment, which is a legitimate area of its responsibilities.

Saraste could not say what will now happen to the satellite programs. There is a 3-month period for a notice of contract cancellation in the agreement between the postal service and HTV so that nothing will happen immediately.

"If this method of transmitting programs does not suit the Ministry of Communications, then the postal service could just as well deliver the programs in package form directly from England. This would be slightly slower and more troublesome," states Saraste.

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NAMES, USERS, FUNCTIONS OF DATA BANKS SUBJECT OF STUDY

Paris LE NOUVEL ECONOMISTE in French 15 Mar 82 pp 45-47

/Article by Gilles Coville: "Data Banks--Don't Forget the Guide!"/

/Text/ A new profession is being born: that of consultant on--data bank consultation--to find one's way among the 200-odd banks accessible in France.

Information is power--provided one knows where to find it and how to use it. For the past few years the data bank market has been exploding. Buried in computer memories, billions of information bits flow by telephone and terminal through telematic nets. They concern jurisprudence, regulatory matters, chemical compounds, statistical series, market studies, new technologies, etc. There are now at least a thousand data banks throughout the world, generating an estimated turnover of Fr 6 billion as of 1980, which is destined to multiply fivefold by 1985. For the moment, the American clientele accounts for nearly 80 percent of consultation expenditures. But already some 200 banks, of French (25 percent) or foreign (75 percent) origin are accessible in France. One could get lost without the services of a guide.

The proliferation of information sources is giving rise to creation of a new profession of consultant on use of data banks. Some firms even seek the services of fulltime experts.

Job offers to data bank specialists thus appear on classified advertisement pages. Oil companies are pioneers and trend setters in the field. A sign of this is the fact that in meetings of data bank experts the small group of oil company records department heads, generally women, is known as the "Princesses' Club." To its members, adept for 10 years past in the mysteries of the various nets, the major concern is to pay less for the information they buy. For enterprises just starting out, the first task is to reconnoiter the ground.

A teaching team from the Graduate Business School of Lyons has undertaken to break them in. Led by M Christian Rovhet, 33, an MBA from Sherbrooke University and visiting professor at Harvard, it has reviewed all information nets available concerning seven major business functions: general management (strategy and diversification), marketing (competitor, markets, and sectors analysis), finance (accounting standards, financing resources, customer credit), technique

and production (patents, technological security), international development (market evolution, business opportunities, regulation), economics (macro-economic, cyclical, or forecasting data), and legal (legislative texts, jurisprudence, social data). "Eight of us were not too many to identify the real needs of enterprises and at the same time make a critical census of all available information sources," notes M Rochet. That work will result in publication of a voluminous work entitled "Data Banks for Enterprise," of which LE NOUVEL ECONOMISTE has published an exclusive synthesis (see p 46).

The main conclusion of that inquiry is that automated documentation somewhat resembles lotto: it is not expensive and it can pay very well! A diversification consultant for several French firms, M Rochet found that out for himself in 1981: with a Fr 25,000 budget, "without moving from his armchair," he was able to scan a dozen banks specialized in firm strategies. Result: 600 files corresponding to as many "cases" of diversification. A mine, one might say, of experience for French firms. "When a manager is considering a given development or diversification," explains M Rochet, "it is likely that in the United States or elsewhere some firm in a comparable strategic position has undertaken the same strategic movement...a few years earlier. A time lag of 2 to 5 years is needed for the foreign experience to be cogent.

Without undertaking such broad investigations, it is possible through a good understanding of how to make use of specialized data banks to throw light on important decisions. Does a French biscuit manufacturer wish to branch out into canned goods? He can ponder the data on six American competitors who had the same idea before him, and three of whom failed for one reason or another.... Such invaluable data can be obtained within 15 days--a period devoted essentially to programming the interrogation of the banks--and for about Fr 1,200.... Does a cosmetics maker wonder about his development potential in Japan? After an hour given to perfecting a research strategy and a half hour's consultation of the Predicasts bank, Mme Marie-Claude Rondot and M Bruno Hebert, two members of M Rochet's team, came up with a detailed segmentation of the market: complexion makeup, eye shadows, lip rouge, etc., with projections to 1985. Cost of the operation: about Fr 700.

In Lyons M Olivier Froment, president of a small company making highly specialized building materials, found a representative in Canada for Fr 500, the cost of an "ad" run in Technotec, the technology transfer bank created by Control Data. An interested Canadian made the trip to Lyons, signed an agency contract, and now sells Froment materials in Canada.

"Data banks give small and medium size enterprises an even chance with large firms in detecting business opportunities," notes M Rochet. For two field trips per year the manager of a mid size enterprise spends between Fr 50,000 and 100,000 yearly. No more than that is needed to organize an information system aimed at a few key points (technical problems, competitor study, regulations, etc.)--provided one makes a good choice of banks, which means giving the needed time to analyzing what is offered on the information market.

Choice of Banks

M Michel Berthelier, another member of the Lyons Graduate Business School team, is participating in setting up a complete data bank consultation system for a French leader in the agro-food industry, with the aim of providing technological surveillance in the field of food techniques and related sciences such as dietetics and genetics. The operation entails a census of the dozens of banks capable of meeting requirements, and a preliminary selection to which interrogation tests will be applied. In that manner it will be determined that a given bank responds well in microbiology, food sanitation or toxicology, that another provides better coverage of European research projects, or that a third offers information on research by American universities in fields of interest to the questioner, etc. Finally, a list of banks will specify interrogation frequencies for each of them.

"A resolute choice of a worldwide approach to data banks must be made," concludes M Rochet. He agrees on promotion of banks of French origin which are cutting into the American quasi-monopoly and taking their share of an expanding market. But sources of information must remain very open so as to meet the needs of enterprises, which themselves are more and more international. "For a French client seeking new products," he explains, "I found, by consulting a bank in Atlanta, an idea perfected by an Argentine engineer and developed by a small Australian firm!"

Table of Major Data Banks

(1) (2) (3) (4)

FONCTIONS	PRINCIPAUX TYPES D'INFORMATIONS	NOM DES PRINCIPALES BANQUES DE DONNEES		RESEAUX TELEMATIQUES SERVEURS	
		FRANÇAISES	INTERNATIONALES	FRANÇAIS	INTERNATIONAUX
DIRECTION GENERALE	a) Mise au point de la stratégie	GRAPPE (Assemblée permanente des Chambres de commerce)	MANAGEMENT INFOBANK (New York Times)	G. CAM (Caisse des dépôts)	LOCKHEED, SDC DATA STAR, NEW YORK TIMES
	b) Diversification	TRANSINOVE (Bureau national d'informations scientifiques et techniques et ANVAR)	TECHNOTEC (Control Data) DVORKOVITZ TEXTLINE	CISI (filiale du CEA)	CONTROL DATA DVORKOVITZ
MARKETING	a) Concurrence	FITEC	PREDICASTS PTS	SPIDEL	LOCKHEED, DATA STAR
	b) Secteurs industriels	MERLIN "G" (Merlin-Gerin)	ABI/INFORM	SPIDEL	SDC
	c) Marchés de l'entreprise	ISIS (Chambre de commerce et d'industrie de Paris)	NEW YORK TIMES INDEX	G. CAM	CBI
FINANCE COMPTABILITE	a) Analyse de réglementation	ISIS (CCIP)	ACCOUNTANT INDEX	G. CAM	LOCKHEED, SDC, DATA STAR
	b) Marchés financiers	INVES DATA	CONTROL DATA	INVES DATA	CONTROL DATA
	c) Informations crédit-clients	DAFSA/ SNEI (Kompass)	DUN and BRADSTREET	SPIDEL	DUN and BRADSTREET
TECHNIQUE PRODUCTION	a) Brevets	INPI (Institut national de la propriété industrielle)	WPI	TELESYSTEMES PTT	SDC
	b) Surveillance technologique	PASCAL (CNRS)	SSIE	TELESYSTEMES	SDC, LOCKHEED
DEVELOPPEMENT INTERNATIONAL	a) Climat international	ISIS (CCIP)	FINANCIAL TIMES	G. CAM	LOCKHEED, SDC
	b) Opportunités d'affaires	TELEMAQUE	PREDICASTS	G. CAM	DATA STAR
	c) Réglementation	DOC EXPORT (CCIP)		G. CAM	G. CAM
ECONOMIE	a) Suivi de l'activité économique générale	BIPA (Documentation française)	ECONOMIC ABSTRACTS INTERNATIONAL	TELESYSTEMES	LOCKHEED
	b) Conjoncture et prévision	ECOFUTUR (Bureau d'information et de prévision économique-BIPE)	DATA RESOURCES (Filiale de McGraw Hill)	G. CAM	DATA RESOURCES (McGraw Hill)
JURIDIQUE	Environnement juridique de l'entreprise	SYDONI (Conseil du notariat et Dalloz)	CELEX MEAD DATA CONTROL	G. CAM TELECONSULTE (accord avec Mead, Data, Central)	EURIS
	a) Sources françaises	LEXIS			
	b) Sources internationales (textes, jurisprudence, conventions collectives)	CEDIJ (Organismes publics et CNPF)			

/Key on following page/

Table of Major Data Banks: Key

1. Functions

General management
Marketing
Finance/accounting
Technique/production
International development
Economic
Legal

2. Principal types of data

a) Perfecting of strategy
b) Diversification

a) Competition
b) Industrial sectors
c) Markets for firm

a) Analysis of regulations
b) Markets for financing
c) Client credit information

a) Patents
b) Technological surveillance

a) International climate
b) Business opportunities
c) Regulation

a) Monitoring of general economic activity
b) Contingency analysis and forecasting

Legal environment of the enterprise

a) French sources
b) International sources (texts, jurisprudence, collective agreements)

3. Names of major French and International data banks

GRAPPE (Permanent Union of Chambers of Commerce)
TRANSINOVE (National Scientific and Technical Information Bureau and ANVAR /National Agency for Research Valorization/
FITEC /Fiduciary for Accounting Technique and Expertise/
ISIS /International Selected Ideas and Systems/
CCIP /Paris Chamber of Commerce and Industry/
DAFSA /Financial Data and Analysis/
SNEI /National Industrial Expertise Company?/
INPI /National Industrial Property Institute/
CNRS /National Scientific Research Center/
BIPE /Economic Information and Forecasting Bureau/
SYDONI (Notaries' Council and Dalloz)
CEDIJ (Public Agencies and National Council of French Employers)

4. Telematic Service Nets, French and International

G. CAM (Deposit Account)
CISI (Atomic Energy Commission affiliate)
PTT /Posts, Telegraphs, and Telephones/
G. CAM TELECONSULTE (agreement with Mead, Data Central)

Remarks

a) Utilisable pour une stratégie de diversification internationale ou de redéploiement aux Etats-Unis. Difficile à utiliser pour une stratégie purement française. b) Permet, pour un coût très modeste, de faire le tour des technologies cessibles dans un domaine donné.	a) Usable for a strategy of international diversification, or for redeployment to the United States. Difficult to use in a purely French strategy. b) At very modest cost, permits a survey of transferrable technologies in a given field.
a) Facilite la mise en place et la gestion de dossiers sur les concurrents au plan mondial. b) Suivi de l'évolution économique et technologique de son propre secteur et de secteurs voisins. c) Constitue un système permanent d'informations qui permet à l'entreprise de saisir rapidement toute opportunité.	a) Facilitates setting up and control of worldwide competitor files. b) Monitoring of economic and technological evolution of own and adjoining sectors. c) Constitutes a permanent information system permitting an enterprise rapidly to grasp any opportunity.
a) Réalisation d'études théoriques et documentaires. b) Chaque banque très spécialisée répond aux préoccupations d'un public bien précis : établissements bancaires, investisseurs institutionnels, analystes financiers des grandes entreprises. c) Domaine promis à un bel avenir, mais l'accès direct aux informations par terminal est encore embryonnaire.	a) Completion of theoretical and documentary studies. b) Each highly specialized bank responds to the concerns of a sharply defined public: banking establishments, institutional investors, and financial analysts for large firms. c) A field with a promising future, but direct access to information by terminal still in its infancy.
a) Procéder à un vaste tour d'horizon géographique et sectoriel pour accéder aux listes de brevets déposés. b) Dresser l'état de l'art sur un problème scientifique ou technique. Détecter les filières technologiques par lesquelles cheminent les innovations majeures.	a) Offers quick geographical and sectorial survey to obtain list of patents filed. b) To ascertain state of the art on a scientific or technical problem, or detect technological channels through which move major innovations.
Analyse de l'ensemble de la presse, des études de marché et de la réglementation internationales pour la détection, la surveillance et l'accès aux marchés extérieurs.	For comprehensive analysis of press reports, market studies, and international regulations, to determine, monitor, and enter foreign markets.
Les banques d'informations conjoncturelles ou macro-économiques fournissent à la fois les données brutes et les modèles économétriques qui permettent d'en tirer des prévisions.	Banks for contingent or macro-economic data provide both raw data and econometric models for forecasting.
La prolifération des textes législatifs et des décisions jurisprudentielles oblige à recourir aux banques de données si l'on veut avoir une approche éclairée sur un point de droit donné.	Proliferation of legislation and legal decisions compels recourse to data banks for clear grasp of particular points of law.

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