APPENDIX A

SITE: WHAT WAS IT?

The Indian Satellite Instructional Television Experiment (SITE) was undertaken as a one-year learning experience, a trial-run to provide insights on how to harness the potentially useful TV medium for education and development in Indian conditions.

Pilot Project for INSAT

A joint Indian Space Research Organisation (ISRO)-National Aeronautics and Space Administration (NASA) study conducted in June 1967* found that a purely terrestrial TV system with unreliable microwave connections between city transmitters as was then planned would cost India three times more than a terrestrial-cum-satellite system. This hybrid would involve conventional VHF stations for urban and other high-population areas, a satellite for interconnection between them, and direct broadcasts from this satellite to dispersed low-population density areas. Rather than go into such a system immediately on a national scale, it was felt that a short pilot project would help identify problems, develop insights on design and functioning of all sub-systems, and create indigenous expertise in handling a national development-TV system. This project was called SITE, and was preparatory to launching on an Indian National Satellite which would be used for Telecommunications, Meteorology and Television.

The Spirit of SITE

The SITE project was to provide general guidelines on programming content, TV forms and organisational structures, on hardware, on costs, and on management systems for Indian conditions. The objective was not to achieve some hypothetical state of "rural development" after villager exposure to between 50-90 minutes of TV programming per linguistic group per evening for only one year.

Division of Responsibilities

The SITE project was executed through a collaboration between the specially created Satellite-Television wing of All India Radio (AIR) that then ran television, too, in the Ministry of Information and Broadcasting, and the Indian Space Research Organisation (ISRO). While the satellite system was NASA responsibility, ISRO handled all hardware ground systems for transmission and reception from the satellite. ISRO was the coordinating agency on the Indian site that interfaced with the U.S. space agency.

Primary responsibility for production of TV programmes was with All India Radio. AIR had regional TV production units at Delhi, Cuttack and Hyderabad. A group of R & D TV producers in ISRO contributed an in-school science education series for children for direct-reception two mornings a week, and, a daily evening transmission from a conventional VHF transmitter, to Gujarati-speaking Kheda district near Ahmedabad.

Programmes were video-taped for six SITE states in four languages and flown to the Ahmedabad earth station for transmission to ATS-6. The national programme of Hindi news and cultural affairs was made for "common" transmission to all language areas by Delhi city’s TV station. The Satellite-TV
SITE PROGRAMME PRODUCTION CENTRES AND THEIR WORK-LOADS

ALL INDIA RADIO

DELHI CITY TV
* ½ HOUR DAILY NEWS & CULTURAL PROGRAMMES IN HINDI FOR ALL SITE VILLAGES

BASE PRODUCTION CENTRE CUTTACK SITE
* 20 MINUTES EVERY EVENING IN ORIYA ONLY
* 22½ MINUTES FOR PRIMARY SCHOOLS FOR FOUR MORNINGS A WEEK IN ORIYA ONLY

BPC HYDERABAD SITE
* 40 MINUTES EVERY EVENING IN KANNADA & TELUGU

BPC DELHI SITE
* 60 MNS. IN HINDI EVERY EVENING FOR BIHAR, MADHYA
* 22½ MNS. FOR FOUR PRIMARY SCHOOL MORNING IN KANNADA & TELUGU

INDIAN SPACE RESEARCH ORGANISATION

BOMBAY SITE STUDIO
* 30 MNS. GUJARATI TRANSMISSION FOR TWO SCHOOL DAYS A WEEK IN HINDI & ORIYA

AHMEDABAD SITE STUDIO
* 22½ MNS. TRANSMISSION EVERY KANNADA SCHOOL DAYS A WEEK IN KANNADA & TELUGU

* 20 MINUTES EVERY EVENING IN ORIYA ONLY

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Delhi production unit made regional programmes in Hindi for Rajasthan, Bihar and Madhya Pradesh. Cuttack ended up making programmes in Oriya for Orissa alone, three months after SITE began, and Hyderabad made programmes in Telugu for Andhra Pradesh and in Kannada for Karnataka. The satellite amplified the programmes received from the Ahmedabad Earth Station and beamed the signal back to special community sets, designed and installed by the Indian space agency (ISRO) in 2,338 villages.

ISRO was also responsible for village receiver maintenance. Each state government appointed a custodian, usually a school teacher, to switch the village TV set on and off and be responsible for its security.

A Typical Week in SITE

The 22½ minutes transmission in the morning in each of SITE's four languages was divided into three parts. One part dealt with what its producers called "a utility item," the second was "pure entertainment," and the third was "informative." The AIR morning capsule on most days tried to include one of each kind.

ISRO made science-education programmes on two of the six SITE school days a week for 9 to 12 year-olds.

The evening transmission in SITE planned to maintain the cluster-wise pairing, so the two-audio channels could be experimented with. The SITE evening 150 minute time-slot was divided as follows:

1. Rajasthan/Bihar 40 mns: single audio
2. Orissa/Madhya Pradesh 40 mns: double audio
3. Karnataka/Andhra 40 mns: double audio
4. Common National Programme in Hindi 30 mns: single audio
After the first quarter, the Madhya Pradesh half of transmission 2 was added to the Hindi transmission 1 so transmission 2 became a single-audio transmission.

The daily evening transmission consisted of a hard-core instructional programme on agriculture on health, nutrition, and family planning followed by "cultural" entertainment (folk songs and dances), followed by "general education/community matters" programming.

A 30-minute terrestrial evening transmission in Gujarati was programmed by ISRO for rural Kheda district in Gujarat.

Selection of SITE Villages

The satellite put remote villages and cities on par by reaching them all equally well. Six backward states in the country were selected for the satellite experiment. Within these states, those districts were selected that had good chances of continuity of TV service after the satellite left, so the villagers and the TV sets would not be abandoned after the experiment was over.

Given the myriad languages spoken in India, an attempt was also made to pair selected neighbouring districts with two different languages, as in the South, so an experiment in producing and transmitting programmes with one video channel and two audio-tracks could also be made.

Then, small towns with electricity, petrol pumps and the largest number of electrified villages around them were selected as maintenance centres per state, each one looking after 100 sets distributed 40 kilometres around it. Electrified villages, generally not larger than 3,000 population, with a safe public building for the TV set, more or less "jeepable" throughout the year, and within approximately 40 kilometres of the maintenance centre.
got the special satellite receivers. A few battery-operated sets were installed in one state to further experiment, within the Experiment, on getting TV to the more backward unelectrified villages. Conventional terrestrial TV transmitters for densely-people rural Kheda district, urban and rural Delhi, and urban and rural Amritsar, were hooked up by the satellite so redistribution of programmes of national relevance could also be experimented with. Thus ATS-6 was being used to directly broadcast to low density remote villages, and to hook up conventional VHF stations for a "common" national programme was proposed in the hybrid INSAT.