

Dr. A. Bhaskaranarayana

The intelligence behind India's Satellite Communication System and an integral constituent of the Indian Space Research Organization, Dr. A. Bhaskaranarayana is a name to reckon with in the international space arena. His 40-plus-year career is brightly lit with scientific innovations and successful research programs, which has changed the way India communicates with herself and the world.

Most notable is the period between 1972 and 2010. During this time, Dr. Bhaskaranarayana was extensively involved in various satellite Research and Development Programs for ISRO, with "Aryabhata" leading the list. Subsequent projects include design and implementation of:

1. Satellite Control Stations in Moscow and multiple Indian cities
2. India's first Remote Sensing Satellite – IRS-1A
3. RF Systems for all ISRO's missions
4. India's first Operational Communication Satellite – INSAT 2A, 2B, 2C, 2D, and 2E
5. Orbital slots and frequency-bands of ISRO satellites
6. 20 MHz frequency spectrum for Mission Chandrayaan against the default 10 MHz, which resulted in the simplification of Chandrayaan's Data Transmission System.

Dr. Bhaskaranarayana's expanding involvement in ISRO's satellite communication initiatives runs parallel to his own career growth where he relentlessly climbed the ranks of success from Principal Designer (1972) to the most elevated position of Distinguished Vikram Sarabhai Chair Professor at ISRO Headquarters, Bangalore (2008 to 2010). As Chair Professor, Dr. Bhaskaranarayana shouldered joint responsibilities as Scientific Secretary; Director – Satellite Communication Programs; Director – Frequency Management; Program Director – INSAT; and Program Director – EDUSAT & Telemedicine.

The fruit of Dr. Bhaskaranarayana's R&D breakthroughs is evident in the quality-of-life changes that the Indian populace has experienced since before the turn of the millennium. These include:

1. Establishment of tele-education, tele-medicine, and Village Resource Centers (VRCs), by significantly reducing the cost of ground equipment of satellite-based VSAT Networks.
2. Setting up of 61 tele-education networks connecting 34,000 classrooms across 22 Indian States to provide curriculum-based education to students of schools, colleges, polytechnics, and independent institutes.
3. Networking of 280+ hospitals in remote and rural areas, 45 specialty hospitals and 12 mobile tele-medicine vans across the country, facilitating healthcare support to over 300,000 patients nationwide.
4. Development of low-cost DTH-based Disaster Warnings Dissemination System (DWDS) utilizing commercially available set top boxes and Doordarshan's centralized Warning Dissemination Centre.

Dr. Bhaskaranarayana's exemplary plethora of scientific discoveries, innovations, and inventions has bestowed upon him several globally acclaimed awards for "Distinguished Achievement" by ISRO; "Meritorious Inventions" by the National Research and Development Council, Govt. of India; "Outstanding Achievement" by Astronomical Society of India; and "Distinguished Alumni" by the Alumni Association IIT-Madras. He also received the "Honorary Doctorate" for the year 2009 from Sathyabama University, Chennai.
