

Government of India  
Department of Space  
Indian Space Research Organisation

Headquarters  
Bangalore 560 009

No. SC/CH/A.22/92

15 April 1985

OFFICE ORDER

Subject: Reorganisation of the Space Applications Centre (SAC)

In order to gear up for the tasks ahead when the ISRO programmes will have to support two major nation-wide Space Services namely communications and earth observation, and also to explore and develop new vistas in space applications relevant to the national needs such as microwave remote sensing, satellite geodesy, satellite navigation, search and rescue, mobile satcom services, etc., the Space Applications Centre (SAC), Ahmedabad, requires a degree of reorganisation, regrouping of existing Area/Divisional activities, and strengthening of middle and senior management. In view of the above, with immediate effect and until further orders, the key functional activities at SAC, with the exception of IRS, INSAT-II TS and IRS-UP projects related activities and structures which are part of larger and inter-Centre/Unit projects, are regrouped as follows:

1. Satellite Communications Area
2. Remote Sensing Area
3. Microwave Remote Sensing Programme
4. Technical Support Services

2. The Satellite Communications Area will be managed by a Deputy Director (Communications), SAC, who will report to Director, SAC. This area will consist of four distinct Groups, named below, which will be headed by Group Directors. The inter-Group coordination will be overseen by Deputy Director (Communications). For conduct of all intra-Group activities and efficient discharge of activities assigned to the respective Groups, the Group Director shall be delegated with appropriate administrative and financial powers by Director, SAC.

(a) Systems and Applications Engineering Group

This Group will deal with advanced applications concepts and advanced system studies, INSAT system and applications development support, non-INSAT satcom applications development support including matters concerning TV/sound direct broadcasting, navigation, search and rescue, mobile satcom, etc., system engineering support in definition of and functional specifications for new R&D initiatives in satcom area, and support to DOS/ISRO work in CCIR Study Groups.

(b) Communication Techniques Group

This Group will deal with R&D and D&D in signal transmission, processing and handling techniques, including modulation and multiple access techniques, for satcom applications covering fixed and broadcasting satellite systems, satellite navigation, search and rescue, mobile satcom, etc. The activities of this Group will include R&D/D&D in ISDN as relating to satcom, propagation modelling and engineering, and support to DOS/ISRO work relating to CCITT. The experimental earth stations, such as AES, DES, TRACT, ECT, SCOT, LCT, Experimental Satellite Data Reception (NOAA type activities for Met. etc.), etc. will also be managed under this Group.

(c) Spacecraft Payload Group

This Group will be concerned with R&D and D&D for all satcom payloads, including that for prospective future missions. This Group will also include R&D/D&D related to satcom payload antennae.

(d) Earth Station R&D and Ground Hardware Group

This Group will be responsible for satcom earth stations R&D/D&D and new earth station developments, e.g. terminals in extended C-band, improved S-band DRSS/TVROs, micro-terminals, future L-band and UHF mobile terminals, etc. In particular, in terms of hardware this Group will deal with R&D/D&D on Ground Communication Equipment (GCE), LNAs, HPAs and antennae. On signal handling/processing hardware to be interfaced at the IF level, this Group will assign R&D/D&D to Signal Processing and Transmission R&D Group.

3. The Remote Sensing Area will be managed by a Deputy Director (Remote Sensing), who will report to Associate Director, SAC. This Area will consist of three distinct Groups, named below, which will be headed by Group Directors. For conduct of intra-Group activities and for efficient discharge of responsibilities assigned to their respective Groups, appropriate administrative and financial powers will be delegated to the Group Directors by Director, SAC. The inter-Group coordination and direction will rest with Deputy Director (Remote Sensing), SAC.

(a) Remote Sensing Applications Group

The activities of this Group will include system definition for specific earth observation applications and experiments, space-based earth observation systems utilisation, satellite meteorology and atmospheric remote sensing, geodesy, microwave remote sensing applications and support to NNRMS.

(b) Electro-Optical Sensors Development Group

This Group will be responsible for R&D in and D&D of optical and electro-optical sensors for ISRO/DOS earth observation missions, including meteorological component of the indigenous INSAT Space-Segment.

(c) Image Processing and Data Products Group

The activities of this Group will cover R&D in remote sensing data processing and products, product-generation, and computer-based interpretation support for experimental projects. The activities of this Group will also include R&D/D&D in microwave remote sensing data processing and data products.

3.1 In addition to the Groups and associated activities under the Remote Sensing headed by a Deputy Director (Remote Sensing), SAC, there will be a Chief Scientist, SAC (Remote Sensing) who will report to Associate Director, SAC and he will have the same powers as Deputy Directors. Chief Scientist, SAC (Remote Sensing) shall be an adviser to Director/Associate Director, SAC and ISRO management on ISRO/DOS earth observation programmes, particularly on advanced systems, applications and research and on generation of new programmes. In particular, he will play a special guiding role for Microwave Remote Sensing, Meteorology, Oceanography, Geodesy and Cartography applications. He will also perform such additional functions as may be assigned to him from time to time by Director, SAC.

4. Microwave Remote Sensing Programme

The Microwave Remote Sensing Programme will be headed by a Programme Director (MRSP). SAC is the lead Centre for the ISRO/DOS Microwave Remote Sensing Programme (MRSP) will have the responsibility for execution of the approved DOS/ISRO R&D and D&D for microwave remote sensing development leading to active/passive microwave remote sensing satellite payloads and adequate user preparation.

4.1 MRSP will have small Core Teams on Microwave remote sensing data products and utilisation while the expertise and support in Microwave remote sensing utilisation, data products and data interpretation will be drawn by the Project from the concerned functional Groups in the Remote Sensing Area. Since this is ISRO/DOS Programme, it will draw upon maximally from NRSA, ISAC, and other Centres/Units of ISRO/DOS.

4.2 Under this programme, there will be a team of personnel dedicated to the development of passive and active sensors for earth observations including land, ocean and atmospheric observations.

4.3 Programme Director, MRSP shall be in close consultation with the Chief Scientist, SAC (Remote Sensing) especially on the scientific and utilisation aspects.

4.4 A detailed order on management will issue separately.

5. Technical Support Services Group

Test and Fabrication Facilities at SAC will be brought under Technical Support Services Group (TSSG) and will be managed by a Group Director who will report to Director, SAC. The TSSG will consist of Environmental Test Facilities, Electronic Fabrication and Test Facilities and Mechanical Fabrication Facilities, each of these

three central facilities will be managed by a General Manager each. Electronics Fabrication and Test Facilities will include MIC Facility, Payload Fabrication Facility and ground-systems electronics fabrication. The Mechanical Fabrication Facility will include the mechanical workshop.

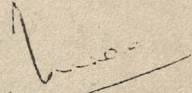
6. The management structure for IRS-UP will continue to be as at present.

7. Head, Reliability and Quality Assurance will directly report to Director, SAC.

8. Until further orders, the following are designated at the senior technical management level for the tasks indicated against their name. The orders at Sub-Group level and below i.e., on Division/Section Heads and Divisional/Sectional structures within each Group will be issued separately by Director, SAC.

1. Shri O.P.N. Calla, Scientist/Engineer 'G' - Deputy Director (Satcom), SAC.
2. Dr. George Joseph, Scientist/Engineer 'G' - Deputy Director (Remote Sensing), SAC
3. Dr T.A. Hariharan, Scientist/Engineer 'G' - Chief Scientist, SAC (Remote Sensing)
4. Shri OPN Calla, Scientist/Engineer 'G' - Programme Director (MRSP)
5. Shri Pramod Kumar, Scientist/Engineer 'SG' - Group Director Communication Techniques Group in Satcom Area
6. Shri N. Mohanty, Scientist/Engineer 'SG' - Group Director, Earth Stations R&D Group in Satcom Area
7. Dr. K.N. Shankara, Scientist/Engineer 'SG' - Group Director, Spacecraft Payload Group in Satcom Area
8. Shri K. Narayanan, Scientist/Engineer 'SG' - Group Director, Systems and Applications Engineering Group in Satcom Area. He will also continue as Associate Director (S&AE) in Satcom Programmes Office in DOS/ISRO HQ.
9. Dr. Baldev Sahai, Scientist/Engineer 'SG' - Group Director, Remote Sensing Applications Group in RSA. He will continue to be Associate Director, IRS-UP, SAC & Associate Director, (NNRMS-SSS)
10. Dr. V.S. Iyengar, Scientist/Engineer 'SF' - Deputy Group Director, Electro-Optical Sensors Development Group in RSA
11. Shri A.K.S. Gopalan, Scientist/Engineer 'SG' - Group Director, Image Processing and Data Products Group in RSA
12. Shri Leo Lasrado, Scientist/Engineer 'SG' - Group Director, TSSG
13. Shri M.M. Shah, Scientist/Engineer 'SG' - Deputy Group Director, TSSG, and General Manager, Mechanical Fabrication Facilities, SAC

14. Shri S.R. Naik, Scientist/Engineer 'SG' - Head, Reliability and Quality Assurance will hold additional charge as General Manager, Environmental Test Facilities in TSSG
  15. Shri R.C. Garg, Scientist/Engineer 'SF' - General Manager, Electronics Fabrication and Test Facilities in TSSG.
9. Orders delegating the administrative and financial powers to Deputy Directors/Chief Scientist, Group Directors and other officers identified above will be issued by Director, SAC.



(U.R. Rao)

Chairman, ISRO/Secretary, DOS

Distribution

As per General ISRO/DOS Distribution List.