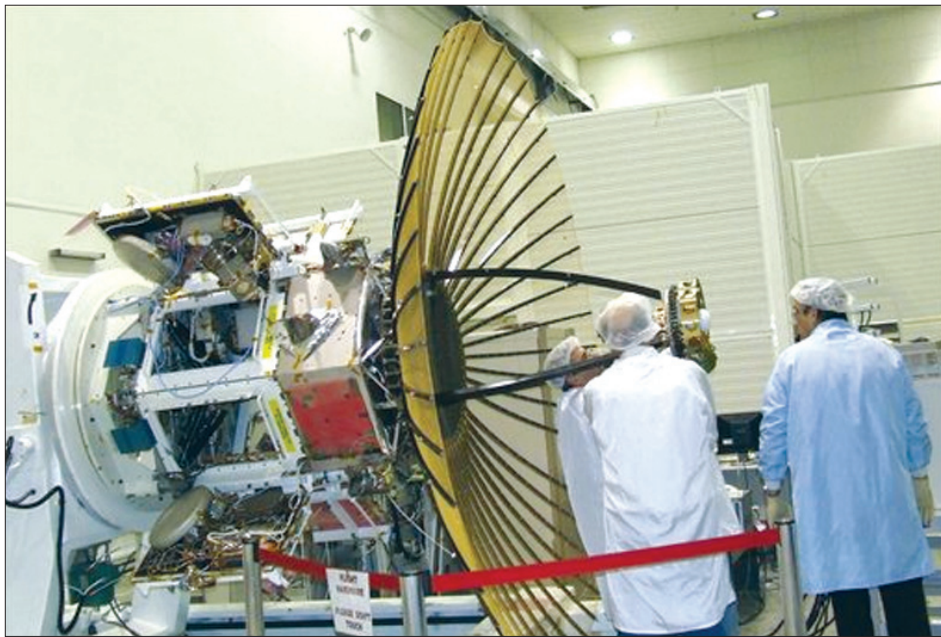


India set to be major player in satellite manufacturing



India can become a major player in the emerging small satellite manufacturing industry. The country's space agency has estimated a market potential of 50 satellites over the next decade, worth around \$1.5 billion, says a space official. Keeping this in mind, the Indian Space Research Organisation (ISRO) has already formed a special team to manufacture small satellites.

ISRO will launch two such satellites in 2009 and 2010, both having overseas payloads. The small satellites are now in demand because its "mass and volume are low, thereby reducing the cost of carriage by rocket. Further, the cost of

building the satellite as well as the time required to build it are less," D.V. Raghava Murthy, ISRO's Small Satellite Projects director, said. "The satellites perform well owing to miniaturisation, and simultaneous launch of several satellites is possible if the orbit is the same."

ISRO has two small satellite variants - micro and mini. The micro satellites weigh 100 kg with a payload capacity of 30-40 kg while the minis weigh 400 kg with a payload capacity of 200 kg.

ISRO is also making communication satellites — INSAT series. Its INSAT-4 series satellites weigh around four tonnes and cost about Rs. 3 billion. In April this

year, ISRO shot its first mini satellite — Indian Mini Satellite (IMS-1) — weighing 85 kg on board the Polar Satellite Launch Vehicle (PSLV-C9).

ISRO will launch its second micro satellite YOUTHSAT next year, carrying two Indian payloads and one from Moscow University. "We will also launch SARAL, a mini satellite with French payload some time in 2010," Murthy said.

Speaking of the application potential of small satellites, he added: "It is mind-boggling. They can be used in remote sensing, atmospheric monitoring, gas detection, pollution monitoring, ionospheric tomography, ocean monitoring, low earth orbit communications, stellar monitoring, space physics experimentation, data collection and others."

ISRO will be crossing swords with the Britain-based Surrey Satellite Technology Ltd., OHB Germany, Canada's MDA and Comdev, Israel Aerospace Industries, Orbital Sciences in the United States, and Thales Alenia in Europe among others.

"We are targeting a revenue of \$60 million from manufacturing satellites," K.R. Sridhara Murthi, executive director of Antrix Corp Ltd., the commercial arm of the Indian space agency, said.

ISRO has built and delivered a 32 transponder satellite, W2M, weighing 3,200 kg for the Paris-based Eutelsat Communications.

ISRO plans manned mission to moon in 2014



Indian Space Research Organisation (ISRO) is planning a manned mission to the moon in 2014. The proposed budget for the manned mission is around \$203 million.

ISRO plans to use a Geo-Synchronous Satellite Launch Vehicle (GSLV) for the manned mission, as a Polar Satellite Launch Vehicle (PSLV) is not capable of launching a load of over 1,500 kg. ISRO is in the process of identifying the team for the mission. "Our chairman is very keen on the project getting approval. He has asked us to come out with complete proposals internally," said M.C. Dathan, Director, Satish Dhawan Space Centre (SDSC), Sriharikota Range.

On the proposal, he said a commission had done a preliminary study and the report submitted for approval of the Space Commission. "The Commission has cleared the proposal and it has been submitted to the Government. A high-powered committee is studying the report. It is expected to be cleared in about two months," he added. On training the crew, Dathan said, "The Indian Air Force has the capability. But we plan to develop a full-fledged training facility in Bangalore."

ISRO, which has two launch pads, plans to build another for the manned mission. It will have facilities for entry into the human lunar space capsule and an escape chute for the crew if anything goes wrong.

Dathan said ISRO had the technical knowhow for the launch pad.

News from Edinburgh

An Indian Evening

A leading Scottish law firm, Anderson Strathern, organised an 'Indian Evening' on September 16 for strengthening interaction with India and generating further awareness about opportunities in the country. Karyn Watt, a partner in Anderson Strathern, along with a couple of other Scottish business services exhibited their collection of Indian jewellery and handicrafts on the occasion. Consul-General Ramesh Chander was the chief guest at the function, which was also attended by the chairman of Anderson Strathern, Robert Carr. A raffle was held to raise



Consul-General Ramesh Chander with chairman Robert Carr of Anderson Strathern at Indian Evening, in Edinburgh on September 16.

funds for charities in India, the proceeds of which would be donated to the Indian Prime Minister's Relief Fund.

Onam celebrations

The Edinburgh Malayalee Cultural Association celebrated Onam with gaiety and fervour on September 13. The Malayalee community in and around Edinburgh participated in the daylong festivities.

Consul-General Ramesh Chander, who was the chief guest at the function congratulated the community and greeted them on the festive occasion. The local talent provided the entertainment inputs with traditional song and dance sequences.



An artistic presentation of King Mahabali with children at the Onam celebrations in Edinburgh on September 13.

Sikhs in Scotland Achievement Awards



Awardees of Sikhs in Scotland Achievement Awards 2008 with MSP Bashir Ahmed and Lord Iqbal Singh on September 18, 2008 at the Scottish Parliament.

Anderston Mel-Milaap Centre, Glasgow, honoured seven prominent Sikhs in Scotland with Sikhs in Scotland Achievement Awards 2008 on September 18.

The awardees were honoured at the Scottish Parliament in Edinburgh. Consul-General Ramesh Chander, and Rt. Hon'ble Minister for Communities and Sports, Stewart Maxwell, the chief guest on the occasion, presented the Awards to D.L.

Bhatti (Noor Bharti) in community service, Hardeep Singh Kohli in media, Sanjay Majhu in entrepreneurship, Prabhjot Kaur Purba in sports, Gurmail Singh and Ranvir Singh in charity and Serjinder Singh in Sikh religion.

The cultural interlude at the function was provided by Panchali Bari with the singing of 'For A That' and Pavitar Manjhu with 'Aye mere pyare watan'.