Satellite debacle hits India's DTH plans

July 11 2006

The failure of the launch of the Indian Space Research Organization's communications satellite INSAT-4C that was made to explode since it veered off course soon after launch Monday has come as a major setback for the country's most ambitious direct-to-home (DTH) initiatives. And with it, the launch failure has also pushed back India's entry into the field of commercial satellite launching.

The satellite, the latest in India's "4 series" of communication satellites, was carrying 12 high power Ku-band transponders designed to provide DTH television services, facilitate video picture transmission and digital satellite news gathering as well as to serve the National Informatics Centre for its VSAT connectivity.

Seven of these transponders had been booked by Sun TV, a South Indian media group for its DTH foray, while Sri Lanka's government-owned broadcaster Rupavahini had also booked a small slot on the Insat 4C. Besides a local telecom company VSNL Ltd. and the country's Web services backbone National Informatics Centre had booked a transponder each. The other two transponders were supposed to be allocated to other Indian media houses after the launch.

The failure is also likely to delay the launch of a few other satellites originally planned by the ISRO.

However, this debacle has also shattered the country's dreams of sending its heaviest satellite to date -- the 2168 kg Insat-4C -- aboard a Geosynchronous Satellite Launch Vehicle (GSLV) and thus becoming

one of the few countries in the world to possess the capability of commercial satellite launching.

Although India had achieved the milestone of building its own satellites several years back, the country still depends mainly on Europe and Russia to launch its satellites, which cost almost as much as the satellite.

The commercial satellite launch market is currently dominated by Europe's Arianespace, Russia -- which incidentally has the capability of launching the heaviest satellites -- and by Boeing and Lockheed Martin of the United States and, to a lesser extent by China and Japan.

For the past few years, India, through ISRO, had been working hard on the mission of building and launching its own GSLV and thus grabbing a share of the $2 billion space-transportation market. According to ISRO, if India succeeds in commercial GSLV, it would be able to offer satellite launches 30 percent cheaper.

Notably, the GSLV failure was preceded by yet another failure of the country's space program. On Sunday the country's secretive Defense Research Development Organization tried to launch a new intermediate-range ballistic missile called "Agni III" that also disintegrated soon after liftoff.

This surface-to-surface ballistic missile with a range of 3,500 km was also an indigenously developed launch vehicle that was designed to carry a payload weighing up to 1.5 tons for delivery to targets as far as Beijing and Shanghai. According to rumors, this missile was designed to act as an effective nuclear deterrent for China, which too has developed similar capabilities.

According to critics, the Agni III failure was more serious in the sense that it revealed the country's limitations of pursuing independent military

capabilities. They also argue that, in its zeal to demonstrate success quickly, India often takes hasty decisions. For instance globally, similar missile programs are not announced as fully developed unless they undergo at least 10 test launches, whereas India considers about four test flights enough for producing and inducting new missiles.

Nevertheless, even as India's space scientists gather to ascertain the exact reasons of these failures, according to communications experts Dinyar Contractor, India may stand to gain more from these failures than the losses.

"I do not see this as an embarrassment," says Contractor, "but just a stepping stone towards India's future space plans. After all India is on the threshold of joining a handful of countries that can not only build satellites but can also launch them on its own."

ISRO Chairman G. Madhavan Nair too said that considering the complexities and challenges that come with space missions, the GSLV failure was a minor setback that does not impact the country's space programs significantly.

"We are trying to gather details and will analyze them," he said "I am sure we will learn from the GSLV debacle and come out stronger."

According to Madhavan, ISRO could undertake its next GSLV launch as soon as early 2007. Reports also suggest that ISRO is also developing a new launch vehicle, GSLV -Mk III, capable of launching up to 4 tons of payload into geosynchronous transfer orbit. The first prototype is expected to be ready in about three years.