

'SatCom Emerging trends: Post reform era'
A brief summary of the 2 Day conference

The Satcom Industry Association of India (SIA-India) organised a 2 day virtual conference on the emerging Satellite business in India on August 4th & 5th, 2021. This conference was aptly titled as ***'SatCom Emerging trends: Post reform era'***.

This conference was attended by 48 Speakers from 20 Countries with active participation of 400 + participants over 2 days.

The virtual event saw the leading luminaries and eminent speakers discussing the future role of Satellite industry especially in the context of India. Supported by ISRO the objective of this conference was to provide a platform to various stakeholders to come together and address the critical issues and challenges faced by the Satellite industry.

The Day One of the Conference witnessed a grand inaugural session and had two illuminating panel discussions on the topics of ***'Emerging Trends in Satellite Communication's Landscape'*** and ***'Capacity building and industrial collaborations within the country'***.

The Day Two of the Conference was packed with 4 critical panel discussions on some very interesting and relevant topics of ***'Space Startups connecting to International markets with emerging Business Models'***, ***'Satellite Design and Development and Ground infrastructural requirements within the country'***, ***'Monetizing Satellite Applications; New business model with innovative use cases in connectivity'*** and ***'Regulatory Framework for private participation in Space Economy'***.

This well-timed conference is expected to help create a bridge between the government and the industry bodies to understand the importance of the space economy as the next big leap towards making India a global superpower.

The Indian space economy is valued at USD 7 billion, which is around 2% of the global space economy. Of this, upstream activities contribute USD 2.3 billion and downstream activities contribute USD 4.7 billion. India has a notable contribution in the DS sector, around 92% business come from applications, where as the upstream activities have not been evolved as much.

There is a large-scale market opportunity for private players in both the upstream and downstream sectors to engage in the manufacturing design and development of high tech spacecrafts which would inadvertently help in proliferation of the downstream applications. Another trend to look for is low

cost small satellites that are transforming the dynamics and economics of the space industry and this sector too has immense scope.

Investors are now looking at space sector as a viable investment opportunity— thanks to a number of factors, including the Indian government’s move to open up the spacetechnology sector to include private players, as many as 7 policy documents have come up in last one year, low cost satellites, quantum tech, market demand for geospatial data, and many technological advancements in the space sector.

Although, the recent hyper-drive of Space Sector reforms and some in the pipeline point towards India’s indispensable Space strategy but without a clear defined roadmap and deregulation of Power, space activities would lag in harnessing the power of private innovation and remain challenged at the overall Global strategic picture.

The exploitation of space is not just for economic development, but also to strategically strengthen India’s position as a critical stakeholder in the international arena. India needs a Commercial Space Law that is bold and facilitating.

Some key highlights of this two-day conference is summarised below:

- In a country with 57% rural India still being unconnected, Satellites will play a pivotal role in bridging the digital divide.
- India’s satellite industry, which currently has a less than 5 per cent share of global space economy, can be a new frontier for national growth with the potential of cornering about 10 percent of the pie worth approximately \$ 50 billion in 10 years’ time. This goal could also hugely benefit Indian PM Narendra Modi’s dream of a true ‘Digital India’.
- Around 500 firms which are engaged in directly or indirectly with space technologies will be benefited with these reforms.
- But, for this to happen, several regulatory challenges need to be removed with policy tweaks done that would make the regulatory regime industry and investor friendly, including foreign investment.
- Indian government needs to work with the industry very closely in making this goal a reality. This would need a direct engagement, open market access, allowing competition to drive down prices of satellite bandwidth and subsequent services offered, easing of time consuming licensing regime and rationalization of tax layers. There were some of the changes that the satellite and spacecom industry would highly appreciate, if the Government of India works on these critical issues.
- The new wave of reforms is expected to unleash further opportunities. Some of the key areas to focus include allowing Ka band, NGSO access, opening of BSS spectrum and liberalizing Indian satellite systems. Newer software-based payloads and technologies expected in geostationary orbit satellites in the near future, resulting in more flexibility of the satellites

- Satcom expected to be the most viable solution technically and financially in the development of 5G network in India. Spectrum allocation is expected to play a major role in India's road to being a digital giant globally. However, spectrum sharing is strongly recommended - 5G should be allocated the 26GHz spectrum and 28GHz should be provided for satellite communication to keep the best of both worlds
- There is need to enable the right technology (GEO/NGSO/Terrestrial) for the right applications without creating artificial regulatory barriers
- Making a case for use of satellite to also provide broadband to augment the underserved Indian rural market specifically, cellular, Wi-Fi and satellite were all complementary services — all of them had the same goal of reaching broadband to the Indian masses.
- All access technologies, including satellite, mobile, wi-fi and fibre, come with their unique advantages to fulfil national connectivity requirements
- Satellites also bring cheaper access to rural and remote areas for projects like BharatNet against alternate technologies like IMT and fibre.
- TV penetration in India is about 70 percent and the consumers are empowered with this. DTH is certainly growing and giving more power to the users. Cable TV, supported by linear TV, is also there and Satellite has played an integral role in this as well. Sports and weather reports are contributed via satellites. While, Linear TV is here to stay, OTT brings the anywhere TV concept. Both will co-exist in the future. The need will be served by Satellites in the future.
- India should follow the FCC example, avoid the ITU rule and it should encourage the Make in India approach for satellites, launch vehicles and ground terminals. India should focus more on developing systems which are not expensive.
- The key lessons for India from Global case studies are:
 - Satellite can provide great connectivity to economically disadvantaged communities and India needs to use Satellites to achieve mass rural penetration. Satellite operators also need to be able to access universal service funds.
 - Need to involve Private Sector to participate in this Industry for this to grow much faster than what has been done so far.
 - Need to have a consistent, stable regulatory regime to attract multi-billion dollar investments from the private sector.
- Many speakers emphasized on the larger participation of private and global players in this field to fulfil the need and demand for Satcom Industry's overall growth in India.
- Financing the capacity expansion of the space sector in addition to liberalisation and reduction of bureaucracy are key elements to the growth of the Indian space sector
- Space industry is asset heavy, hence understanding the market demand will be a prerequisite for any kind of capacity building in the industry post liberalisation
- Industry collaboration with the government to develop new strategies w.r.t ownership, revenue sharing etc. could play a key role in the growth of the sector

- Latency of GEO satellites are not going to be enough for low latency and ultra-low latency. With many players setting up LEOs, low latency can be provided. In India, we have taken highly-enabling provisions. Along with spacecom policy, there will be remote sensing policy using space infrastructure. It will provide opportunities to develop specific apps in a highly innovative manner.
- Satcom Industry Association India to launch its first Portal to facilitate interface for Space Start up Industry And Government.