



BIF

BROADBAND INDIA FORUM

"Think Tank for Digital Transformation"

INDIA SatCom 2019

5th International Summit

28th November, 2019 | Hotel Shangri-La, New Delhi

SUMMIT GUIDE BOOK

Satellite Applications for Inclusive Growth

SUPPORTED BY



Department of Telecommunications
Ministry of Communications
Govt. of India



नीति आयोग
National Institution for Transforming India



Ministry of Electronics and Information Technology
Government of India



विज्ञान एवं औद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



www.broadbandindiaforum.com



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About Broadband India Forum (BIF)

Broadband India Forum (BIF) functions as an independent policy forum and think-tank that works for the development & enhancement of the entire broadband ecosystem in a holistic, technology-neutral and service-neutral manner. BIF's endeavour is to promote, support and enhance all policy, regulatory & standards initiatives for the proliferation of high-quality broadband in the country to empower consumers with efficient and economical broadband to realize the true Digital India. BIF works closely with the Government and the Regulator in this mission.

Formed in October 2015, BIF is a dedicated forum with participation from all stake holders, including Technology Providers, Telecom Operators, Internet Service Providers, Value-Added Service Providers, Satellite Operators and service providers, MSOs, Startups and professional entities, as well as seasoned Industry professionals who are familiar with different technologies, operations, regulations and policies.

The Forum's senior leadership team includes renowned and respected professionals from varied backgrounds from the Industry, Regulatory bodies and the Government as well as a distinguished Panel of experts as Honorary Principal Advisors.

Some key highlights about BIF:

- BIF has established itself as a thought leader and a credible and effective voice to help propel the nation to achieve the country's ambitious vision of creating a Digital India.
- To achieve this, BIF works to promote the rapid development of policies to facilitate affordable and high-speed ubiquitous broadband throughout the country.
- BIF functions through its Hi-Level Committees on various subjects like 5G, SatCom, Content & Applications, Networks, Spectrum & Licensing, Manufacturing – Mobile Devices & Equipment, New Technologies & Innovations, Rural Digital Initiatives, Technology, Media & Telecom (TMT), etc. BIF has as many as 14 Hi-level Committees and Working Groups.
- BIF is working through its Academia & Standards Committee with special emphasis on Startups, to nurture innovation led Startups in the Digital Technology space, to meet the goals of the Government in the Digital Communications domain.
- Other significant activities of the Forum broadly relate to coordination, promotion and formulation of expert opinion on topical subjects related to Broadband; act as a credible and reliable platform for Industry, Government, Regulatory and Standards agencies; spearhead independent and non-partisan work in several areas related to policy, regulation and standards; conducting conferences, seminars and knowledge events; writing research papers and white papers in collaboration with reputed research institutes; running awareness campaigns; releasing media articles on issues pertinent to telecom in India, and conducting R&D Projects in partnerships with leading consumer organisations as part of an overall Consumer Awareness Program.
- BIF has published White Papers & Reports on a wide variety of Telecom and Broadband related subjects.



India Satcom 2019 organized by Broadband India Forum (BIF), presents you a unique opportunity to meet with the key decision makers and business leaders driving the development in bringing Satellite Communications into the mainstream of Digital India and the National Digital Communication Policy.

India Satcom 2019 offers you the knowledge and access you will need to make your organisation part of this growing market for satellite communications services in India.

Join India Satcom 2019 to:

- ❖ Learn about the Role of Satellite Communications in the Broadband & Broadcasting Ecosystem of India
- ❖ Talk to the Key Government Policy Makers on Policy Formulations, Regulatory Interventions & Policy Implementation Guidelines
- ❖ Attend Knowledge Sessions which deliberate and formulate strategies related to :
 - Making IFMC services a major success in India
 - Advancements in Satellite Technologies with specific focus on India
 - Ease of Doing Business

What are the Opportunities for you?

- ❖ Unique networking opportunities with Government officials, Business Leaders and Senior Executives from the world's major satellite operators, manufacturers and equipment providers.
- ❖ Create awareness within the Government at all levels regarding importance of the role of Satcom in providing broadband pan India, particularly rural India.
- ❖ Get access to key decision makers in the Government on matters related to policy, regulation & business opportunities in Satellite Communications.
- ❖ Attend panel discussions on Market Growth, Policy & Regulatory Issues, Role of Satcom in Digital India, Ease of Doing Business, Satcom Mobility & other related topics.

Participants at the Summit

- ❖ Satellite Operators
- ❖ Satellite Manufacturers
- ❖ Broadband Service Providers
- ❖ Internet Service Providers
- ❖ VSAT Manufacturers & Distributors
- ❖ Value-added Service Providers
- ❖ User Organisations (Banks, Oil & Gas, Defence, Security Agencies, etc.)
- ❖ DTH Service Providers
- ❖ Government Representatives
- ❖ Spectrum & Regulatory Experts
- ❖ Start-ups and Innovators
- ❖ Attorneys & Consultants
- ❖ Telecom Service Providers
- ❖ Broadcasters

Glimpses of India Satcom 2018



India-Satcom 2018 was graced by Smt. Aruna Sundararajan, Secretary (Telecom) & Chairperson - Digital Communications Commission, the highest policy making body for Telecom in the country. She commended the work being done by BIF over the years in the field of Satcom. Emphasising the importance of Satcom in the enhancement of Digital Infrastructure in the country & the vision of Digital India, she said the NDCP 2018 has recognized the same for the first time and has 3 dedicated sections on Satcom.

Dr. K Sivan, Secretary, Department of Space (DoS) and Chairman, ISRO, also sent a special emissary to read out his felicitation message at the inaugural session, in which he conveyed that *"space technology plays a critical role in connecting the unconnected, despite the growing popularity of the terrestrial means of communication. When it comes to providing connectivity to deep and inaccessible hilly areas, there is no alternative to Satcom."*

BIF's endeavour is to bring equal opportunities to all players in the Satcom Industry and to create a framework for exploiting the full potential of the sector, at par with the rest of the world; as well as catalyse the use of Satcom for bridging the Digital Divide and for utilizing its potential for serving new applications & services of the future.

The event was attended by over 150 Delegates, 24 speakers and was extensively covered by over 30 leading print and online media.

KEY RECOMMENDATIONS OF INDIA SATCOM-2018

- 1. CAPACITY CONSTRAINTS:** Additional capacity from private players be contracted to overcome this deficit. It is also recommended that in the interim period, pending finalization of Long-term Capacity, vacant capacity idling over India, which is of the order of 10 Gbps, may be utilized.
- 2. REQUESTS PENDING WITH CAISS:** Due consideration be given and early disposal of pending requests/applications for Indian Satellite System/Networks with CAISS be carried out, as per the norms, guidelines and procedures for implementation of the policy frame-work for satellite communications in India as approved by Government in 2000.
- 3. PRICES:** The satcom bandwidth prices be reduced substantially, so that it becomes competitive.
- 4. USE OF NEW TECHNOLOGIES:** New Technologies viz. Ka band, HTS, LEO/MEO Constellations, etc., should be permitted for liberal usage so as to make Satellite Bandwidth more affordable and accessible.
- 5. SPECTRUM BANDS:** Opening up of both Ka Band (28GHz: 27.5-31.0 GHz) and C band (3.6-4.2 GHz) which are extensively used by Satellite Operators world over.
- 6. USE OF EXCLUSIVE SATELLITE BROADCASTING BAND:** The BSS Ku band (11.7 – 12.2 GHz) should be permitted for use by broadcasters, so that FSS Spectrum be freed for broadband usage.
- 7. EASE OF DOING BUSINESS:**
 - a) Removal of Artificial Barriers: Increase in DL speeds for VSAT Terminals.
 - b) Spectrum Charges for NLD need to be rationalized
 - c) Need to delicense VSAT User terminals
 - d) Need for regular Long Term Administrative Mechanism for allocation of spectrum on a continuous basis for the industry.
- 8. MIGRATION FOR BROADCASTING INDUSTRY:** Migration from foreign satellites to Indian satellites may be reviewed only after the expiry of the existing contract period.
- 9. CONTRACT PERIOD:** It is recommended that contracts between the buyer and the seller for Satellite Bandwidth be permitted/extended for longer periods than the existing norm of 1-2 years.
- 10. DISASTER MANAGEMENT & RECOVERY:** It is recommended that Uplinking Teleports for the Broadcasting sector be permitted to plan for contingencies by entering into arrangements with similar facilities located in other jurisdictions & transponders on alternate satellites to take care of emergencies/disaster recovery.

Satellite Applications for Inclusive Growth

Time:	Programme
9.00 – 10.00 Hrs	Registration
1000 – 1130 Hrs	Inaugural Session
	Lighting of the Lamp
Welcome Address:	Shri MF Farooqui, IAS (Retd) , Chairman, Broadband India Forum
Keynote Address:	Shri PJ Nath , MD & CEO, Tata Nelco & Chair, BIF Satcom & Broadcasting Committee
Release of White paper	"Liberalising Satellite Communications in India: Opportunities for enhanced economic growth" by Chief Guest and Dignitaries
Special Address:	Shri Rakesh Sasibhushan , CMD, Antrix (Special Guest of Honour)
Special Address:	Dr. K Sivan , Secretary, DoS & Chairman, ISRO (Special Guest of Honour)
Inaugural Address By Chief Guest	Dr. RS Sharma IAS (Retd.) , Chairman, TRAI
Vote of Thanks:	Shri TV Ramachandran , President, Broadband India Forum
1130- 1200 Hrs	Networking Tea
1200-1330 Hrs	Session I: Making IFMC Services a major success in India
Introduction by Chairman	Shri UK Srivastava , Pr. Advisor (NSL), TRAI
Panel Speakers:	Mr. Gautam Sharma , Managing Director, Inmarsat India Mr. Jayesh Parelkar , Regional Director (Sales & Business Development), ITC Global Mr. Manik Vinnakota , Director, Commercial and Product Development, Telesat Mr. Brajendra Urmalia , Product and Presales Head, Maritime and Aero Business, Nelco Limited Mr. Shivaji Chatterjee , Business Head, Enterprise Business, Hughes India Q & A Session Concluding Remarks by Chairman
1330 – 1430Hrs	Networking lunch
1430 – 1545Hrs	Session II: Advancements in Satellite Technologies with specific focus on India
Introduction by Chairman:	Mr. K Krishna , Vice President & CTO, Hughes Communications India Pvt. Ltd.
Panel Speakers:	Mr. Stephane Thibault , Managing Sales Director, Intelsat

Satellite Applications for Inclusive Growth

Mr. Sathya Narayanaswamy, Country Manager, ViaSat

Mr. Prashant Butani, Senior Sales Director – South Asia, Measat

Mr. Abhinandan T Dodamani, CTO, Tata Nelco

Q&A Session

Concluding Remarks by Chairman

1545 - 1600 Hrs

Networking Tea

1600 - 1730Hrs

Session III: Ease of Doing Business

Session Chairman:

Shri SK Singhal, Advisor (Broadband), TRAI

**Introductory Address
by Session Chairman**

Shri SK Singhal, Advisor (Broadband), TRAI

Panel Speakers:

Shri RB Prasad, JWA, WPC

Mr. Gaurav Kharod, Country Manager, India, INTELSAT

Smt. M Revathi, Sr. DWA, WPC

Mr. K Krishna, Vice President & CTO, Hughes Communications India Pvt. Ltd.

Mr. MN Vyas, Founder Director, Planet Cast

Q & A session

Closing remarks by the Chairman

Concluding Remarks:

Mr. TV Ramachandran, President, Broadband India Forum

Vote of Thanks:

Mr. Debashish Bhattacharya, DDG, Broadband India Forum

1730Hrs

Close of Summit

Invited*

INAUGURAL SESSION: SATELLITE APPLICATIONS FOR INCLUSIVE GROWTH

SPEAKERS' PROFILE



Shri MF Farooqui, IAS (Retd.)

Chairman, Broadband India Forum

Shri MF Farooqui is the Chairman of Broadband India Forum. He has retired as Secretary, Department of Telecommunications (DoT) and Chairman Telecom Commission. Prior to the current assignment, he served as Secretary, Department of Heavy Industry, Government of India. He also played a key role in Tamil Nadu government in increasing the footprint in the industry sector as Principal Secretary, Department of Industry. He also served as Special Secretary in the Ministry of Environment and Forests and was instrumental in shaping up critical environmental and climate change policies in the Ministry. During his career, he worked as Joint Secretary in the Department of Economic Affairs, Ministry of Finance, Government of India. In mid-nineties he worked as Consul General of India in Jeddah, Saudi Arabia. He has also worked as Chief Executive and Member, Secretary, Chennai Metropolitan Development Authority (CMDA). He is a 1978 Tamil Nadu cadre IAS officer and holds Masters degrees in Physics and Business Administration.

Dr. RS Sharma

Chairman, TRAI

Dr. RS Sharma is currently the Chairman of Telecom Regulatory Authority of India (TRAI). He has held this position since August 2015. In his present job, he has led major reforms in the sector including the work in the area of Net Neutrality, data ownership, privacy and security. Dr. Sharma, as a member of Indian Administrative Service has been working in the area of public administration since last forty years. His earlier assignments include DG and Mission Director of the Unique Identification Authority of India (UIDAI) as a founding CEO for India's ID project - Aadhaar - for four years (2009-2013). His other major assignments include working as Chief Secretary of Jharkhand (India), Principal Secretary of the Departments of Human Resources Development (HRD), Information Technology (IT) and Drinking Water and Sanitation. He was also the Joint Secretary in the Department of Economic Affairs at Government of India looking after issues such as infrastructure financing and multilateral and bilateral economic cooperation. He has been deeply involved in the areas of e-Governance since long. He is credited with introducing IT systems in the area of public service delivery such as Government Treasuries, Public Grievances, Office Automation, Land Reforms, Urban Governance, Tax reforms, Transport Systems and many more...

He holds a PhD from IIT Delhi (2018), Masters in Computer Science from UC Riverside (2002) and a Masters in Mathematics from IIT Kanpur (1976).





Dr. K Sivan

Secretary, DoS & Chairman, ISRO

Dr. K Sivan joined ISRO in 1982 and was inducted into PSLV Project. He is specialised in Aerospace engineering, Space Transportation Systems Engineering, Launch vehicle and mission design, control & guidance design and mission simulation software design, Mission synthesis, simulation, analysis and validation of flight systems.

He has significantly contributed towards end-to-end mission planning, design, integration and analysis. His innovative contributions, particularly the strategies adopted in mission design enabled the consistent performance of PSLV. This has also proved to be a good foundation for other launch vehicles of ISRO,

like, GSLV MkII & MkIII including RLV-TD. He is the chief architect of 6D trajectory simulation software, SITARA, which is the backbone of the real-time and non-real-time trajectory simulations of all ISRO launch vehicles. He was responsible for commissioning world-class simulation facility in ISRO for mission synthesis and analysis, which is used for mission design, sub-system level validation and integrated validation of avionics systems in all ISRO launch vehicles. He developed and implemented an innovative 'day-of launch wind biasing strategy' that enables rocket launch on any day, under varied weather and wind conditions. He was the chief mission architect for successful launch of 104 satellites in a single mission of PSLV.

He has received many awards including Doctor of Science (Honoris Causa) from selected universities.

He has numerous publications in various reputed Journals including a book in Nov 2015 "Integrated Design for Space Transportation System" published by Springer.

Shri Rakesh Sasibhushan

CMD, Antrix

Shri Rakesh Sasibhushan, is a Distinguished space scientist and currently the Chairman & Managing Director of ANTRIX Corporation, which is the commercial arm of ISRO. Prior to this assignment, from 2015 to 2016 he was the Director of ISRO's Propulsion Complex, at Mahendragiri, Tamilnadu, and from 2011 to 2015 he was the Dy. Director of Vikram Sarabhai Space Centre heading the Composites Entity at the Vattiyoorkavu Campus of VSSC. ISRO's CE20 cryogenic engine testing activities were completed at Mahendragiri under his leadership. He was also instrumental in setting up critical facilities for Semi-cryo engine assembly & testing as well as optimizing the productivity of PSLV & GSLV Engine & Stage assembly activities at Mahendragiri.

He joined ISRO during 1984, In the area of Launch Vehicle manufacturing. He has set-up a Centre of Excellence in manufacturing and is credited with the creation of an Advanced Manufacturing Lab. He completed his M-Tech in Manufacturing Management while in service. He has three joint patents in the area of Advanced Manufacturing - in Laser welding, Metallic Thermal Protection systems and Silica Tile processing.

He is a recipient of ISRO Team award 2011 and Merit award 2012.

He's an avid naturalist and a life member of BNHS.





Mr. TV Ramachandran

President, Broadband India Forum

Mr. TV Ramachandran, a.k.a. "TV", is one of the forerunners of digital network and mobile communications in India with 50-year-long experience. TV currently heads India's Broadband India Forum and provides consultancy in ICT fields as an independent consultant. A holder of a Master's degree in Physics (Wireless and Electronics) from Madras Christian College, TV was the very first CEO of one of the earliest cellular ventures in India, Sterling Cellular (predecessor of Vodafone India), and led the establishment and successful launch of the largest Indian cellular network of the time. TV was the first Director-General of the Cellular Operators' Association of India (COAI) and championed the voice of the Indian mobile industry from a professional point of view. After that he played a critical role as Resident Director of Regulatory Affairs and Government Relations for Vodafone India. TV regularly publishes articles and commentaries in India's leading newspapers and professional journals on telecom and infrastructure. TV provides substantive inputs for government policies and regulatory consultations and he was invited to sit on the High Level Government Forum for 5G Development by 2020 in India. TV is an Honorary Fellow at the Institution of Engineering & Technology, London, since 2013, and was awarded the Voice & Data Lifetime Contribution Award at the Telecom Leadership Forum in Delhi, in 2015.

Mr. PJ Nath

MD & CEO, TATA Nelco

Mr. PJ Nath joined Nelco as Chief Executive Officer in 2011. He holds a graduation degree from BITS Pilani in Master of Management Studies (MMS). He has a rich experience of over 25 years in Enterprise Market in reputed IT & Telecom service companies including ICIM, Wipro, Tata Communications and SIFY.

Prior to joining Nelco, he was Executive President - Enterprise Business with Sify Technologies Ltd. (a NASDAQ Listed Company) mainly focused on IT, SI and Telecom Services.



SESSION 1:

MAKING IFMC SERVICES A MAJOR SUCCESS IN INDIA

Shri UK Srivastava

Pr. Advisor (NSL), TRAI



Shri UK Srivastava is Principal Advisor in Telecom Regulatory Authority of India, looking after telecom networks, spectrum and licensing. He is a graduate in Electronics Engineering and possesses Diploma in Management. He is trained in transmission technologies, including optical, radio and satellite communications. He has managed various telecom activities including operations, maintenance, training, quality assurance, standardization and policy. He has been a member of various standing committees on satellite communications. He was deputed to ITU to serve in Iraq for two years and at ITU HQ in Geneva for a year and half. He has been associated with various standards development activities of ITU-T and ITU-R and has represented India in various conferences of these organizations. He also served as Vice Chairman of Study group-7 of ITU-R for a period of four years.



Mr. Gautam Sharma

Managing Director, Inmarsat India

Mr. Gautam Sharma joined Inmarsat in 2016 as Managing Director, India. He is focused on the introduction of Inmarsat's voice and broadband data communication services across India powered by the company's fourth generation (I-4) of mobile satellites. Prior to joining Inmarsat, Gautam Sharma held a range of senior, international positions with giant Telecom equipment provider, Huawei. While at Huawei, Gautam worked across a variety of linked disciplines including sales and marketing, Account Management and business development. Across his career, Gautam has worked with both private sector companies, including telecom OEMs and operators, and with Government departments and public sector bodies, managing contract negotiations valued at hundreds of millions of dollars. In addition to Inmarsat and Huawei, Gautam has held senior roles with the optical and wireless solutions firm, Arasor International Holding, Pacific Bangladesh Telecom and Hexacom India Limited (now Airtel). Gautam has a Post Graduate Diploma in Telecom Management from the Symbiosis Institute of Telecom Management, Pune, India, and a degree in Mechanical Engineering, from the Birla Institute of Technology & Science (BITS, Pilani), Rajasthan, India.

Mr. Jayesh Parelkar

Regional Director Sales & Business Development, ITC GLOBAL



Mr. Jayesh Parelkar is a dynamic professional with extensive experience in Satellite Communications Industry. His two decades experience has given him exposure to work in all domains of business. He is Experienced in Business Operations, Service Delivery, Solution Design, Client Management and P&L Management.

His customer engagement skills and ability to blend with people of different cultures has helped him work successfully on key projects and operations across the globe. One of the

key success factors is his ability to adapt himself to work with different levels of managements simultaneously.

Currently working for ITC Global as Regional Director Sales and Business Development focusing on Indian subcontinent and Asia Pacific Region.



Mr. Manik Vinnakota

Director, Commercial and Product Development, TELESAT

Mr. Manik Vinnakota leads commercial go-to-market for Telesat LEO globally covering aero, marine and terrestrial verticals. He is responsible for defining service offerings and engaging strategic partners. Prior to Telesat, he assisted mobile and wireline telcos across North America, Asia & Africa in their commercial transformation. He has a global telecom perspective combining terrestrial and satellite technologies. He has an MBA from INSEAD and is an engineer from BITS, Pilani.

Mr. Brajendra Urmalia

*Product and Presales Head, Maritime and Aero Business
Nelco Limited*

Mr. Brajendra Urmalia has 20 years of experience in total with 18+ years rich experience in the VSAT industry. He has an expertise in Solution engineering, Presales, Product development, Network Operations, System Integration, Project Implementation. He has done his Masters of Computer Applications (MCA).



Mr. Shivaji Chatterjee

*Business Head, Enterprise Business
Hughes India*

Mr. Shivaji Chatterjee is Business Head – Enterprise Business Unit at Hughes Communications India Limited (HCIL). He heads the functions of the Enterprise Business Unit encompassing various functions of Sales & Marketing, Operations & Program Management at Hughes.

He is a gold medalist in Computer Engineering from Pune University. Subsequently, he did his post graduation in Marketing from NMIMS in Mumbai.

In a career spanning a total of over 17 years, he has been with Hughes for the past 15 years during which he has won several Sales & Marketing accolades. He has been felicitated as the International Marketing Person of the Year at Hughes Network Systems USA, thrice in the last 6 years. Recently in January 2012, he was also awarded “Hughes CEO’s Honor Award” – a very special Hughes global recognition.

Having started out his career at Hughes as an Account Manager in 1997, he has grown to head the Enterprise Business Division, and has spearheaded many achievements for Hughes and for the VSAT industry in India. His areas of expertise include satellite communications, broadband networking and business solutions – across diverse industry segments with many firsts in the areas of Digital Cinema, e-Governance, Banking and Distance education.

SESSION 2: ADVANCEMENTS IN SATELLITE TECHNOLOGIES WITH FOCUS ON INDIA

Mr. K Krishna

Vice President & CTO

Hughes Communications India Pvt. Ltd.

Mr. K Krishna is the Vice President and the Chief Technology Officer of Hughes in India. He has been with Hughes and the Satellite Industry for more than 25 years. He has been one of the founding members of the India operations of Hughes. He is responsible for the technology roadmap of the company and spearheads the various strategic initiatives of the Company. He heads the defense business for Hughes. He also plays the role of a Chief Regulatory Officer. He represents Hughes and the Satellite industry in various forums. He is Co-chairman of the Satellite Committee for Broadband India Forum and active member of Society for Satellite Professionals International.



Mr. Stephane Thibault

Managing Sales Director, ASIA, INTELSAT

Mr. Stephane Thibault joined Intelsat in January 2010 and is currently Managing Sales Director, Asia, and Media Lead for the region. He's leading the company regional Media strategy. With experience across a wide area of applications, He has over 25 years of experience in the media and Telecom industries, in Asia Pacific. Stephane Thibault has held management positions across a wide range of media applications and cultures, witnessing and participating to the extraordinary growth of the broadcast media and telecommunication mobile industries from its Singapore base, where he is established

since 1994. Prior to joining Intelsat, He has held various sales and business development positions with Getris Images, an innovator in PC based graphics technology in the 1990's, before leading the successful development of Pinnacle Systems from 1995. He later held the position of Regional Director for Avid Technology, a leader in content solutions.

Mr. Sathya Narayanaswamy

Country Manager, Viasat

Mr. Sathya Narayanaswamy is Country Manager, India for Viasat, a global broadband and satellite communications company. He is responsible for business development in India, and also growing the Viasat India engineering center, which he helped establish. In a previous role, he also worked in Viasat's COMSAT Labs division and was in the design team for the Linkway product line. He has also held other roles in Cisco, and Lucent.





Mr. Prashant Butani

Senior Sales Director – South Asia, Measat

Mr. Prashant H. Butani is MEASAT's Senior Sales Director. In his role, he supports pre-sales, sales, post-sales and online & offline marketing activities of MEASAT's satellite services. He has over 15 years of experience in the satellite and telecommunications industry in pre-sales, project management, market research, strategy consulting and business development.

He holds a B.E. (Information Technology with Satellite Communications) from Mumbai University. He has also completed a Masters of Science in Satellite Communications Engineering from University of Surrey, United Kingdom.

Mr. Abhinandan T Dodamani

CTO, Nelco

Mr. Abhinandan Dodamani is CTO at Nelco. He has been in the satcom industry for over 26 years starting his career with Comsat Corporation to Viasat in various engineering positions. He has led VSAT products design, development, maintenance, and deployment of over 15 different VSAT products, from concept to end of life, with full lifecycle management exposure. He has worked with fixed, transportable and mobile satcom systems using CDMA, TDM, TDMA and SCPC technologies in areas of satellite telephony/data, GSM backhaul, interactive data and consumer/business broadband. Abhinandan holds a Masters and Bachelors in Computer Engineering degrees from Widener University, US and Bangalore University, India. He is a US patent co-holder on 2 inventions.



SESSION 3: EASE OF DOING BUSINESS

Shri SK Singhal

Advisor (Broadband), TRAI

Shri Sunil Kumar Singhal, Advisor, Telecom Regulatory Authority of India has more than 25 years of experience in telecommunication and broadcasting sectors.

In his present capacity, he is handling the policy and regulatory issues relating to Telecommunication Services. Before this, he was instrumental in the Digitization of the Cable TV networks - connecting more than 100 Million homes. Before joining TRAI, he was working in the licensing division of the Department of Telecommunications, the Government of India.

He has varied experience of policy formulation, licensing, regulation, strategy, planning, operations and management of telecommunication and broadcasting sectors. He is a regular speaker on various industry forums, and domestic as well as international conferences.

He holds a bachelor's degree in Electronics and Communications Engineering from Jodhpur University, and MBA degree from FMS, University of Delhi.



Shri RB Prasad

JWA, WPC

Shri RB Prasad is an officer of 1983 batch of Indian Engineering Service. He has graduated in Electronics and Communication Engineering from BIT Sindri. He has done post-graduation in Electronics and Communication Engineering from IIT Roorkee. He has also worked as lecturer in NIT Jamshedpur. He has worked in various capacities in Wireless Monitoring Organisation for verifying the technical and operational characteristics of Wireless Stations operating in fixed services, mobile services, aeronautical services, maritime mobile services, satellite services and broadcasting services. He has ensured interference free operation from harmful interference. He

has gone through many courses in the field of spectrum management in USA, Canada, France and ITU Geneva.

He has further worked in the field of spectrum management in planning, engineering and licensing. He has played a key role in auction of spectrum for mobile service. He has also responsible for spectrum policy planning and licensing of Safety, Security, Defense and police organisation.

Mr. Gaurav Kharod

Country Manager, India, INTELSAT

Mr. Gaurav Kharod has been a satellite professional with 20+ years in Satellite communications and Broadcast markets with exposure in South East Asia markets. Currently Country Manager for India at Intelsat, beyond his understanding of business and technology, he has experience in regulatory affairs and public policy. Having experience across Hughes – a Service Provider, Viasat – a Network provider, and now Intelsat, he has the right mix of experience across the different aspects of satellite communications service.





Smt. M Revathi

Senior Deputy Wireless Adviser, WPC

Smt. M Revathi joined Wireless Planning and Coordination (WPC) Wing as a Group A officer in 1996.

She took trainer's training on repair and maintenance of radio frequency spectrum monitoring equipment at Thales, Cholet, France. Represented as Frequency Expert from Asia Pacific Region in the Frequency Working Party (FWP) of International Telecommunications Satellite Organisation, Headquarter at Washington, USA. She assisted DoS as spectrum regulatory expert in dealing international arbitration cases at the International Court of Justice, the Hague.

She has contributed and attended various meetings on spectrum management at International Telecommunications (ITU) level and also at Asia Pacific Telecommunity (APT) regional level. Her past experience is in Radio frequency interference resolutions, Spectrum Auctions. Her present portfolio is as head of Satellite section looking after all the issues related to management of satellite spectrum, notification and coordination for orbital slots at ITU Coordination with other countries.

She completed her Bachelor of Technology (B.Tech) in Electronics and Communications Engineering from Jawaharlal Nehru Technological University, Hyderabad. She has also completed her Post Graduate Programme in Public Policy Management from Management Development Institute (MDI), Gurgaon and as part of International component of the programme, completed one module at Sciences Po University, Paris.

Mr. MN Vyas

Founder Director, Planet Cast

Mr. Mahendra Nath Vyas, founder member and Executive Director / Whole Time Director of Planetcast Media Services Limited (formerly Essel Shyam Communication Limited), has a rich experience of 30 years in satellite communication and digital media technology. He began his career as a design engineer with the Indian Space Research Organization (ISRO). It was during that time he had developed sub-system for India's first communication satellite transponder APPLE which is adapted in the current INSAT satellite. He has also been associated with various defense SATCOM networks during his tenure with Bharat Electronics Limited (A Ministry of Defense Undertaking). He has been instrumental in setting up the technology facility and the technology based growth of Planetcast since inception. He is responsible for formulating the key strategies and technology management including business and technological transitions, making Planetcast a Digital Media Technology and Service company. He was on the Board of World Teleport Association from 1st April 2007 to 31st March 2013. He is an engineering graduate with specialization in microwave and satellite communication from IIT Mumbai and Computer Architecture from Indian Institute of Science, Bangalore.



Mr. Debashish Bhattacharya

DDG, Broadband India Forum

Mr. Debashish Bhattacharya is involved in Advocacy & Consulting in the field of Technology, Public Policy, Regulation, Markets & Business Development in the field of Digital Communications (IT & Telecom), Satellite Communications & Broadcasting.

He is currently associated with Broadband India Forum as Deputy Director General. Prior to this, he was holding the position of Sr. Director-Technology & Policy in BIF. BIF is a think tank which is solely dedicated to enhance, adapt & promote policies & regulations for the enhancement of Broadband and Digital India.

He has been part of this think tank since 2015 and has been part of the team responsible for formulating inputs to the Union Govt. as well as the regulator TRAI on various Policy & Regulatory matters from creation of a New Digital

Communications Policy, digital transformation of the Telecom sector, new and cutting edge technologies viz., 5G, IoT, M2M, AI, ML, etc., the Fourth Industrial Revolution (Industry 4.0), Data Protection, Data privacy and Security, etc.

He has corporate experience of over three decades wherein he has worked with reputed companies viz. Siemens, Nokia-Siemens, Alcatel CIT, Lucent Technologies, Nokia –Siemens Networks, ZTE, Alcatel-Lucent Technologies, ACME CleanTech Solutions, besides reputed Indian business houses viz. HCL & Escorts

He is an Engineer by profession from IIT, Roorkee and holds a Masters in Business Management (MBA) from FMS, University of Delhi.



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