

Drone Connectivity, Operations and Standards

TSDSI-BIS Joint online workshop

TSDSI is partnering with BIS to organize an online workshop on Drone Connectivity, Operations and Standards on 4th October 2021, 0930-1330 IST.

Context:

Long range connectivity offered by telecom networks are a key to enabling Drone operations in real world use cases. This includes beyond Line of Sight operations, multi-drone operations, connecting to network compute and intelligence, monitoring etc. Standards are the essential enabler for unlocking the promise and potential of Drone applications and ecosystem.

TSDSI has published a technical report on Drone Communication Services Support in Cellular Networks ([TSDSI TR 6007 V1.0.0](#)). This report captures India specific flight requirements during takeoff, in-flight and post-flight operations. It also includes the requirements on the connectivity aspects between drones and 3GPP cellular network and recommendations for using Digital Sky platform [Ref: DGCA RPAS Guidance manual], a regulatory framework from Directorate General of Civil Aviation (DGCA), India for seamless and secure operations of Drones in Indian airspace.

TSDSI members are now carrying out a study on UAV assisted Cloud RAN for 5G and beyond (SI83).

BIS has taken the initiative of formulating standards for drones in the country. Initial drafts have been formulated with contributions from several academicians, industry stakeholders, entrepreneurs and committee members of UAV Systems Subcommittee constituted by BIS under the convenorship of Prof. S.N. Omkar.

About the Workshop:

BIS Drone Standards Subcommittee and TSDSI are organizing a deep-dive online workshop on Drone Connectivity, Operations and Standards on 4th October 2021. This workshop aims to serve as a platform for aviation and telecom industries to collaborate for drafting standards to serve the connectivity needs for Drone Services. It will discuss India based use cases, requirements, deployment experiences and challenges, and areas for standardization.

The workshop will include talks from experts followed by a panel discussion to discuss way forward for development of standards.

Schedule: 4 October 2021, 09:30-13:30 IST

Venue: Online

Participation: Open to all upon prior registration. [Click here](#) to register for the meeting.

Workshop Chairs: Dr Samar Shailendra, Vice Chair- SG Networks, TSDSI (Intel); Mr Satish Kanugovi, Member TSDSI (Nokia)

Workshop Conveners: Prof Omkar, Convener - UAV Systems Subcommittee, BIS; Mr Vijay Madan, Convener TSDSI Application Services Layer Standards Task Force and Mentor & Advisor- Services and Solutions

Workshop Coordinators: Capt. Ravindra Beniwal, BIS; Ms Sonia Sachdeva Sharma, Events Coordinator, TSDSI Secretariat

Tentative Program Schedule:

Drone Connectivity, Operations and Standards Online workshop organized by TSDSI in partnership with BIS 04th October 2021			
SESSION TIME (IST)	SESSION NAME	TOPIC	SPEAKER
0930-0940		Opening Remarks	R. R. Singh, Scientist-E & HoD (Transport Engineering), BIS
0940-0950		Drone Regulations	Expert from DGCA* TBC
0950-1005	Drones Applications - Indian Use Cases and Requirements	Applications	Prem Kumar Vislawath (Marut Drones)
1005-1020		Applications	Sampath Kumaran (Adani Defence and Aerospace)
1020-1035		Applications	Alex Punnen, Nokia
1035-1050		Applications	ChandraKumar (Optimus Electronics) G V V Sharma (IIT Hyderabad)
1050-1100	Drones Standards for Indian use cases and requirements	Standards - TSDSI	Samar Shailendra (VC - SGN, TSDSI)
1100-1110		Standards - BIS	S. N. Omkar (BIS)
1110-1125		Aviation Ecosystem	Raejus T Job (IISc Bangalore)
1125-1140		Test Bed for Drone Operations	Amrutur Bharadwaj (ARTPark-IISc)
1140-1155	Drones Connectivity and Ecosystem for Indian Scenarios	Connectivity	Debarati Sen (IIT Kharagpur)
1155-1210		Ecosystem	Dharmendra Singh (IIT Roorkee)
1210-1225		Ecosystem	Rajalakshmi (IIT Hyderabad)
1225-1235	Q & A and	Q & A from Audience	
1235-1325	Panel Discussion	Panel Discussion - Requirements, Challenges, and Way Forward for Drone Connectivity Standards in India	Moderator: Satish K Panelists: Raejus T Job, Prem Kumar, Amrutur Bharadwaj, Sampath Kumaran, MVB Sarma (TCS), AT Kishore (BIS)
1325-1330		Closing Remarks	Satish K (Nokia)

About TSDSI:

Telecommunications Standards Development Society, India (TSDSI, tsdsi.in) is an autonomous, membership based SDO with representation from all segments of Digital Communications sector- operators, service providers, manufacturers, R&D, Test Labs, Academia, Govt. bodies (including DoT and MeitY), and Industry Associations. Our members carry out technical studies and develop standards for access, core, back-haul, and infrastructure systems, solutions and services that best meet India specific Telecom/ICT needs, based on research and innovation in India. We collaborate extensively with global SDOs and forums to promote reflection of India requirements and harmonization of global standards.

About BIS:

Bureau of Indian Standards (BIS) is the National Standards Body of India, working under the administrative control of the Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India, which is inter-alia responsible for promotion of harmonious development in standardization and matters connected therewith, both within the country and at international level. In line with its mandate, BIS is engaged in the establishment, publication, review and promotion of the Indian Standards, in relation to goods, articles, processes, systems and services.