

TSDSI Induction Program

How is TSDSI Organized

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TSDSI Secretariat
22 May 2021

AGENDA

1. Journey so far
2. Organization
3. Governance
4. Study Groups
5. Standing Committees
6. Secretariat Team

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Journey So Far...

Jan 2014
11 Members

Join 3GPP and oneM2M
11 IoT/M2M Use Case reports

Oct 2015
39 Members

- ITU – LMLC for IMT 2020
- 3GPP & one M2M – 300+ Transpositions, 150+ contributions
- CPRI Front Haul Std. (ITU-R SG 15)
- Indo-EU Collaboration

Feb 2017
44 Members

Feb 2018 – April 2020
67 Members

- 2300+ Standards and Reports
- ITU – LMLC & TSDSI RIT submission
- NavIC – 3GPP Rel 16
- 3GPP Rel 17 submissions
- oneM2M Transpositions
- STANDARDISATION ROADMAP & VISION
- TRs on Dual SIM, 60Ghz for Backhaul, ICN, PPDR, Broadcast – Broadband Convergence
- TSDSI to report 3GPP Rel 17 Status of Developing Country proposals
- Metrics Based Performance Monitoring
- Vertical Industry Entities join TSDSI

March 2021
79 Members

- 5Gi approved by ITU-R
- TEC adopts as National Stds
 - IMT Advanced (M.2012-4)
 - oneM2M specifications (Rel 2)
- Released Cloud Interoperability and Portability Standard Report
- Published White Paper on “Status of Telecom Startup Ecosystem in India”

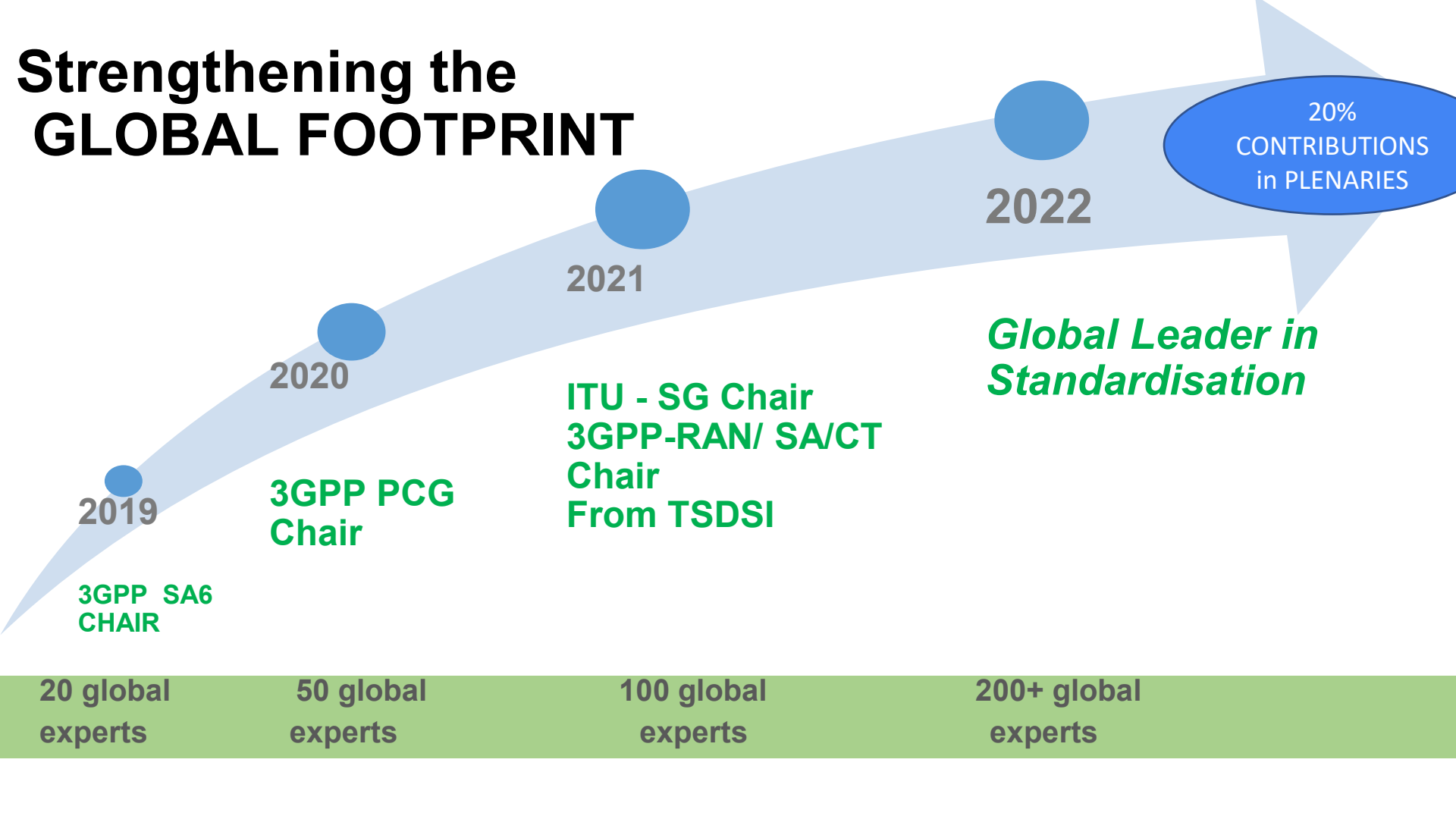
FORMING

STORMING

NORMING

PERFORMING

Strengthening the GLOBAL FOOTPRINT



TSDSI – ORGANIZATION (REGD. IN 2014)

*R&R, Working
Procedures & IPR Policy*

TSDSI General Body

Chair: N G Subramaniam **Vice Chair:** Satish Jamadagni
Treasurer: D K Agrawal

TSDSI Governing Council

(21 elected members + 8 nominees)

*R&R, Finance, IP,
Outreach
Committees*

*Standardization,
Roadmap,
Transposition
Committees*

TSDSI Technical Groups

SG Networks

Wireless, Radio, Core, 5G
Optical
Access & Transport,
Back-haul

SG Services & Solutions

Services, Applications and Solutions;
IoT/M2M; Localisation; Security and Privacy

Operations, Outreach & Strategy Support

Anurag(ED), Udayan, PK Jaswal, Harsh, Vanshika, Rajesh, Niwedita, Sarat

MARCOM, International Relations & Info Mngt

Bindoo, Jean Pierre, Shefali, Asif

Networks: AK Mittal, MH Kori, Guna, Jayeeta, Akansha; Services & Solutions: Vijay Madan, Vishnu RAM, Akash;

Membership Development & Startups: Amit Gupta; IoT and Academia Strategy: Uday Desai

TSDSI Secretariat : Director General - Pamela Kumar

SG, GC Elections every 2 years

Governance

TSDSI is registered as a Society under Societies Registration Act, 1860. It is a **membership based organization**. Associate Members Industry Associations, Foreign entities, Foreign Industry Associations. Guest Members / Observers Professional experts, researchers in their individual capacity as observers. Companies wishing to explore before becoming full members are granted Guest Membership for six months. The membership types and eligibility criteria is as per table belows.

Membership Type	Eligibility Criteria
Corporate Members	Entities registered in India and engaged in telecom related activities e.g.: Telecom Equipment Manufacturers, Mobile Phone/CPE Manufacturers, Service Providers, R&D, Academic Institutions, Value Added Service Providers/ Software Developers, Govt., Societies of Govt., PSUs, Regulatory Bodies etc.
Associate Members	Industry Associations, Foreign entities, Foreign Industry Associations.
Guest Members / Observers	Professional experts, researchers in their individual capacity as observers. Companies wishing to explore before becoming full members are granted Guest Membership for six months.

The **General Body**, constituted by the authorised representatives of **all member organisations** of TSDSI, is the apex decision making body of TSDSI. It appoints a **Governing Council (GC)**, drawing members from all sectors of telecom, to make it as representative as possible. GC also **includes Government of India nominated members from DoT, BIS and MeitY**.

However, **only corporate members can elect, and seek election to, the membership of Governing Council**. Each Corporate member has one vote which is exercised by its authorised representative. The General Body also elects a Chairperson and a Vice Chairperson to preside over its and GC's meetings. GC is assisted by a Secretariat headed by a Director General.

All standardization activities are carried out in Study groups through specialised work groups. A member can participate in any study/workgroup. Study and workgroups elect individuals affiliated with corporate member organizations as Chairs and Vice – Chairs to lead the technical work. **TSDSI Study/Working Groups include representatives of DoT/TEC/MeitY/BIS**.

Study Groups

Study Group- Networks

- **6G**
- **Spectrum Studies**
- **Broadcast Offload**
- **5G Enhancements**
- **Open Systems**
- **Wireless Backhaul**
- **Narrow Band IOT**

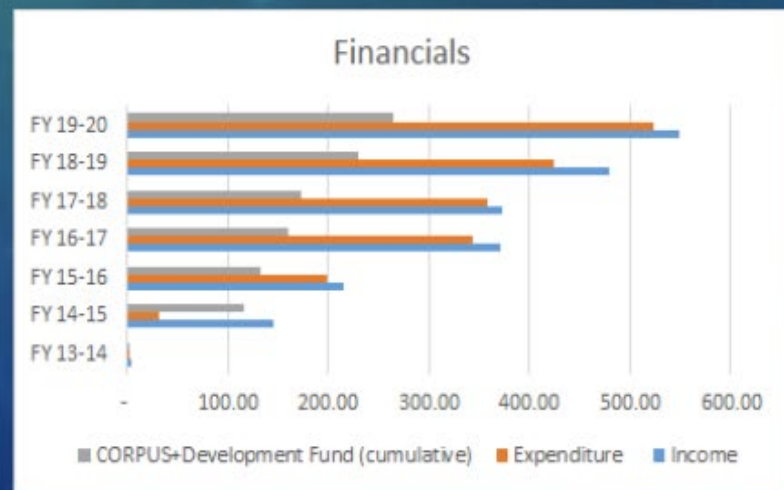
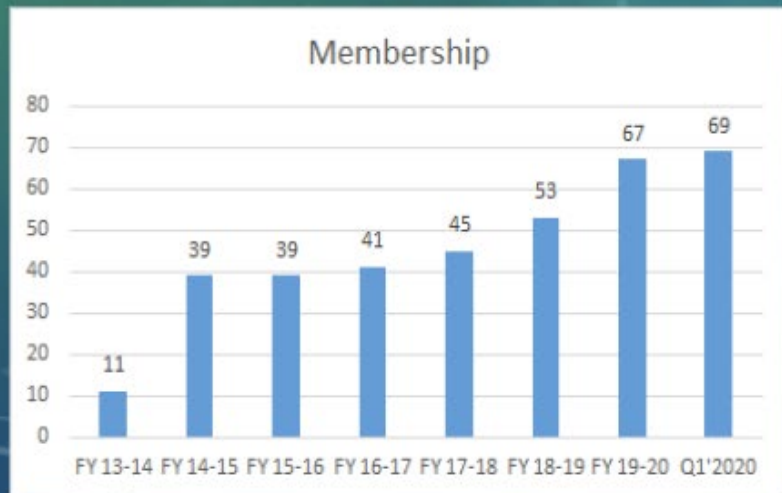
Study Group- Services & Solutions

- **Cloud Interoperability and Portability**
- **Public Protection and Disaster Recovery**
- **5Gi use cases and trials in automotive**
- **Support for Indian Languages in financial transactions & applications**
- **Information Centric Networking**
- **Rural UAV/Drone Communications and Services**
- **M2M/IoT**
- **Security and Privacy**

CUMULATIVE METRICS

Published Standards and Reports

Group	Technical Reports Published	Technical Reports in Draft	Technical Standards Published	Technical Standards in Draft
Study Group - Networks	4	1	2465	0
Study Group - Services & Solutions	84	4	136	0



tsdsi TSDSI Governing Council Corporate Composition (1/2)

Sl.No	Name of Representative	Organization	Designation
Telecom Network Equipment Manufacturers with Indian product related IPR / Licensed Indian design or technology			
1	Dr Kumar N Sivarajan	Tejas Networks Ltd	Chief Technology Officer
2	Mr Anindya Sahai	Saankhya Labs Pvt. Ltd.	Chief Technology Officer
Domestic Telecom Network Equipment Manufacturers			
1	Mr Ashwani Kumar	Huawei Telecommunications (India) Co. Pvt. Ltd.	Vice President (Standards & Industry Development)
2	Mr Randeep Raina	Nokia Solutions & Networks India Pvt. Ltd.	Chief Technology Officer
Telecom Service Providers			
1	Mr Satish Jamadagni	Reliance Jio Infocomm Limited	Vice President – Network Planning Engineering
2	Mr P. Balaji	Vodafone Idea Limited	Chief Regulatory & Corporate Affairs Officer
Any Other Service Providers like Service providers under UL other than those in Sl no 3 above/ISP/VNO/ Cloud Service Providers, Broadcasters, etc			
1	Mr Sharad Arora	Sensorise Digital Services P Limited	Founder & Managing Director
Applications/ Solutions Developers/ Application Software / Service Platform Developers/ Digital communication Software Developers or providers of services mentioned here (but not covered in 3 & 4 above)			
1	Mr N. Ganapathy Subramaniam	Tata Consultancy Services Limited	Chief Operating Officer & Executive Director
2	Mr Subhas Mondal	Wipro Limited	WIPRO Fellow and Chief Architect – 5G

tsdsi **TSDSI Governing Council Corporate Composition (2/2)**

Sl.No	Name of Representative	Organization	Designation
Semiconductor components designer/manufacturing			
1	Dr Saidhiraj Amuru	WiSig Networks Pvt. Ltd	Principal Research Engineer
2	Mr Vinosh James	Qualcomm India Private Limited	Associate Director, Technical Standards
Terminal Equipment Manufacturers: Manufacturers of Mobile Device / CPE/ End Use			
1	Mr Srinivasan Vasudevan	Apple India Private Limited	Head of Carrier Technology Partnership
2	Mr Prasanta Sarkar	Tata Motors	General Manager
R&D organizations			
1	Dr J. Klutto Milleth	CEWIT	Chief Technologist
2	Dr Rajkumar Upadhyay	C-DOT	Executive Director
Academic Institutions			
1	Prof Abhay Karandikar	Indian Institute of Technology Kanpur	Director
2.	Prof K.V.S. Hari	Indian Institute of Science, Bangalore	Professor
Government Department/ Statutory or Autonomous bodies/ organisations set up by Government or Statutory /autonomous bodies			
1.	Mr D.K. Agrawal	Bharat Sanchar Nigam Limited	Senior GM
2.	Dr P.K. Jain	Indian Space Research Organization	Associate Director

TSDSI Governing Council Composition Govt.

Government Nominated			
1	Shri R.K. Pathak, DDG(IC)	DoT	Member TSDSI GC & Chairman, GC SC on Rules and Regulations
2	Ms Deepa Tyagi, Senior DDG-TEC	TEC	Member TSDSI GC
3	Shri G K Agrawal, Wireless Advisor	DoT	Member TSDSI GC
4	Mr. Pushpendra Kumar Singh, DDG-SA	DoT	Member TSDSI GC
5	Ms. Geeta Kathpalia, Scientist G & Gp Coordinator	MeitY	Member TSDSI GC
6	Mr Roy Chowdhury, DDG (Standards P&M)	BIS	Member TSDSI GC
7	Mr Surendra Rai, DDG(NT)	DoT	Member TSDSI GC
8	Mr kishore Babu, DDG(SRI)	Dot	Member TSDSI GC

tsdsi TSDSI Governing Council's Sub Committees and Standing Committees Composition

S.No	Name of the Committee	Chair/Co-Chair	Members
1.	GC SC on Budget and Finance	DK Agrawal, BSNL, NG Subramaniam, TCS	Ashwani Kumar, Huawei SaiDhiraj, WiSIG Anurag Vibhuti, TSDSI
2.	GC SC on Rules and Regulations	R K Pathak, DoT	SaiDhiraj, WiSIG Geeta Kathpalia, MeitY Subhas Mondal, WIPRO Anurag Vibhuti, TSDSI
3.	GC Standing Committee on Legal & IPR Matters	NG Subramaniam, TCS Randeep Raina, Nokia	Abhay Karandikar, IIT Kanpur Srinivasan Vasudevan, Apple PK Jain, ISRO Pushpendra Kumar Singh, DoT Shefali Sinha, TSDSI

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S.No	Name of the Committee	Chair/Co-Chair	Members
4.	GC Standing Committee on Outreach	Sharad Arora, Sensorise; Rajkumar Upadhyay, CDOT	Akhilesh Srivastava, TCS Rajesh Gangadhar, Sterlite Rajeev Shorey, IIT Delhi Gagandeep Bajaj, Vodafone Idea Subhash Chand, DoT Amit Gupta, TSDSI Jean-Pierre Bienaime, TSDSI Bindoo Srivastava, Shefali Sinha, TSDSI
5.	GC Standing Committee on Transposition	Klutto Milleth, CEWIT	Satish Jamadagni, R-Jio R Prakash, C-DOT Akhilesh Srivastava, TCS Sharad Arora, Sensorise Vijay Madan, AK Mittal, TSDSI

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S.No	Name of the Committee	Chair/Co-Chair	Members
6.	GC Standing Committee on Standardization	KVS Hari, IISc; Kishore Babu, DoT	Kumar Sivarajan, Tejas Networks Ltd. Satish Jamadagni, R-Jio P.Balaji, Vodafone Idea Ltd. GK Agrawal, DoT Vinosh James, Qualcomm Pamela Kumar, Uday Desai, Amit Gupta, Vishnu Ram, TSDSI
7.	GC Standing Committee on Roadmap	UK Srivastava, DoT Anindya Saha, Saankhya Labs	Prasanta Sarkar, Tata Motors Ltd. Jayanta Roy Chowdhury , BIS Surendra Rai, DoT, Alex Vikas, DoT Balaji Rangaswamy, Sooktha Niranth Amogh, Huawei Jishnu A, Tejas Networks Puneet Jain, Samar Shailendra, Intel Tejas Shah, Lekha Wireless Satish Jamadagni, R-Jio R Prakash, C-DOT Akhilesh Srivastava, TCS Sharad Arora, Sensorise AK Mittal, Vishnu Ram, Vijay Madan, M H Kori, TSDSI

Further presented by Mr Amit Gupta on Task forces & Membership Engagement

Thank You