



BUREAU OF INDIAN STANDARDS

AGENDA

28th MEETING OF 'INTERNET OF THINGS AND DIGITAL TWIN' SECTIONAL COMMITTEE, LITD 27 IN JOINT SESSION WITH ITS WORKING GROUPS (Hybrid Meeting)

Date & Time	26 th September 2024, 02:00 PM IST
Venue	BIS HQ, New Delhi, India
Meeting link	https://bismanak.webex.com/bismanak/j.php?MTID=m4321491eabf934e1bc6fbc247d8123a3
Meeting ID	2516 857 6805
Password	LITD@28

Chairperson: Mr Sushil Kumar, Addl. DG, Department of Telecommunications

Member Secretary: Mr Priyanshu Sharma, Scientist-C, BIS

ITEM 0 WELCOME

- 0.1** Welcome by the Member Secretary
- 0.2** Opening remarks by the Chairperson

ITEM 1 FORMAL CONFIRMATION OF THE MINUTES OF THE LAST MEETING

1.1 The minutes of the last (27th) meeting of 'Internet of Things & Digital Twin' Sectional Committee, LITD 27, which was held on 20th March 2024 were circulated vide email. No comments have been received.

THE COMMITTEE MAY FORMALLY CONFIRM THE MINUTES.

ITEM 2 SCOPE & COMPOSITION OF SECTIONAL COMMITTEE

- 2.1** The scope and composition of LITD 27 committee is given in [Annex 1](#).
- 2.2** Co-option requests have been received from following organizations/institutes to the committee:
 - **Google India Private Limited, Bengaluru** – Mr. Manoj Kumar, Detailed CV is given in Annex-4

- **Chandigarh College of Engineering and Technology** – Dr. Anil Kumar Rose, Detailed CV is given in Annex-4
- **EU Project SESEI** – Mr. Dinesh Chand Sharma, Detailed CV is given in Annex-4
- **Narnix Technolabs Private Limited, New Delhi** – Mr. Narang N. Kishor
- **Open Geospatial Consortium** – Mr. Harsha Madiraju
- **Telecommunications Standards Development Society, India** – Mr. Vijay Madan
- **Gujarat Technological University** – Dr. Makwana Gautam Durlabhji, Detailed CV is given in Annex-4
- **Individual capacity** – Dr. Prathviraj N, Detailed CV is given in Annex-4
- **National Centre for Communication Security (DOT)** – Ms. Mounika Adepu
- **Veer mata Jijabai Technological Institute, Mumbai** – Mr. Rahul Ramdas Ingle, Detailed CV is given in Annex-4.
- **PSNA College of Engineering and Technology** – Mr. A. Dyson Bruno, Detailed CV is given in Annex-4.
- **Individual capacity** – Mr. Devendra N. Tandel, Detailed CV is given in Annex-4.
- **Individual capacity** – Mr. Gaurav Joshi, Detailed CV is given in Annex-4

THE COMMITTEE MAY REVIEW THE SCOPE & COMPOSITION.

2.3 There are currently 5 Working Groups and 1 Panel under LITD 27:

- [IoT Architecture](#)
- [IoT Interoperability](#)
- [IoT Applications](#)
- [Digital Twin](#)
- [Maritime, underwater IoT and Digital Twin applications](#)
- [IoT for Stress Management, Good Health & Well Being Panel.](#)

The present composition of various Working groups under LITD-27 is given in [Annex-3](#). The committee may review the compositions of the WGs.

ITEM 3 DRAFT INDIAN STANDARDS UNDER DEVELOPMENT

The following Indian standards are currently under publication stage (Ready for Gazette) and will be published in the forthcoming period. The committee may note.

SI No.	Doc. No.	Title
1.	LITD/27/24904 (Identical To: ISO/IEC 21823-1:2019)	Internet of Things IoT - Interoperability for IoT systems - Part 1: Framework
2.	LITD/27/24905 (Identical To: ISO/IEC 21823-2:2020)	Internet of Things IoT - Interoperability for IoT systems - Part 2: Transport interoperability
3.	LITD/27/24906 (Identical To: ISO/IEC 21823-3:2021)	Internet of Things IoT - Interoperability for IoT systems - Part 3: Semantic interoperability

4.	LITD/27/24907 (Identical To: ISO/IEC 21823-4:2022)	Internet of Things IoT - Interoperability for IoT systems - Part 4: Syntactic interoperability
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THE COMMITTEE MAY NOTE

ITEM 4 PROPOSAL FOR FORMULATION OF INDIAN STANDARDS

The following two Indian led draft international standards, currently under development within ISO/IEC JTC 1/SC 41, under the leadership of Indian experts and originally proposed by India are being developed within SC 41. Considering the series of circulations and the discussions held within LITD 27 & the international forum on multiple occasions, it is **proposed** to initiate the simultaneous development of these two standards as Indian standards. This will ensure timely development of these two subjects at both the national and the international level:

- Internet of Things - IoT for Stress Management, Good health & Well-being
- Internet of Things - Underwater Network Management System - Interworking

ITEM 5 Working Groups/Panels under LITD 27

5.1 WG 3 ‘IoT Architecture’

Convenor/Co-Convenor may provide a status update of the work under this WG.

5.2 WG 4 ‘IoT Interoperability’

Convenor/Co-Convenor may provide a status update of the work under this WG.

5.3 WG 5 ‘IoT Applications’

Convenor/Co-Convenor may provide a status update of the work under this WG.

5.4 WG 6 ‘Digital Twin’

Convenor/Co-Convenor may provide a status update of the work under this WG.

5.5 WG 7 ‘Maritime, underwater IoT and Digital Twin applications’

Convenor/Co-Convenor may provide a status update of the work under this WG.

5.6 Panel 1 ‘IoT for Stress Management, Good Health & Well-Being’

“JTC1-SC41-383 ED1: Internet of Things (IoT) - IoT for stress management, good health and well-being”. Panel 1 had multiple meetings and finalized the agreed DoC (Disposition of Comments) on the 60+ pages comments received during the NP ballot of the project within SC 41 in June 2024. The finalized proposed agreed DoC and the revised draft were circulated to the LITD 27 committee and sent to the SC 41 secretariat.

THE COMMITTEE MAY NOTE

ITEM 6 PROPOSED RECONSTITUTION OF LITD 27 & ITS WORKING GROUPS/ PANEL

As per the current guidelines of BIS, there shall be a Working Group of domain experts with clearly defined Terms of Reference (ToR) and **timeframe**, ideally for each standardization subject. Each Sectional Committee shall review the current Working Groups concerning their assigned tasks and progress, and reconstitute them if necessary.

Further, Panels are supposed to be long term subgroups with defined ToR under the committee and Working groups only ad hoc with a defined ToR.

In view of the above, this **proposal** is from the BIS Secretariat regarding the reconstitution of the Panels and Working groups under the LITD 27 committee. This is envisioned to support the long term goals and vision and to continue the good work being done by the committee.

Why Reconstitution?

- Evaluate the structure from 7 years ago to examine what is working well and what isn't.
- Potential and opportunity to do more (in parallel)
- Potential and opportunity to do better
- Support the long term vision

THE COMMITTEE MAY DISCUSS AND DECIDE

ITEM 7 BRAINSTORMING POTENTIAL SUBJECTS TO BE TAKEN UP

The committee may discuss and provide suggestions on potential subjects to be taken up and initiation of new work on areas yet to be works upon.

ITEM 8 INTERNATIONAL STANDARDIZATION WORK

8.1 ISO/IEC 30177 ED1: Internet of Things (IoT) - Underwater network management system (U-NMS) interworking - Indian led project

The project failed the CDV ballot which was completed recently. The CRM meetings are currently ongoing with the next one scheduled on 27 September 2024. Indian experts are pushing for a 2nd CDV ballot recommendation from WG 7 for the project.

Project leader may provide an update

Also, JWG 32 “Maritime and Underwater IoT Effects on Environment and Ecology” has been constituted within SC 41 with ISO/TC 43/SC 3.

Scope: Development of AWI (Approved Work Item) on Internet of Things (IoT) – Environmental and ecological effects, risks, and considerations of underwater acoustic signaling

The committee may nominate relevant Indian experts in this JWG. Project leader may provide an update

8.2 ISO/IEC 30197 ED1: Internet of Things (IoT) – IoT for Stress Management, Good Health & Well Being - Indian led project

Consequent to the acceptance of the NP ballot in SC 41, the CRM meeting was held within SC 41/WG 5 led by Mr. Jitender Kumar & Mr. Ajit Shenvi. Noting the concerns regarding potential overlap, a JWG was formulated during the last Plenary of SC 41 with SyC Bio- Digital Convergence and the project was transferred to this JWG. Mr. Jitender Kumar will be the Convenor of this JWG & Mr. Ajit Shenvi appointed as the main Project editor for 30197. The JWG has been formulated under the administrative control of SC 41.

JWG 33 “Embodied IoT Systems”

Scope: Standardization for embodied IoT Systems. Embodied IoT Systems are based on the embodied computing paradigm, also known as body-centered computing. This is ‘a paradigm on the merging of information technology and an organism’. This includes wearable, implantable and ingestible devices as well as bionics.

The committee may nominate relevant Indian experts in this JWG. Project leader may provide an update

THE COMMITTEE MAY DECIDE

8.3 Plenary Meetings of ISO/IEC JTC 1/SC 41

8.3.1 Debriefing from last Meeting of JTC 1/SC 41

A strong Indian delegation of around 15 members attended the last Plenary & WG meetings of JTC 1/SC 41 held during 27-31 May 2024 in Espoo, Finland in face-to-face mode with accommodation for remote participation. These meetings were attended by more than 100 delegates from around 18 countries including 5 Category liaisons organizations (AIM, AIOTI, Eclipse Foundation, IIC, INCOSE and ITU-T).

The approved Resolutions from the meetings are given in **Annex-5**

In person attendance

- 1) Mr Sushil Kumar, Chairperson LITD 27 – **Head of delegation**
- 2) Dr Gargi Keeni (In personal capacity)
- 3) Mr Jitender Kumar (BIS)
- 4) Mr Priyanshu Sharma, (BIS)

Remote attendance

- 5) Mr Abhik Chaudhuri, TCS
- 6) Mr Ankur Bansal, Samsung
- 7) Dr Delphin Raj, Kookmin University
- 8) Dr Mohan Varma (MITS)
- 9) Ms Namrata Singh, TEC
- 10) Mr Pramod Maurya, NIO
- 11) Shri Ravinder Kumar Meena (MeitY)
- 12) Dr Sarang C. Dhongdi, BITS
- 13) Dr Sarmistha Neogy, Jadavpur University
- 14) Mr Vaibhav Pratap Singh, CDAC
- 15) Dr Anand Kumar, TCS

Participation report from the plenary week is given in **Annex-6**

8.3.2 Upcoming Meeting of JTC 1/SC 41

The schedule of the upcoming plenary and WG meetings of SC 41 ‘Internet of Things & Digital Twin’ is as follows:

Committee	Meeting	Date	Place
JTC 1/SC 41	16 th	11 Nov to 15 Nov 2024	Wuxi, China

Members are **encouraged** to consider participation in the plenary meeting as well as the working group meetings of JTC 1/SC 41.

THE COMMITTEE MAY FINALIZE THE INB CONTRIBUTIONS & THE INDIAN DELEGATION FOR THE NEXT PLENARY MEETINGS OF SC 41

8.4 The list of experts registered in different WGs/AGs/ahGs of JTC 1/SC 41 is given at [Annex-2](#). The committee may **review** the list of experts nominated in various WGs of SC 41.

THE COMMITTEE MAY REVIEW

8.5 Standards of JTC 1/SC 41

8.5.1 A list of standards published by JTC 1/SC 41 is given in **Annex-7**.

THE COMMITTEE MAY NOTE

ITEM 9 INTERNATIONAL DOCUMENTS DUE FOR VOTING

Following documents of ISO/IEC JTC 1/SC 41 have been circulated for inputs of committee members. The last date to provide inputs to JTC 1/SC 41 is also mentioned below. Members are requested to provide their inputs before the due date to the BIS secretariat, so that the Indian inputs on these documents may be finalized and sent to ISO before the due date:

Sl. No	Reference No	Title	Working Group	Due Date for Voting	BIS Secretariat Remarks
1.	JTC1- C41/436/CDV	ISO/IEC 30180 ED1: Internet of Things (IoT) - Functional requirements to determine the status of self-quarantine through Internet of Things data interfaces	WG 5	27/9/2024	The committee may finalize the inputs from India, Dr. A Paventhan – ERNET and Dr. Pradeep Reddy - VIT-AP were nominated during NP stage
2.	JTC1-SC41/444/NP	PNW JTC1-SC41-444 ED1: Digital Twin - Extraction and transactions of data products	WG 6	04/10/2024	The committee may finalize the inputs from India. In addition, since it is an NP ballot, the committee may consider nominating an Indian expert.
3.	JTC1-SC41/457/DTR	ISO/IEC TR 30194 ED1: Internet of Things (IoT) and digital twin - Best practices for use case projects	WG 6	04/10/2024	The committee may finalize the inputs from India.

4.	JTC1-SC41/452/NP	PNW JTC1-SC41-452 ED1: Internet of Things (IoT) - Smart onshore aquaculture - General and technical requirements	WG 5	25/10/2024	The committee may finalize the inputs from India. In addition, since it is an NP ballot, the committee may consider nominating an Indian expert.
5.	JTC1-SC41/453/FDIS	ISO/IEC 30184 ED1: Internet of Things (IoT) - Autonomous IoT object identification in a connected home - Requirements and framework	WG 5	11/10/2024	The committee may finalize the inputs from India, Dr Aravind Kilaru – K L University was nominated during NP stage
6.	JTC1-SC41/456/CD	ISO/IEC TR 30123 ED1: Internet of Things (IoT) - Guidance on IoT application to home healthcare	WG 5	01/11/2024	The committee may finalize the inputs from India.
7.	JTC1-SC41/438/CDV	ISO/IEC 30186 ED1: Digital twin – Maturity model and guidance for a maturity assessment	WG 6	08/11/2024	The committee may finalize the inputs from India.
8.	JTC1-SC41/458/FDIS	ISO/IEC 30181 ED1: Internet of Things (IoT) - Functional architecture for resource identifier interoperability	WG 4	08/11/2024	The committee may finalize the inputs from India, Dr. Nancy Victor-VIT was nominated during NP stage

ITEM 10 GUIDELINES FOR RESEARCH & DEVELOPMENT (R&D) PROJECTS FOR THE FORMULATION AND REVIEW OF STANDARDS INVITING POTENTIAL R&D PROJECTS FROM THE COMMITTEE MEMBERS

Bureau of Indian Standards (BIS) has issued Guidelines for Research & Development (R&D) Projects for the formulation and review of standards inviting potential R&D projects from the committee members.

Guidelines for Research and Development projects and the template for the Terms of Reference (ToR) were shared during the last meeting for the members' perusal.

The following ToR was approved by the committee during the last meeting and is currently under consideration by the Screening committee of BIS:

- Classification Framework in Underwater IoT Networks

THE COMMITTEE MAY NOTE

ITEM 11 DATE AND PLACE FOR THE NEXT MEETING

ITEM 12 ANY OTHER BUSINESS

Annex 1

Scope

To develop standards in the field of Internet of Things and Digital Twin, including their related technologies

Committee Composition

<u>LITD 27-Internet of Things and Digital Twin Sectional Committee</u>						
S.No.	Organization	Member Name	25th 06-09- 2023	26th 19-01- 2024	27th 20-03- 2024	Attendance in last 3 meetings
1.	Department of Telecommunications, New Delhi	Shri Sushil Kumar (Chairperson)	Y	Y	Y	3/3
2.	Amity University, Noida	Dr. Tanya Singh (P)	N	N	N	0/3
3.	BITS Pilani Goa Campus, Goa	Dr. Sarang Chandrashekhar Dhongdi(P)	Y	Y	Y	3/3
4.	CSIR - National Institute of Oceanography, Dona Paula	Shri Vasudev P. Mahale, (P) Shri Pramod Kumar Maurya (A)	N	Y	Y	2/3
5.	Capgemini, Noida	Shri Yashowardhan Sonwale, (P) Shri Atul Kurani (A)	N	Y	Y	2/3
6.	Centre for Development of Advanced Computing, Pune	Shri Hari Babu (P) Shri Vaibhav P Singh(A) Shri Kaushik Nanda (A)	Y	Y	Y	3/3

7.	Centre for Materials for Electronics Technology, Hyderabad	Dr. Parag Adhyapak (P)	Y	Y	N	2/3
8.	ERNET India, New Delhi	Dr. A. Paventhan (P)	Y	Y	N	2/3
9.	International Institute of Information Technology, Bangalore	Dr. Kurian Polachan (P) Prof Shrisha Rao (A)	Y	Y	Y	3/3
10.	Jadavpur University, Kolkata	Dr Sarmistha Neogy (P)	N	Y	Y	2/3
11.	KPMG	Shri Rishabh Dangwal (P) Shri Prashant Sankhla (A)	N	Y	N	1/3
12.	K L University	Dr. Aravind Kilaru (P)	Y	Y	Y	3/3
13.	Marwadi Education Foundation, Rajkot	Dr. Amit Sata (P)	N	Y	Y	2/3
14.	Madanapalle Institute of Technology and Science, Madanapalle	Dr N Mohan Krishna Varma (P)	Y	Y	Y	3/3
15.	Ministry of Electronics and Information Technology, New Delhi	Ms Kavita Bhatia (P) Shri Ravinder Kr Meena (A) Mr. Piyush Kumar (A)	Y	Y	N	2/3
16.	National Association of Software and Service Companies, Noida	Shri Sanjeev Malhotra (P) Shri Sudhanshu Mittal (A)	Y	Y	Y	3/3
17.	Samsung India Electronics Private Limited, New Delhi	Shri Ankur Bansal (P)	Y	N	Y	2/3
18.	Schneider Electric India Private Limited, Gurugram	Shri Veerendra Vasamsetty (P) Shri Pavan Kumar (A)	Y	Y	Y	3/3
19.	Standardization Testing and Quality Certification (STQC)	Shri Vishal Jaiswal (P) Shri Sunil kumar Yadav (A) Shri Ankit Jain (A)	Y	Y	N	2/3
20.	TUV Rhineland (India) Private Limited, Mumbai	Shri Raghavendra Kulkarni (P) Shri Lokesh Ramu (A)	Y	Y	N	2/3
21.	Tata Consultancy Services Limited, Mumbai	Dr. Anand Kumar, (P) Shri Abhik Chaudhuri (A) Shri Rahul Sinha (A)	Y	Y	N	2/3

22.	Telecommunication Engineering Center, New Delhi	Ms Namrata Singh (P) Ms Ashima (A) Mr Shekhar Singh (A)	Y	Y	Y	3/3
23.	The Institution of Electronics and Telecommunication Engineers, New Delhi	Dr M. H. Kori (P) Prof Wg Cdr P Prabhakar Retd (A)	Y	Y	N	2/3
24.	VIT-AP University, Amravati	Dr. Pradeep Reddy CH (P)	Y	Y	N	2/3
25.	Vellore Institute of Technology, Vellore	Dr. D. Rekha (P) Dr. Nancy Victor (A)	N	Y	N	1/3
26.	In Personal Capacity	Shri G L Ganga Prasad	N	N	Y	1/3
27.	In Personal Capacity	Dr Gargi Keeni	Y	N	Y	2/3

WG/Panel Members of LITD 27

S.No.	WG	Organization	Member Name	25 th 06-09- 2023	26 th 19-01- 2024		Attendance in last 3 meetings
1	4,5,P-1	BIS	Mr Jitender Kumar	Y	N	Y	2/3
2	4	In personal capacity	Mr Tulasi Dwarakanath	N	N	N	0/3
3	4,7	Kookmin University	Dr Delphin Raj	Y	Y	N	2/3
4	5	Support Elders Pvt. Ltd.	Mr Supratik Gupta	N	N	N	0/3
5	3	Idemia	Mr Pranav Singh	N	N	N	0/3
6	5,P-1	Philips Healthcare Pvt Ltd	Mr Ajit Shenvi (P) Mr Rajendra Prasad (A)	N	N	N	0/3
8	P-1	Siemens Healthineers	Mr M Maheshappa (P) Mr Gowri Shanker (A)	N	Y	N	1/3
9	P-1	Wipro GE Healthcare Pvt Ltd	Mr Ramkumar (P) Mr Dorai Subramaniam (A)	Y	Y	Y	3/3
10	5,P-1	In personal capacity	Dr Vikram Venkateshwaran	N	N	N	0/3
12	5,6,7	VIT-AP University, Amravati	Dr Y V Pavan Kumar	N	Y	N	1/3

Annex-2

Experts registered in WG/AG/ahGs under JTC 1/SC 41

WG	Experts
JTC 1/SC 41/ WG 3 IoT Foundational Standards	<ol style="list-style-type: none">1. Dr Tanya Singh2. Mr Hari Babu3. Mr Sushil Kumar4. Dr Gargi Keeni5. Mr Ganga G L Prasad6. Dr Sarmistha Neogy7. Mr Prashant Sankhla8. Ms Kavita Bhatia9. Dr Mohan Krishna Varma N10. Mr Vasudev P. Mahale11. Mr Pramod Kumar Maurya12. Mr Veerendra Vasamsetty13. Dr Anand Kumar14. Mr Abhik Chaudhuri15. Ms Ashima16. Mr Shekhar Singh17. Mr Ravinder Kumar Meena18. Dr Delphin Raj19. Mr Priyanshu Sharma
JTC 1/SC 41/ WG 4 IoT Interoperability	<ol style="list-style-type: none">1. Ms Kavita Bhatia2. Mr Abhik Chaudhuri3. Dr Gargi Keeni4. Mr Jitender Kumar5. Mr Sushil Kumar6. Mr Vasudev P. Mahale7. Mr Pramod Kumar Maurya8. Mr Nand Kishor Narang9. Ms Sarmistha Neogy10. Mr Ganga G L Prasad11. Mr Delphin Raj12. Mr Prashant Sankhla13. Ms Namrata Singh14. Mr Mohan Krishna Varma15. Mr Veerendra Vasamsetty16. Dr Nancy Victor17. Mr Ravinder Kumar Meena18. Dr Tanya Singh19. Dr Sarang Dhongdi20. Mr Tulasi Dwarakanath21. Mr Mohan Kumar R22. Mr Balaji Rajendran23. Ms V Karthika24. Mr Priyanshu Sharma

JTC 1/SC 41/ WG 5 IoT Applications	<ol style="list-style-type: none"> 1. Mr Ankur Bansal 2. Mr Abhik Chaudhuri 3. Dr Gargi Keeni 4. Mr Jitender Kumar 5. Mr Sushil Kumar 6. Mr Vasudev P. Mahale 7. Mr Pramod Kumar Maurya 8. Mr Ravinder Kumar Meena 9. Mr Kaushik Nanda 10. Dr Sarmistha Neogy 11. Mr Ganga G L Prasad 12. Mr Prashant Sankhla 13. Dr Tanya Singh 14. Mr Vaibhav Pratap Singh 15. Dr Mohan Krishna Varma 16. Ms Ashima 17. Dr Amit Sata 18. Dr Aravind Kilaru 19. Dr Vikram Venkateshwaran 20. Mr Ajit Shenvi 21. Mr Pradeep Reddy CH 22. Dr A. Paventhan 23. Mr Supratik Gupta 24. Mr Priyanshu Sharma
JTC 1/SC 41/ WG 6 Digital Twin	<ol style="list-style-type: none"> 1. Dr Gargi Keeni 2. Mr Sushil Kumar 3. Dr Pradeep Reddy CH 4. Dr Mohan Krishna Varma N 5. Dr Aravind Kilaru 6. Mr Priyanshu Sharma 7. Ms Namrata Singh 8. Mr Ravinder Kumar Meena 9. Ms V Karthika
JTC 1/SC 41/ WG 7 Maritime, Underwater IoT and digital twin applications	<ol style="list-style-type: none"> 1. Mr Sushil Kumar 2. Mr Pramod Kumar Maurya 3. Mr Delphin Raj 4. Dr Mohan Krishna Varma N 5. Dr Gargi Keeni 6. Mr Pavan Kumar 7. Mrs Tanya Singh 8. Dr Sarang Dhongdi 9. Mr Priyanshu Sharma 10. Ms V Karthika
JTC 1/SC 41/AG 6 JTC 1/SC 41 Advisory Group	<ol style="list-style-type: none"> 1. Ms Gargi Keeni 2. Mr Sushil Kumar

	<ol style="list-style-type: none"> 3. Mr Priyanshu Sharma 4. Mr Jitender Kumar
AG 20 Sectorial Liaison Group (SLG 1) on Industrial sector	<ol style="list-style-type: none"> 1. Mr Veerendra Vasamsetty 2. Mr Sushil Kumar 3. Mr Priyanshu Sharma
AG 21 Sectorial Liaison Group (SLG 2) on Utilities	<ol style="list-style-type: none"> 1. Mr Priyanshu Sharma
AG 25 Use cases	<ol style="list-style-type: none"> 1. Mr Mohan Sundaram 2. Mr Sushil Kumar 3. Mr Mohan Krishna Varma 4. Ms Namrata Singh 5. Mr Ravinder Kumar Meena 6. Mr Supratik Gupta 7. Mr Jitender Kumar 8. Ms Gargi Keeni 9. Ms Geetha Adinarayan
AG 28 JTC 1/SC 42 Liaison Group	-
AG 29 Liaison Coordination Group on Communication and Networking	<ol style="list-style-type: none"> 1. Mr Sushil Kumar
AG 31 Impact of standardization activities of other groups on SC 41	<ol style="list-style-type: none"> 1. Mr Sushil Kumar 2. Dr Gargi Keeni 3. Mr Priyanshu Sharma
ahG 14 Ad hoc group on Business Plan	<ol style="list-style-type: none"> 1. Dr Gargi Keeni
ahG 15 Communication and outreach	<ol style="list-style-type: none"> 1. Dr Gargi Keeni
ahG 30 Cyber physical systems	-
JWG 24 IIoT and digital twin applications in power systems management - Managed by TC 57	-
JWG 17 System interface between industrial facilities and the smart grid - Managed by TC 65	-
JWG 3 IEC Smart Energy Roadmap - Managed by SyC Smart Energy	<ol style="list-style-type: none"> 1. Mr Nand Kishor Narang 2. Mr A. K. Mishra 3. Mr Atul Kumar Bali 4. Mr Mayank Sharma

[Return](#)

Annex-3

Composition of Various Working Groups under LITD-27 Sectional Committee

Working Group	Composition
LITD 27/WG 3 'IoT Architecture'	<ol style="list-style-type: none">1. Dr. Anand Kumar, TCS - Convenor2. Dr Sarmistha Neogy – Co-Convenor3. Shri Prashant Sankhla - Co-Convenor4. Ms Ashima, TEC5. Dr Tanya Singh, Amity6. Shri Hari Babu, C-DAC7. Shri Aurindam Bhattacharya, C-DOT8. Shri Vasudev P Mahale, CSIR - NIO9. Shri Sushil Kumar, TEC10. Shri Naveen Choudhary, ERNET India11. Shri Pranav Singh, IDEMIA12. Mr. Rahul Tandon13. Dr Gargi Keeni, In Personal Capacity14. Shri Ganga Prasad G L, In Personal Capacity15. Smt Kavita Bhatia, MEITY16. Dr N Mohan Krishna, MITS17. Shri Sudhanshu Mittal, NASSCOM18. Shri Pramod K Maurya, NIO19. Shri P Muthuvel, NIOT20. Dr N Vedachalam, NIOT21. Shri Veerendra Vasamsetty, Schneider Electric22. Shri Abhik Chaudhuri, TCS23. Mr Shekhar Singh, TEC24. Shri Lokesh R, TUV25. Shri Vishal Jaiswal26. Dr. D. Rekha27. Smt Geetha Adinarayan28. Shri Amit M. Mangalvedkar

<p>LITD 27/WG 4 Interoperability'</p>	<p>'IoT</p> <ol style="list-style-type: none"> 1. Shri Hari Babu, C-DAC -Convenor 2. Dr Tanya Singh- Co-Convenor 3. Mr Jitender Kumar, BIS 4. Mr Vasudev P. Mahale, CSIR - NIO 5. Mr Sushil Kumar, TEC 6. Dr Sarmistha Neogy, Jadhavpur University 7. Shri Prashant Sankhla, KPMG 8. Ms Kavita Bhatia, MEITY 9. Dr N Krishna Varma N, MITS 10. Shri Sudhanshu Mittal, Nasscom 11. Mr Pramod Kumar Maurya, NIO 12. Mr P. Muthuvel, NIOT 13. Mr N. Vedachalam, NIOT 14. Shri Veerendra Vasamsetty, Schneider Electric 15. Shri Abhik Chaudhuri, TCS 16. Dr. Anand Kumar, TCS 17. Ms Namrata Singh, TEC 18. Shri Lokesh R, TUV 19. Dr Gargi Keeni, In Personal Capacity 20. Dr Delphin Raj, In personal Capacity 21. Shri Ganga Prasad G L, In personal Capacity 22. Dr. Mohan Kumar R, In personal Capacity 23. Shri Tulasi Dwarakanath, In Personal Capacity 24. Shri Vishal Jaiswal 25. Smt Geetha Adinarayan, IBM 26. Shri Amit M. Mangalvedkar, IBM 27. Shri Ritesh Tandon, IBM 28. Dr Nancy Victor, VIT 29. Dr Sarang Dhongdi, BITS 30. Shri Supratik Gupta, iCloud Computing 31. Shri Vaibhav P Singh, C-DAC 32. Shri Kaushik Nanda, C-DAC 33. Shri Mohan Sundaram, C-DAC
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