

Detailed Report of Indian Delegation Attending 15th
ISO/IEC JTC 1/SC 41 Plenary Meeting
Along With Its WGs During 27-31 May 2024 In Espoo, Finland

Background:

ISO/IEC JTC 1/SC 41 on ‘Internet of Things and Digital Twin’ is the joint technical committee under ISO and IEC which is responsible for developing standards in the area of Internet of Things and related technologies. India is a P-member in SC 41 & LITD 27 ‘Internet of Things and Related technologies’ Sectional committee is the National mirror committee of JTC 1/SC 41.

India has been actively participating in JTC 1/SC 41 and has nominated number of experts in various working groups and Study/Ad-hoc groups of JTC 1/SC 41.

Contribution of Indian delegation and usefulness of the meeting:

This plenary meeting of SC 41 was the 15th meeting held along with its WGs/Adhoc Groups/Study Groups in In Espoo, Finland in face-to-face mode with accommodation for remote participation. This meeting was attended by delegates from 20 countries including 6 Category A liaisons organizations (AIM, AIOTI, Eclipse Foundation, IIC, INCOSE and ITU-T).

Indian delegation consisted of the following participants:

In person attendance

- a) Mr Sushil Kumar, Chair-LITD 27 - Head of delegation
- b) Mr Jitender Kumar, BIS
- c) Dr Gargi Keeni, In Personal Capacity
- d) Mr Priyanshu Sharma, Member Secretary of NMC LITD 27 Sectional Committee, BIS

Remote attendance

- a) Dr Sarmistha Neogy, Jadavpur University
- b) Mr Pramod Maurya, NIO
- c) Mr Ankur Bansal, Samsung
- d) Mr Abhik Chaudhuri, TCS
- e) Mr. Vaibhav Pratap Singh, CDAC
- f) Dr Delphin Raj, Kookmin University
- g) Dr. N Mohan Krishna Varma, MITS
- h) Ms Namrata Singh, TEC
- i) Dr. Sarang Dhongdi, BITS Pilani
- j) Shri Ravinder Kumar Meena (MeitY)
- k) Dr Anand Kumar, TCS

The participation of the Indian delegation has been as follows:

Date & Time	Working Group	Participants	Outcome
27 May 2024	Plenary meeting – Opening	Mr Sushil Kumar, Mr Jitender Kumar, Dr Gargi Keeni, Mr Priyanshu Sharma– in person Dr. Sarang Dhongdi, Mr Abhik Chaudhuri, Ms Namrata Singh, Dr	Discussion on WG reports and NB contributions

		Sarmistha Neogy – Online	
28 May 2024	WG 5, IoT Applications	Mr Jitender Kumar, Dr Gargi Keeni, Mr Priyanshu Sharma – in person	<p>a. Mr Jitender Kumar submitted comments sent by INB during the meeting.</p> <p>b. INB presented ISO/IEC 30197 “Internet of Things (IoT) - IoT for stress management, good health and well-being’</p> <p>c. New 4-party JWG formulation recommended by SC 41 with the administrative lead with SC 41 for handling ISO/IEC 30197</p> <p>d. Change of title & scope of PWI on Context aware & Approval of draft resolution.</p> <p>e. CNB contribution (2) registered as PWI in the system. Approval of draft resolution of WG 5.</p>
28-29 May 2024	WG 3, IoT Reference Architecture	Mr Sushil Kumar, Mr Priyanshu Sharma & Dr Gargi Keeni – In person Dr Anand Kumar - Remote	<p>a. Mr Sushil Kumar gave comments of IoT Reference Architecture document.</p> <p>b. Work initiated on new TR on “IoT RA Guidance”</p> <p>c. Joint Working Group Meeting between SC 41 WG 3 and SC 7 WG 42</p>
28-29 May 2024	WG 7, Maritime, underwater IoT and Digital Twin applications	Mr Priyanshu Sharma– In person Dr. Sarang Dhongdi, Dr Mohan Varma – Online	<p>The following questions were raised by Mr Priyanshu Sharma regarding JWG 32 group:</p> <p>a. Procedural issue? 1st meeting without SC 41 participation (What is an organization meeting)</p> <p>b. Why isn’t the list of expert available on the IEC portal for JWG 32?</p> <p>c. Can you briefly apprise us of the discussion need during the first meeting?</p> <p>d. Why there is not any meeting notice/agenda circulated before the 1st meeting?</p> <p>Indian NB comments were being discussed for NP 395 - ISO/IEC 63573-1</p> <p>WG 7 Roadmap (suggestion given by INB), Ship IoT RA contribution discussed & our comments on NMC NP discussed.</p>

29-30 May 2024	WG 4, IoT Interoperability	Mr Priyanshu Sharma and Mr Sushil Kumar – In person	<p>a. Task force created for updation of Part 1 (ISO/IEC 21823) pertaining to the support for Digital Twin.</p> <p>b. WG 4 is now looking at two Projects:</p> <ol style="list-style-type: none"> 1. Revision ISO/IEC 21823-1 2. Development of ISO/IEC 21823-5 <p>c. Ms V Karthika (India) was appointed as Co-editor in ISO/IEC 30198 “Internet of Things (IoT) - Edge computing gateway interoperability framework”</p>
29-30 May 2024	WG 6, Digital Twin	Mr Sushil Kumar– In person	Indian comments were submitted during WG 6 meetings and two interesting proposals were discussed.
28 & 30 May 2024	Drafting Committee	Mr Priyanshu Sharma	Resolutions drafting for the week
30 May 2024	AG 6, JTC 1/SC 41 Advisory Group	Mr Sushil Kumar and Mr Jitender Kumar - In person	Agenda discussions
30 May 2024	AG 21, Sectorial Liaison Group (SLG 2) on Utilities	Mr Sushil Kumar, Mr Priyanshu Sharma & Dr Gargi Keeni – In person	Presentation on JWG b/w JTC 1 & IEC SyC SC (Urban Digital Twin & CIM
31 May 2024	AG 31, Impact of standardization activities of other groups on SC 41	Mr Sushil Kumar & Dr Gargi Keeni – In person	Discussions on the horizontal impact of other groups on SC 41 standards
31 May 2024	Plenary meeting – Closing	<p>Mr Sushil Kumar, Mr Jitender Kumar, Dr Gargi Keeni, Mr Priyanshu Sharma– in person</p> <p>Dr. Sarang Dhongdi, Mr Abhik Chaudhuri, Ms Namrata Singh, Dr Sarmistha Neogy – Online</p>	Approval of the Resolutions and the WG reports based on the discussions held during the week

Following two new entities were formed under SC 41:

Any issues which need to be taken up subsequently:

Creation of a new JWG with IEC/TC 124, IEC SyC AAL and IEC/ISO JSyC BDC - JTC 1/SC 41 decided to create the JWG and transfer the project ISO/IEC 30197 to this JWG with Mr Jitender Kumar as the proposed Convenor of this JWG. Additional parties will be added to the JWG afterward. Also, once the JWG is formulated, Mr Ajit Shenvi (Philips) will be appointed as the Project editor for this project.

To spearhead the discussions on ISO/IEC 30197 within SC 41, regarding the JWG as well as the Disposition of comments within SC 41 & the future JWG with the administrative lead with India

Benefits accrued to BIS:

- a) **Creation of a new JWG with IEC/TC 124, IEC SyC AAL and IEC/ISO JSyC BDC - JTC 1/SC 41 decided to create the JWG and transfer the project ISO/IEC 30197 to this JWG with Mr Jitender Kumar as the proposed Convenor of this JWG. Additional parties will be added to the JWG afterward. Also, once the JWG is formulated, Mr Ajit Shenvi (Philips) will be appointed as the Project editor for this project**
- b) Dr Anand Kumar was re-appointed as project co-editor of ISO/IEC 30141 ED3 “Internet of Things (IoT) - Reference architecture”.
- c) Dr. N Mohan Krishna Varma was re-appointed as main editor and Mr Pramod Maurya & Dr Delphin Raj as co-editor of ISO/IEC 30177 “Internet of Things (IoT) - Underwater network management system (U-NMS) interworking”.
- d) Dr. Sarang Dhongdi was appointed as project co-editor of ISO/IEC 63573-1 “Internet of Things (IoT) — Multi-modal underwater wireless communication technologies — Part 1: Overview and requirements”.
- e) Ms V Karthika (CDAC) was appointed as project co-editor of ISO/IEC 30198 “Internet of Things (IoT) - Edge computing gateway interoperability framework”
- f) Lobbying with other NB experts for garnering support for ongoing CDV ballot for ISO/IEC 30177 (Indian led project) during the Plenary meetings was done by the Indian delegates
- g) Indian comments on various ongoing projects were discussed and deliberated on during the corresponding WG meetings
- h) BIS delegates attended the Plenary meeting for the 15th time in a row. The participation was well acknowledged by the committee as valuable contribution from the Indian member. It gave an opportunity to understand the work going on various projects like IoT Reference Architecture, applications, Societal and human factors in IoT based services and linkage with blockchain. This will help in identifying expertise at national level in the field of IoT while bringing them at our platform towards National Mirror Committee LITD 27 seeking technical inputs to formulate and adopt relevant standards. It becomes more important as the domains of blockchain, security and privacy are intermingled.
- i) BIS delegate had informal discussions with SC 41 leadership and various WG and Study Group Convenors and Secretaries. These interactions helped gather support for Indian led projects and future contributions from Indian NB to SC 41. Further, it will generate confidence about India’s active contribution in future and help in getting necessary votes for key positions like project editors, co-editors etc to the Indian experts.
- j) The participation gave an exposure of setting of International standards taking into account the various upcoming issues which in turn will be useful in formulation of National standards on various aspects of IoT and related technologies.

Any action points :

- a) To submit new contributions from India pertaining to IoT & Digital Twins, including one WG 7 contribution already under preparation
- b) To ensure the progression of ISO/IEC 30177 U-NMC Interworking to the next stage for timely publication

- c) To spearhead the discussions on ISO/IEC 30197 within SC 41, regarding the JWG as well as the Disposition of comments within SC 41 & the future JWG with the administrative lead with India
- d) To participate in next Plenary meeting of SC 41 present our inputs and comments on various agenda items under discussion.
- e) To participate at IoT related platforms as an effort to create awareness in industry forums to increase participation in NMC LITD 27 as well as WGs/AHGs of SC 41 at international level.
- f) Active participation of Indian experts where they are in leadership position.

Conclusion and Recommendations:

- a) Indian delegation had an advantage of being a significant one in the overall participation as we had once hosted SC 41 Plenary and WGs meeting in Nov 2017 at New Delhi. This meeting will further provide us with a platform to understand the global initiatives taken recently as well as to share India's perspective and challenges in the Standardization aspects especially with respect to IoT use cases. Further, it will present an opportunity to interact with professionals across the globe and deliberate on relevant issues.
- b) It is essential that India's standardization efforts in this area are harmonized with the global standards so that the potential benefits can be reaped. A number of global companies are developing applications based on IoT to reap its benefits. Such companies are also driving the efforts of making global standards so that the standards remain consistent with their efforts.
- c) We have to look out for more opportunities where we can propose NWIPs from India on other related subjects of IoT, digital twin and maritime underwater IoT being of focus. It is possible by having adequate participation from industry and academic institutions.
- d) BIS needs to develop national viewpoints/voting positions on key projects. Also, India's focus should be to attend more meetings in future with greater participation for following up on the work of various projects. Considering their importance, we need to identify more experts in this regard.
- e) Continuity of participation by key experts and BIS delegates is necessary to make effective contribution. The next Plenary meeting of JTC 1/SC 41 will be held at Wuxi, China November 2024 and it is essential that we continue and strengthen our participation.

Priyanshu Sharma
Sc-C (LITD)