Fifth (5ᵗʰ) Meeting of "Brain-Computer Interface Sectional Committee", LITD 37 (Virtual Meeting)

Date	30 September 2024
Time	3:30 PM - 5:30 PM
Meeting link (for remote participation)	https://bismanak.webex.com/bismanak/j.php?MTID=mb6edccd2d851b729b592f842c2aecd80
Meeting ID	2510 513 4449
Password	litd37@5

Chairman: Mr. Prof Prabhat Ranjan, Vice Chancellor, DYPIU, Pune
Member Secretary: Ms. Jyoti Kushwaha, Scientist D, BIS

AGENDA

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 (4th) meeting of LITD 37 held on 05ᵗʰ July 2024 were circulated to the members of the committee on 24ᵗʰ July 2024 through BIS portal **(ANNEX 1).** No comments have been received so far.

The committee may formally approve the minutes.

ITEM 2 SCOPE & COMPOSITION OF SECTIONAL COMMITTEE
2.1. Scope:
Standardization in the area of Brain-computer Interfaces for information technology to enable communication and interaction between brain and computers that are applicable across application areas.
2.1.1. Serve as the focus and proponent for JTC 1's standardization program on Brain-computer Interfaces, including the development of foundational standards;

2.1.2. Provide guidance on Brain-computer Interfaces to JTC 1, IEC, ISO, and other entities developing applications of BCI.
Excluded: standards for human implants and medical applications.

2.2. Liaison: LITD 37 is the National Mirror Committee (NMC) for ISO/IEC/JTC1 / SC 43 - Brain-computer interfaces - Principle (P).

2.3. The present composition of the committee is given in **ANNEX 2**.
The committee may review the composition.

2.4. The list of nominated experts in various WGs of JTC 1/SC 43 is given in **ANNEX 3**.
The committee may review the composition

2.5. Leadership positions from India in JTC 1/SC 43:

Sl No.	Leadership position	SC 43 WG/Project	Indian delegate
1	Convener	JTC 1/SC 43/WG 1 Foundation	Dr. Saurin Parikh, Nirma University
2	Convener	JTC 1/SC 43/WG 2 Use Cases	Dr. Arpan Banerjee, NBRC
3	Project Leader	ISO/IEC 8663 ED1 Information Technology-Brain-computer Interface-Vocabulary	Prof Aziz Khan, IIT Bombay

Members are requested to note and share their inputs for supplementing the contributions to these Working Groups.

ITEM 3 PROJECTS UNDER DISCUSSION IN JTC 1/SC 43

3.1 Following are the ongoing projects on the work programme in JTC 1/SC 43:-

S No	Project	SC 43 WG	India's current position	Next Action Item
1	ISO/IEC 8663 ED1 Information Technology-Brain-computer Interface-Vocabulary	WG 1	Prof Jiangbo PU is Project Editor. Draft circulated as CDV	To identify new terms for incorporation and provide comments
2	ISO/IEC TR 27599 ED1 Information Technology - Brain-computer Interfaces - Use Cases (approved for initiation of a TR)	WG 2	Translation of RDTR	To provide Use cases in new template and identify new use cases for submission.

3	ISO/IEC 27572 ED1 Information Technology - Brain-computer Interfaces - Reference Architecture	WG 1	Approved For ACD	To provide comments on the draft document shared.
4	ISO/IEC TS 27571 ED1 Information Technology - Brain-computer Interfaces -BCI data format for Non-Invasive brain information collection	WG 5	Approved For ACD	To provide comments on the draft document shared.
5	PWI TR JTC1-SC43-1 Information Technology – Ethical Guidelines of Brain-computer Interfaces	AhG 6	Preliminary work item	To identify experts for contribution in the project.
6	PWI JTC1-SC43-2 Information Technology– Brain-computer Interfaces - Safety and Security General Requirements	AhG 6	Preliminary work item	To identify experts for contribution in the project.
7	PWI JTC1-SC43-3 Information Technology - Brain-computer Interfaces - Invasive BCI Multi-modal Neural Data Format	WG 5	Preliminary work item	To identify experts for contribution in the project.
8	PWI JTC1-SC43-4 Information Technology - Brain-computer Interfaces - Hardware interfaces and protocols	WG 1	Preliminary work item	To identify experts for contribution in the project.

Members are requested to note and provide their inputs on the above mentioned projects.

ITEM 4 INDIAN PROPOSALS ON BCI

4.1 So far, no proposal is there from India at National and International level on BCI.

Members are requested to identify new proposals for standardization in the field of BCI from India.

ITEM 5 INTERNATIONAL STANDARDIZATION ACTIVITIES

5.1 India is a Participating member in IEC/SyC AAL. As P member, India has an obligation to vote and send response/comment on the documents emanating from the committees. Participating Countries can also nominate their experts on the working Group to participate in international standardization activities.

The ballot and calls currently active has been listed below:

S. No	Doc. No. & Title	Type	Closing Date	Remarks
1	JTC1-SC43/111/CDV: ISO/IEC 8663 ED1: Information technology - Brain-computer Interfaces - Vocabulary	CDV	2024-12-06	This document of IEC 8663 specifies the terms and definitions commonly used in the field of 116 Brain-Computer Interface (BCI). It is also pertinent to note that the project co-editor for this project is our committee member Prof Aziz Khan. Document Attached as ANNEX 4.
2	AhG 6: Ethics and Trustworthiness - Call for experts	Call for experts	2024-11-01	Facilitate the development of the work for 1.PWI TR JTC1-SC43-1 Information Technology - Ethical Guidelines of Brain-computer Interfaces, and 2.PWI JTC1-SC43-2 Information Technology - Brain-computer Interfaces - Safety and Security General Requirements Document Attached as ANNEX 5.
3	AhG 7: Application of Non-Invasive BCI for Disorders of Consciousness - Call for experts	Call for experts	2024-11-01	Facilitate the development of a PWI on application of Non-Invasive BCI for disorders of consciousness. Document Attached as ANNEX 6.

The committee may also share their inputs/comments on the ballots circulated.

5.2 The 5th plenary meeting of ISO/IEC JTC 1 SC 43 was held during 2 - 6 Sep 2024 at Sydney, Australia in Face-to-Face (with remote participation) mode.
The Indian delegation comprising the following members attended the said WGs and plenary meetings:

i. Prof Prabhat Ranjan, DY Patil University (Chair) - Face to Face participation, WG1, WG2, WG5, AG3, AG4, Workshop & Plenary
ii. Mr. Saurin Parikh, Nirma University (WG 1 convener) –Remote Participation, WG1, WG2, WG5, AG3, AG4, Workshop & Plenary
iii. Dr Arpan Banerjee, NBRC (WG 2 convener) –Remote Participation, WG1, WG2, AG4, Workshop & Plenary.
iv. Prof Aziz Khan, IIT Bombay (Project leader BCI-Vocabulary)–Remote Participation, WG1, WG2, WG 5, Workshop & Plenary.
v. Dr. Nirmal Surya, IFNR - Remote Participation, WG1, WG 2 & Plenary.
vi. Mr. Narang N Kishore, Narnix Technologies - Remote Participation, WG 1, WG 2 & Plenary

vii. Mr. C Sudalaimani, CDAC Trivandrum - Remote participation, WG1, WG 2 & Plenary.
viii. Ms. Jyoti Kushwaha, BIS - Face to Face Participation WG1, WG2, WG5, AG4, Workshop & Plenary.

Members are requested to present their report of participation for the plenary or WGs meeting attended by them along with the major outcomes.

5.3 The resolution approved at the 5th Plenary Meeting of JTC 1/SC 43 in Sydney, Australia held from 02-09-2024 to 06-09-2024 is placed at ANNEX 7.

The committee may note.

5.4 India has invited SC 43 to host its 7th Plenary meeting in New Delhi, India along with IEC GBM in September 2024. JTC1/SC43's response regarding logistical requirements for hosting SC43 plenary and working Group meetings in India (September 2025) along with IEC GBM is awaited.

The committee may note

ITEM 6 RESEARCH & DEVELOPMENT PROJECTS FOR FORMULATION AND REVIEW OF STANDARDS

6.1 BIS has issued Guidelines for Research & Development Projects for Formulation and Review of Standards. The guidelines were circulated to all members of the Sectional Committee inviting potential R&D projects from the committee members. BIS will publish a list of research & development projects along with Terms of Reference (ToR) on Standardization portal or any other suitable digital platform.

6.2 Members are requested to provide their interest for taking up R&D work and suggest more such relevant R&D projects. Interests received, if any, would be tabled during the meeting. The guidelines for R&D projects and template of Terms of Reference (ToR) is attached as **ANNEX 5** and **ANNEX 6** respectively.
The committee may please note and deliberate.

ITEM 7 eBIS Portal (www.manakonline.in)

7.1. BIS has recently migrated its activities into an online collaboration tool. Three portals – the Standardization, Conformity Assessment and Training Portals of e- BIS can be accessed through www.manakonline.in. BIS committee related work like, meeting notice, issuing agenda, minutes, P-draft, WC draft etc. is being done through the Standardization portal.

The committee may please note

ITEM 8 INFORMATION ON E-SALE OF STANDARDS BY BIS

8.1. Bureau of Indian Standards, the National Standards Body of India has published more than 20000 Indian Standards. Indigenous standards are available for free. These can be accessed at https://standardsbis.bsbedge.com/

8.2. Indian standards which are adoption of ISO and IEC standards are available for sale. These can be accessed at https://standardsbis.bsbedge.com/

The committee may please note

ITEM 9 PROCESS REFORMS IN STANDARDIZATION ACTIVITY OF BIS

9.1. Bureau of Indian Standards in its efforts to become front runner organization in standardization globally has recently reformed the process. Various initiatives, boosting the standardization activity at national and international forums have been taken. A short presentation regarding the same will be delivered by the member secretary.

The committee may please note

ITEM 10 NATIONAL INSTITUTE FOR TRAINING IN STANDARDISATION (NITS)

10.1. National Institute of Training for Standardization (NITS) has been set up by BIS with world class facilities to impart training on various aspects leading to standardization, quality and other management systems, consumer protection, public service delivery, etc. The training calendar for the current year is available on BIS web site https://www.bis.gov.in.The organizations willing to depute their personnel for training may kindly go through the appropriate programme and get them registered

The committee may please note

ITEM 13 DATE AND PLACE FOR THE NEXT MEETING

ITEM 14 ANY OTHER BUSINESS