



JTC1-SC43/115/DL

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2024-09-13

**INTERNATIONAL ELECTROTECHNICAL COMMISSION / INTERNATIONAL
STANDARDISATION ORGANISATION**

JOINT TECHNICAL COMMITTEE 1: Information Technology

SUBCOMMITTEE No. SC 43: Brain-computer Interfaces

**Resolutions approved at the 5th Plenary Meeting of JTC 1/SC 43 in Sydney,
Australia (2024-09-02 to 06, Hybrid Meeting)**

PLENARY MEETING RESOLUTIONS
ISO/IEC JTC 1/SC 43 Brain-computer Interfaces
2024-09-02 to 2024-09-06, Hybrid Meeting

Note: All resolutions have been approved unanimously unless otherwise indicated

1	WG 1 Foundational standards
1.1	<p>The promotion of ISO/IEC 27572 to CD stage</p> <p>JTC 1/SC 43 approves to submit current working document ISO/IEC 27572 Information Technology - Brain-computer Interfaces - Reference Architecture, the final CD will be sent to SC43 for review by 12 October 2024 for circulation as a CD for 8 weeks duration. SC 43 instructs its Committee Manager with support from the WG1 project editor and convenor to take the action to submit the CD to the IEC Secretariat for its circulation.</p>
1.2	<p>A new PWI on BCI hardware interfaces and protocols</p> <p>Based on the JTC 1/ SC 43/WG 1/N055, JTC 1/SC 43 approves a new PWI on BCI hardware interfaces and protocols.</p> <p>Title: Information Technology - Brain-computer Interfaces - Hardware interfaces and protocols</p> <p>Proposed Type: IS</p> <p>Project Editor: Zheng Zhang (CN)</p> <p>JTC 1/SC 43 instructs its Committee Manager to take the action to register the PWI in the IEC system.</p> <p>Abstain: JP, UK, US.</p>

2	WG 2 Applications
2.1	JTC 1/SC 43 instructs its Committee Manager to issue a call for new use cases on BCI from all National Bodies, these use cases will be incorporated in future edition of ISO/IEC TR 27599 Information Technology - Brain-computer Interfaces - Use Cases.
3	WG 5 BCI Data
3.1	<p>The promotion of ISO/IEC TS 27571 to CD stage</p> <p>JTC 1/SC 43 approves to submit the revised working document ISO/IEC TS 27571 Information Technology - Brain-computer Interfaces - BCI data format for Non-Invasive brain information collection by 15 February 2025, for circulation as a CD for 8 weeks duration. SC 43 instructs its Committee Manager with support from the WG5 project editor and convenor to do whatever is necessary to submit the CD to the IEC Secretariat for its circulation.</p> <p>Abstain: JP.</p>
4	AG 3 Chair's Advisory Group (CAG)
4.1	<p>Establishment of SC 43 Ad Hoc Group 6: Ethics and Trustworthiness (AhG 6)</p> <p>JTC 1/SC 43 approves to establish the Ad Hoc Group 6 with the title, terms of reference, convenor and initial members as follows:</p> <p>Title: Ethics and Trustworthiness (AhG 6)</p> <p>Terms of Reference:</p> <p>(1) Track the issues and concerns, and identify potential work items related to ethics, robustness, reliability, security, safety, privacy, etc. in the field.</p> <p>(2) Facilitate the development of the work for PWI TR JTC1-SC43-1 Information Technology - Ethical Guidelines of Brain-computer Interfaces, and PWI JTC1-SC43-2 Information Technology - Brain-computer Interfaces - Safety and Security General Requirements.</p> <p>Convenor: Jiangbo Pu (CN)</p> <p>Initial members: Brandy Smith (US), Gang Pan (CN), Kim Yan (AU), Lin Yao</p>

	<p>(CN), Matthew Dade (US), Ming Yin (CN), Nan Li (CN), Ruiping Yin (CN), Saurin Parikh (IN), Taehwa Han (KR), Ting Li (CN), Wei Ma (CN), Xin Zhang (CN), Yoshikazu Seki (JP), Young-Im Cho (KR), Zhen Yang (CN).</p> <p>SC 43 instructs the AhG 6 to submit an interim report by 3 January 2025 for consideration at the March 2025 SC 43 Plenary in Korea.</p> <p>SC 43 instructs its Committee Manager to invite JTC 1/WG 13 to participate the AhG 6 if they are interested, and to issue a call for AhG 6 experts and register them in the IEC system after the establishment of AhG 6.</p>
4.2	<p>Establishment of SC 43 Ad Hoc Group: Application of Non-Invasive BCI for Disorders of Consciousness (AhG 7)</p> <p>Base on the discussion (CAG N0041), JTC 1/SC 43 approves to establish the Ad Hoc Group 7 with the title, terms of reference, convenor and initial members as follows:</p> <p>Title: Application of Non-Invasive BCI for Disorders of Consciousness (AhG 7).</p> <p>Terms of Reference:</p> <p>(1) Track the issues and concerns, and identify potential works related to the BCI application for disorders of consciousness.</p> <p>(2) Facilitate the development of a PWI on application of Non-Invasive BCI for disorders of consciousness.</p> <p>(3) Conduct the gap analysis of relative standards.</p> <p>Convenor: Jun Xiao (CN)</p> <p>Initial members: Brandy Smith (US), Damien Coyle (UK), Gang Pan (CN), Jiahui Pan (CN), Kim Yan (AU), Lin Yao (CN), Matthew Dade (US), Nan Li (CN), Prabhat Ranjan (IN), Taehwa Han (KR), Xingwei An (CN), Yoshikazu Seki (JP), Young-Im Cho (KR).</p> <p>SC 43 instructs the AhG 7 to submit an interim report by 3 January 2025 for consideration at the March 2025 SC 43 Plenary in Korea.</p> <p>SC 43 instructs its Committee Manager to issue a call for AhG 7 experts and register them in the IEC system after the establishment of AhG 7.</p> <p>Abstain: JP.</p>
5	<p>AG 4 Liaisons and Communications Advisory Group (LCG)</p>

5.1	<p>JTC 1/SC 43 nominates Xin Zhang (CN) serve as the co-convenor of AG 4, to help facilitating the LCG operation and connection, and provide support for the liaisons and communications with other SDOs.</p> <p>Abstain: JP.</p>
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	<ul style="list-style-type: none"> • The calling notice/ logistics / first draft agenda posted (16 weeks before): 2024-11-08 • Contributions for new agenda items/reports/presentation (8 weeks before): 2025-01-03 • The intermediate draft agenda (7 weeks before): 2025-01-10 • Comments on posted agenda items/documents (4 weeks before): 2025-01-31 • The final draft agenda posted (3 weeks before): 2025-02-07
11	<p>Call for host for the 9th Plenary meeting</p> <p>JTC 1/SC 43 encourages National Bodies to consider hosting the 9th Plenary meeting. O-members can also host the meeting.</p> <p>Any National Body interested in hosting the 9th Plenary meeting is invited to send the official letter to the Committee Manager.</p> <p>Expressions of interest for subsequent years are also welcome.</p>

ACTION ITEMS

1. JTC 1/SC 43 instructs its Committee Manager to contact with JTC 1 and IEC to find an appropriate way to send certification or appreciation letter to the experts at the BCI Symposium, to thank for their contributions.
2. JTC 1/SC 43 requests the AG 4 convener to update the current liaison list, and instructs its Committee Manager to do whatever is necessary to have the liaisons registered in the system.

APPRECIATIONS

Appreciation A – Thanks to Meeting Host

JTC 1/SC 43 expresses its deepest appreciation to the Standards Australia (SA) for hosting this meeting in Sydney. We are sincerely grateful for the time and resources SA invested in making this plenary week both enjoyable and effective.

SC 43 especially wishes to thank Kim Yan from Cisco, Romaine Crawford and the Front of House team from SA for their exceptional organization, meticulous coordination and excellent event logistics of both the plenary sessions and symposium. Their efforts prior to and throughout the plenary significantly contributed to the success of this meeting week.

SC 43 also expresses its appreciation to Marcelle Elzerman for her excellent welcoming

remarks as the representative of SA in the opening plenary and her presence in the workshop.

Appreciation B – Thanks to Experts at the BCI Symposium

JTC 1/SC 43 expresses its appreciation to Ian Oppermann, Chair of the Australian IEC National Committee and of JT-001-JTC 1 Strategic Advisory Committee, for his welcoming remarks at the symposium.

SC 43 extends its appreciation to the all experts who gave excellent presentations at the BCI Symposium. They are Dr. Kiwon Lee, Prof. Young-Im Cho, Prof. Jiahui Pan, Prof. Jiangbo Pu, Prof. Lin Yao, Prof. Taehwa Han, Dr. Thomas Do, Dr. Avinash Singh, Dist. Prof. Chin-Teng Lin, Dr. Zheng Zhang, Prof. Sam John, Ms. Lorraine Finlay, Dr. Luciana Lorenzon and Dr. Maria Cristina Gaeta. Their expertise, insight, and passion for BCI field are truly inspiring for SC 43. Their willingness to share knowledge generously has fostered a successful symposium.

Appreciation C – Thanks to IEC Academy & Capacity Building Team

JTC 1/SC 43 expresses its appreciation to Mr. Ian Gardner and Ms. Semegnish Grosjean from the IEC Academy and Capacity Building team, for their professional support and facilitation in the 1st SC 43 hybrid IEC academy symposium event.

Appreciation D – Thanks to SC 43 Subgroup Convenors, Editors, Liaison Representatives and Contributors

JTC 1/SC 43 expresses its appreciation to SC 43 subgroup convenors, Saurin Parikh (IN), Arpan Banerjee (IN), Young-Im Cho (KR), and Yuntao Yu (CN) for their leadership in the working/advisory group meetings and recommendations to SC 43.

SC 43 extends its appreciation to project editors and liaison representatives for their efforts in support of the work of SC 43.

Appreciation E – Thanks to the IEC Officer

JTC 1/SC 43 expresses its gratitude to the IEC Officer Stephen Dutnall for his sharing of the information from ITTF / IEC Secretariat, and his instructions to this plenary. As this is the final JTC 1/SC 43 plenary in which Stephen participates, SC 43 would like to take this opportunity to express its deepest appreciation for his exceptional professional guidance and invaluable contribution since the establishment of SC 43, which definitely are instrumental in shaping the direction and organization of SC 43.

SC 43 also extends its appreciation to its Standards Project Administrator Nadine Andrey

for her continued support and great patience to SC 43's routine work. Appreciation also goes to the previous SPA, Shewaynesh Mehari, for her support during her time with SC 43, and wish her all the best.

Appreciation F – Thanks to National Bodies and All Delegates

JTC 1/SC 43 extends appreciation to all the national bodies and delegates who attended the plenary. Their presence, whether in person or through virtual means, has been invaluable. Their active engagement and commitment were key in driving the discussions and achieving meaningful progress.

Appreciation G – Thanks to the Drafting Committee

JTC 1/SC 43 expresses its appreciation to the drafting committee for their crucial and prompt support in finalizing the draft resolutions. Their invaluable contributions are instrumental in bringing these resolutions to completion.

Drafting committee members:

1. Kim Yan (AU)
2. Lin Yao (CN)
3. Stephen Dutnall (IEC Secretariat)
4. Prabhat Ranjan (IN)
5. Yoshikazu Seki (JP)
6. Taehwa Han (KR)
7. Brandy Smith (US)

Appreciation H – Thanks to the Chair

JTC 1/SC 43 expresses heartfelt thanks to its Chair, Yuntao Yu, for her exemplary leadership, and thoughtful management throughout the plenary. Her dedication ensured that all agenda items were effectively addressed and on track.

Appreciation I – Thanks to the Committee Manager

JTC 1/SC 43 extends its appreciation to the Committee Manager, Bing Cui, for his effective management and attention to detail, which were instrumental in the smooth operation of the plenary.

Appreciation J – Thanks to the SC 43 Secretariat Member

JTC 1/SC 43 expresses its appreciation to the SC 43 Secretariat member Wenjing Sun for her consistent facilitation and hard work.