



Bureau of Indian Standards

Report on Computer and Electronics Engineering Convention

Subject: - Report on **Annual Convention of BIS** with Deans and HoDs of Computer and Electronics Engineering discipline of MoU partner institutes

Venue : MGM Beach Resort, Mahabalipuram

Date : 27 & 28 September 2024

BIS organized a Convention for Deans and Heads of Departments (HoDs) of MoU partner institutions of the Computer and Electronics Engineering discipline. The event took place at MGM Beach Resort, Mahabalipuram on the 27 and 28 September 2024. 78 delegates from 55 MoU partner institutes participated in the convention.

Day 1 (27/09/2024) – Sessions and Activities:

The convention started with traditional Lighting of Lamp ceremony followed by rendering of Manak Geet.



Welcome Address by DDGS:

Shri Praveen Khanna, DDG (Southern Region) welcomed all delegates to the convention and highlighted the critical role of academia in standardization process. He emphasised that MoUs represent not just formal agreements but a strategic alliance between academia and the BIS. Through these collaborations, we seek to embed the highest standards of practice and innovation into national standards and simultaneously in our academic curricula, ensuring that the next generation of engineers is well-equipped to address the evolving challenges of our nation's infrastructure.





Inaugural Address by DDG Standardization:

Shri Rajeev Sharma, Deputy Director General of Standardization, in his inaugural address further emphasized the vital role of academia in the standardization process. He highlighted several challenges, including the limited participation of academic institutions in standardization, the disconnect between ongoing research and its relevance to standardization, and the need for a balanced Indian perspective in international standardization.

In his address, Shri Rajeev Sharma outlined a strategic roadmap for integrating BIS standards into academic research and curricula. He underscored the importance of prioritizing Indian Standards (IS) in academic work and research papers, advocating for their use over international alternatives. Additionally, he stressed the pivotal role that academic institutions can play in promoting Indian standards through their research contributions and encouraged faculty members to actively engage in the standardization process.

BIS Academia Collaboration – Overview:



Smt Neha Yadav, Scientist-D, SCMD provided an overview of the BIS-Academia collaboration including the salient features of MoU, Annual Plan for Technical sessions on Standardization, reference handbooks prepared by BIS Technical Committees, achievements so far, road ahead and expectations from the academia. She informed the participants about Academic Dashboard and its features developed to make it more accessible and efficient for the MOU partner institutes.

A live demonstration of revamped BIS's Standardization Portal was presented. Ms. Yadav showcased the latest digital initiatives and platforms developed to streamline the standardization process by providing easy access to a range of interactive features.

Your Standardization Awareness – A Quick Check

Shri Devansh Deolekar, Scientist D, LITD, organized a quiz session aimed at gauging participant's awareness of standardization. The session was attended enthusiastically by participants by answering the questions provided, demonstrating their understanding and interest in the subject matter through the submitted responses.



Presentation on Areas Covered by the standardization and opportunities for contribution in International Standards:

Smt. Reena Garg, Scientist G and Head of the Electronics and Information Technology Department (LITD), delivered a presentation covering key areas in the field of Electronics and IT, at the international levels. She highlighted the pivotal role of the Bureau of Indian Standards (BIS) as the National Standards Body in global standardization efforts within ISO/IEC. Additionally, she elaborated on the current New Work Item Proposals (NWIPs) in ISO/IEC, emphasizing the opportunities for India to assume leadership roles by involving suitable experts from academic institutions and industry in the standardization process.



Group Exercise



A group exercise was conducted to identify potential subjects for standardization in the field of Electronics and Information Technology. Participants were also invited to share their areas of expertise and interest to be considered for membership in the Technical Committees of the LITD Division of BIS.

Kshitij Bathla, Scientist-D, provided a demonstration of the BIS Standardization Portal, covering various aspects such as the different technical departments, access to published standards, the process for submitting R&D projects, how to comment on working committee (WC) drafts, the procedure to become a technical committee member, and the submission of New Work Item Proposals

(NWIP).

Presentation on Standards Formulation:

Ms. Alismita Khag, Scientist D, delivered a presentation that provided a comprehensive overview of the Bureau of Indian Standards (BIS). Her presentation covered key topics such as the principles of standardization, the process and structure of standard formulation, and the life cycle of a standard, offering valuable insights into the entire standardization process.

Technical Sessions:

During the technical sessions, Shri Manikandan K, Scientist E & Head WROL, delivered a presentation on "Introduction to the Concept of Artificial Intelligence Systems – A Standard Perspective" followed by presentation on "Introduction to Software Life Cycle Processes, Quality Assurance, and Software Testing," delivered by Shri Ashish Tiwari, Scientist D". These presentations provided valuable insights into technical aspects of standardization in Electronics and IT Department.



Day 1 ended with the open house discussions and briefing for next day programme.

Day 2 (28-09-2024) - How to take forward the MoU- presentation by the participants

The second day of the convention emphasized strengthening the collaboration between BIS and academic institutions, with a particular focus on enhancing the existing Memoranda of Understanding (MoUs). Shri Rajeev Sharma, Sc-G & DDG (Standardization), outlined a strategic roadmap for integrating BIS standards into academic research and curricula. He highlighted the importance of prioritizing Indian Standards (IS) in academic work and research papers, advocating their use over international alternatives. He also stressed the pivotal role academic institutions will play in promoting Indian standards through research contributions, as well as encouraging faculty members to actively participate in the standardization process.



Actionable Points and Key Takeaways:



1. **Training of Trainers:** BIS could launch a program to train the professors of MoU partner institutes, enabling them to effectively educate students and other stakeholders about the Indian standards.
2. **BIS Involvement in Curriculum Development:** Involving BIS officers in the Board of Studies at academic institutions can facilitate the seamless integration of standards into technical education. This collaboration could lead to the introduction of a standards course for first-year BTech students, aligning it with mandatory courses like Universal Human Values (UHV) and Creative Programming Skills and Innovation (CPSI) as required by AICTE. Additionally, a collaborative module on standards, developed jointly by faculty and BIS officials, should be incorporated into all engineering programs to promote awareness and practical application of standards in academic work.
3. **Collaboration with Technical Education Societies:** BIS could establish partnerships with the Indian Society for Technical Education and IETE to expand outreach, as these organizations have extensive membership across academic institutions.
4. **Collaborative R&D Projects with Academic Institutes:** BIS could initiate proposals for collaborative R&D projects with academic institutions focused on developing new standards, while also extending opportunities for R&D project awards to students. This partnership could lead to joint research publications that enhance the development of better standards in emerging technologies. Additionally, BIS might explore sponsoring PhD students for research projects in these critical areas, further strengthening the collaboration between academia and industry.
5. **Standard Operating Procedures for Research:** BIS could collaborate with academic institutions to develop Standard Operating Procedures (SOPs) that require the incorporation of standards in thesis writing and research projects. Furthermore, initiatives for joint R&D projects between academia and BIS could be established to facilitate the development of new standards.
6. **Professional Elective Course:** Academic institutions should consider introducing a professional elective for BTech students covering:
 - Historical development and significance of standards
 - Overview of standardization and standards agencies
 - Existing and upcoming standards from BIS
 - The process of standards development and documentation

This could include practical components for 2 credits, such as:

- Minor projects/Dissertations on drafting standards
- Research on standards relevant to students' interests
- Field surveys and interactions with professionals in the field.

7. NPTEL Course Offering and Integration with National Education Policy: A course on national and international standards could be offered as an NPTEL MOOC via SWAYAM, lasting 8-12 weeks and providing 2-3 units of credit. Additionally, consideration should be given to incorporating standards into the framework of the National Education Policy (NEP-2020) to enhance their relevance in education.

The convention concluded with Quality pledge by Smt Bhavani, Scientist-F and Head(CNBO) and Vote of Thanks by Smt Srithi Dixit, Scientist-D, followed by the field visit for all the delegates. All participants expressed their gratitude to BIS for organizing such a well-executed event. This convention is expected to significantly benefit the collaboration between the organizations, serving the broad national interest in the future.