



भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG, NEW DELHI 110002

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कार्यवृत्त

हमारा संदर्भ: सीईडी 46:P21/ए-2.3

26 फरवरी 2024

विषय: सूचना और संचार सक्रिय संस्थापन के लिए पैनल, सीईडी 46:P21,
की तीसरी बैठक के कार्यवृत्त

सीईडी 46:P21 के सभी सदस्य

प्रिय महोदय/महोदया,

हमें, सूचना और संचार सक्रिय संस्थापन के लिए पैनल, सीईडी 46:P21, की तीसरी बैठक जो 12 दिसंबर 2023 को नई दिल्ली में सम्पन्न हुई, के कार्यवृत्त भेजते हुए प्रसन्नता हो रही है। कार्यवृत्त की पुष्टि अध्यक्ष, श्री ए. के. मित्तल द्वारा की जा चुकी है।

आपसे अनुरोध है कि कार्यवृत्त का अवलोकन करें और इसकी यथार्थता पर अगर कोई सम्मतियाँ हों तो अधोहस्ताक्षरकर्ता को भेज दें। यदि दो सप्ताह पश्चात् तक कोई सम्मति प्राप्त नहीं होती तो आपकी सुविधा के लिए यह समझा जाएगा कि आपने कार्यवृत्त का अनुमोदन कर दिया है।

जिन सदस्यों को उपरोक्त बैठक में कुछ कार्य सौंपे गये हैं उनसे अनुरोध है कि समिति के निर्णय के अनुसार वे उन्हें शीघ्र पूरा करके भेजें ताकि आगे की उचित कार्रवाही की जा सके।

सधन्यवाद,

भवदीय

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(अभिषेक शर्मा)

वैज्ञानिक 'बी' (सिविल इंजीनियरिंग)

ई मेल: ced46@bis.gov.in

सलंगन: उपरिलिखित

जैसा कि आपको विदित है कि आपको सभी प्रलेख/पत्राचार ईमेल द्वारा भेजे जा रहे हैं। यह आवश्यक है कि हमारे पास आपका सही ई मेल ID हो ताकि उपरोक्त आपके पास पहुंच सके। इसलिये जब भी आपके ई मेल ID में कोई परिवर्तन हो ता हमें सूचित करें।



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Phone: + 91 11 23230131, 23233375, 23239402 Extn 4402; Fax: + 91 11 23235529

MINUTES

Our Ref: CED 46:P21/A-2.3

26 February 2024

Subject: Minutes of the Third Meeting of the Panel for Information and Communication Enabled Installations, CED 46:P21

ALL MEMBERS OF CED 46:P21

Dear Madam/Sir,

Please find enclosed a copy of the Minutes of the Third Meeting of the Panel for Information and Communication Enabled Installations, CED 46:P21 held on 12 December 2023 in New Delhi. The Minutes have been duly approved by the Convener, Shri A. K. Mittal.

Comments, if any, confined to the accuracy of recording may please be sent to the undersigned at the earliest, preferably within two weeks' time. If no reply is received within the above period, we may be permitted to presume your approval of the Minutes as recorded.

The members who have been entrusted with some responsibility as recorded in the above minutes are requested to provide their inputs at the earliest as per the decision of the Panel so that further necessary action can be taken on priority.

Thanking you and with regards,

Yours faithfully,

Sd/-

(Abhishek Sharma)
Scientist 'B' (Civil Engg)
e-mail: ced46@bis.gov.in

Encl: As above

As you are aware, a number of important documents/communications are sent to the members of BIS Technical Committees through e-mail. In order to ensure that these reach you, it is necessary that we have your latest e-mail ID. You may, therefore, keep us informed whenever there is any change in your e-mail ID. Further, in case you have still not sent your e-mail ID details to us, you are requested to send the same immediately.

BUREAU OF INDIAN STANDARDS

MINUTES

**Panel for Information and Communication
Enabled Installations, CED 46:P21**

: Third Meeting

Tuesday, 12 December 2023

: 1400 h to 1700 h

In HYBRID Mode from

**Dr Lal C Verman Hall, Bureau of Indian Standards, Manak Bhavan
9 Bahadur Shah Zafar Marg, New Delhi 110 002**

Convener: Shri A.K. Mittal

**Member Secretaries: Shri Arunkumar S
Smt Madhurima Madhav**

Member Physically Present:

1)	Dr Shiv Kumar	Broadband India Forum, New Delhi
2)	Shri Hemchand Rajput	Shyam Spectra Private Limited, Gurugram (formerly UBICO)

Member Virtually Present:

3)	Shri Ninad Mohan Desai	Building Industry Consulting Service International India District, Mumbai
4)	Shri Thota Gowrinaidu	Rep. Central Industrial Security Force, New Delhi
5)	Shri Vikram Tiwathia	Cellular Operators Association of India, New Delhi
6)	Shri Kshem Kapoor	Rep. Cellular Operators Association of India, New Delhi
7)	Ms Priya	Rep. Cellular Operators Association of India, New Delhi
8)	Shri Suprateek Gulia	Rep. Cellular Operators Association of India,

		New Delhi
9)	Shri Ashok Kumar	Rep. Department of Telecommunication, Ministry of Communications and IT, New Delhi
10)	Shri Rahul Jain	Rep. Department of Telecommunication, Ministry of Communications and IT, New Delhi
11)	Shri Nilesh Kumar Purey	Gujarat International Finance, Tec-city Company Limited, Gandhinagar
12)	Smt Shruti Goel	Proion Consultants, New Delhi

Invitees:

13)	Shri Mahendra Srivastava	Telecom Regulatory Authority of India, New Delhi
14)	Shri Tejpal Singh	Telecom Regulatory Authority of India, New Delhi
15)	Shri Hemant	Telecom Regulatory Authority of India, New Delhi

BIS Directorate General:

- 16) Shri Sanjay Pant, Deputy Director General (Standardization-II)
- 17) Shri Devansh Deolekar, Sc 'D' [Electronics & Information Technology Department (LITD)]
- 18) Shri Abhishek Sharma Scientist 'B'/Assistant Director (Civil Engineering)

Item 0 OPENING REMARKS

0.1 Smt Madhurima Madhav, initiated the meeting, acknowledging the presence of key personalities responsible for revising the National Building Code of India (NBC), including the Convener, Shri A. K. Mittal. She welcomed all the members and Shri Sanjay Pant, Deputy Director General (Standardization) and requested for their expert inputs during the meeting.

0.2 Shri Sanjay Pant expressed his appreciation for the collaborative efforts in revising the NBC 2005 earlier as NBC 2016. He highlighted the significant work done in the previous version in which the Chapter on 'Information and Communication Enabled Installations' was introduced in the Code as a new Section 6 of Part 8 'Building Services'. Shri Pant briefed about the importance of adapting the Code to effectively implement the provisions in the construction activity of buildings with respect to the Information and Communication-related installations. Citing the proposed next revision by the end of 2025, he mentioned that more professionals be involved to initiate and

accomplish this revision of the Code. He once again welcomed all the members and the Convener, Shri A. K. Mittal to the meeting.

0.3 Shri A. K. Mittal, while welcoming the members to this meeting mentioned/recalled about the deliberations in the previous two meetings. He mentioned that this particular field of ICT is fast changing and newer technologies emerge as innovations happen across the world. He requested that information about Code-compliant buildings and advantages felt and challenges faced by them be shared by the members in future meetings. In particular, Shri Mittal mentioned that the current and future challenges regarding comfort as well as security aspects need to be further enhanced in the Code. He acknowledged the challenges faced while developing the previous version and highlighted the evolving technology landscape as a catalyst for potential amendments. He mentioned that one of the potential areas to be addressed in the new version is ICT enablement of street furniture for supporting next generation mobile services. He emphasized the need for open-mindedness to improvements and encouraged members to share their insights during the discussions. He solicited the active participation of the members, particularly TRAI and DOT, during the future meetings as well to prepare the draft of the revision. He encouraged all the members to collaborate with an advanced target of December 2024 in mind.

0.4 Shri Arunkumar S, Head and Director (Civil Engineering Department) highlighted the ongoing efforts by BIS which is organizing meetings of all the 22 Panels so as to accomplish the fifth version of the NBC by the year 2025.

With these, it was decided to take up the Agenda, item-wise.

Item 1 CONFIRMATION OF MINUTES OF THE LAST MEETING

1.1 There being no comments on the Minutes of the second meeting of the Panel held on 11 December 2015 in New Delhi and circulated vide BIS DG letter No. CED 46:P21/A-2.2 dated 15 January 2016, the Panel confirmed the Minutes.

Item 2 COMPOSITION

2.1 The Panel noted its present composition as reconstituted by the National Building Code Sectional Committee, CED 46 and given at Annex 1 to Agenda. The following decisions were made;

a) To seek the interest of the following to be a member on the Panel:

- 1) Municipal Corporation of Delhi, New Delhi
- 2) New Delhi Municipal Council, New Delhi
- 3) Bruhat Bengaluru Mahanagara Palike, Bengaluru
- 4) Brihan Mumbai Municipal Corporation, Mumbai

- b) The following organizations to be provided one final opportunity regarding their commitment and interest to be a part of the Panel, failing which they may be removed from the Panel in the next meeting:
- 1) Military Engineer Services (E-in-C's Branch), New Delhi
 - 2) The Indian Institute of Architects, Mumbai
 - 3) The Institution of Engineers (India), Kolkata
- c) As desired by the representatives of Telecom Regularity Authority of India, New Delhi present in the meeting, TRAI to be invited in the subsequent meetings unless formally co-opted for which TRAI would write to BIS separately.
- d) To once again write to the following organizations to review their nominees, who could not attend today's meeting:
- 1) Airports Authority of India, New Delhi
 - 2) Internet Service Providers Association of India, New Delhi
 - 3) Roads and Buildings Department, Govt. of Telangana, Hyderabad
 - 4) Sterlite Technologies, Pune
 - 5) Telecom Equipment Manufacturer's Association, New Delhi (Formerly TSDMA)
 - 6) Town and Country Planning Organization, New Delhi
- e) As informed by him, Shri Hem Chand Rajput will represent M/s Shyam Spectra Private Limited, Gurugram (Formerly UBICO Networks Private Limited, Gurugram)

Item 3 PROJECT OF REVISION OF NBC

3.1 The Panel noted the information regarding the comprehensive exercise of revision of NBC 2016, being executed by the 22 Panels to bring updates to the various Parts/Sections of NBC 2016, so as to bring out a most modern and state-of-the-art revision of the Code.

3.2 The Panel noted the existing chapter on Information and Communication Installations, that is, Part 8/Section 6 of NBC 2016 and its contents as given in Annex 3 to the Agenda. The Panel agreed for necessary alignment of the chapter with current industry standards and practices; the inclusion of potential areas that are required; and also the amendments & enhancements in the existing chapter. As in the Agenda, the Panel had invited the representatives of TRAI, New Delhi to make their presentation regarding ratings of buildings/areas for digital connectivity; apart from requesting the members to share their thoughts and experiences to enable arrive at a comprehensive revision. It was then agreed to examine the comments received from TRAI as given in Item 4 for further consideration.

Item 4 COMMENTS RECEIVED ON PART 8/SECTION 6 'INFORMATION AND COMMUNICATION ENABLED INSTALLATIONS'

4.1 The Panel noted the detailed recommendations of TRAI regarding amendments to the Model Building Bye-Laws (MBBL) and the National Building Code of India 2016 (NBC 2016) to incorporate provisions on Digital Connectivity Infrastructure (DCI), as given in Annex 4 to the Agenda. Representatives of TRAI delivered a presentation to the Panel, which broadly addressed the following:

Overview of Presentation:

- **Purpose and Philosophy:** The presentation aimed to outline the thought process behind the recommendations for Information and Communication Enabled Installations (ICEI) and DCI. Emphasis was placed on collaboration among stakeholders and the need for a comprehensive framework to support digital connectivity.
- **DCI Framework: Ownership and Development:** Proposals were made for the development of DCI as a part of every construction project, ensuring it is integral to the planning process.
- **Certified Professionals:** Introduction of certified professionals, such as DCI Designers, DCI Engineers and DCI Evaluator to ensure the quality and adherence to standards during the development and implementation of DCI.
- **Phased Transition:** Acknowledged that not all buildings and locations could immediately adopt the DCI framework. Proposed a phased transition with priority to critical public infrastructure.
- **Regulatory Recommendations:** Advocated for the creation of a new license provision for DCIP (Digital Communication Infrastructure Provider) to facilitate the development of active infrastructure. Ensured benefits and incentives for service providers to encourage their participation.
- **Collaboration and Stakeholders:** Emphasized collaboration among stakeholders, including property managers, developers, service providers, and regulatory bodies, to create a conducive ecosystem for digital connectivity.
- The presentation provided a comprehensive overview of the proposed framework for ICEI and DCI. It highlighted the importance of collaboration, phased implementation, and the creation of regulatory provisions to support the development of digital communication infrastructure.

Representatives of TRAI also provided a copy of their recent publication titled 'Recommendations on Rating of Buildings or Areas for Digital Connectivity' February 2023, for consideration by the Panel for suitable inclusion in the respective chapters of NBC.

The Panel appreciated the efforts of TRAI and agreed to favourably consider the suggestions suitably in the revision of the chapter of the Code.

4.2 The Panel also considered the recommendations of the Committee formed under the Department of Telecommunication chaired by DDG(AS), to suggest procedures, norms, and methodologies for issuing No Objection Certificate for In-Building Solutions (IBS-NOC), as given in Annex 5 to the Agenda. The recommendations were towards providing a roadmap for implementing TRAI's suggestions and facilitating the seamless integration of digital connectivity infrastructure. The representatives of Department of Telecommunication informed that formally the final approval of the recommendations will be obtained soon. The Panel agreed to consider the matter suitably in the revision of the chapter of the Code.

4.3 The Panel extensively discussed the revision of this chapter of the Code and noted/decided as follows:

- a) An important point of consideration was the necessity of Wi-Fi infrastructure inside buildings to ensure seamless connectivity. Reference was made to international practices, highlighting the importance of aligning local standards with global benchmarks.
- b) Regarding the suggestion to include Cyber Security aspects, it was noted that the same is important, and suitable reference may be considered to be made to other standards formulated by LITD of BIS.
- c) Integrating Building Management System aspects using digital technologies and internet of things are being followed in the Gujarat International Finance Tec-City buildings as mentioned by its representative who also indicated that the same is useful for the Command Center and to the Smart City Authorities. It was also mentioned that GIFT City has greatly benefited by use of the provisions of the chapter on ICT enabled installations. And that the Development Control Regulations for GIFT have incorporated relevant provisions including suitable IBMS for hospitals, schools, residences and commercial buildings. They agreed to share a copy of the same.
- d) An option for specific type of building occupancies will may also be required to be considered while taking care of redundant paths for ICT cabling purposes.
- e) TRAI representative suggested that the provisions on cabling works leading into the building/structure be also be suitably updated.
- j) TRAI also suggested that in the case of wireless communication, depending on the requirement and need of the consumer, respective systems have to be recommended in the Code. On the same, it was also noted that the role of third party is essential in arriving at the speed/user experience at various places within the building, particularly as the licence holder can guarantee the communication

speed up to the end of their usual infrastructure cabling. Co-ordination between the service provider and the property manager will be essential for the above. Members cited the example of practice in France where an alternate solution has been mandated to achieve the desired speeds in wireless communication inside the buildings.

- f) The BIS Officer from its Electronics & Information Technology Department (LITD) mentioned that their Committee has identified the following 6 IEC standards considering that the same was a strategic move towards achieving uniformity and compatibility in cabling infrastructure, and LITD has adopted/are adopting all of the following:

IS/ISO/IEC 11801-1 : 2017	Information technology Generic cabling for customer premises Part 1: General requirements
IS/ISO/IEC 11801-2 : 2017	Information technology Generic cabling for customer premises Part 2: Office premises
IS/ISO/IEC 11801-3 : 2017 (under publication)	Information technology Generic cabling for customer premises Part 3: Industrial premises
ISO/IEC 11801-4:2017 (not yet adopted by BIS)	Information technology Generic cabling for customer premises Part 4: Single-tenant homes
IS/ISO/IEC 11801-5 : 2017 (under publication)	Information technology Generic cabling for customer premises Part 5: Data centres
ISO/IEC 11801-6:2017 (not yet adopted by BIS)	Information technology Generic cabling for customer premises Part 6: Distributed building services

The adopted standards of BIS are available for access (by members of this Panel only for this BIS work for revising NBC considering the Copyrighted IEC standards) through the following link:

https://drive.google.com/drive/folders/1ab2g_EP0N0g_L84VSA1b1jCtfKGrk5b?usp=sharing

- k) The discussions delved into the intricate dynamics of inside and outside plant infrastructure, with particular emphasis on the cables entering buildings. Shri Ninad Desai contributed to the discourse by suggesting the formation of subgroups. These Subgroups could delve into specific areas, notably inside plant, outside plant, and radio aspects. The idea behind this initiative was to facilitate in-depth exploration and contribute to the development of robust standards. The Convener endorsed Shri Desai's proposal, expressing optimism about the effectiveness of Subgroups in ensuring a comprehensive and well-rounded standards development process.

The meeting concluded with plans for future engagements, including document reviews and the formation of Subgroups. Also the members agreed to inform their willingness to contribute in the relevant section of the Chapter. Based on the willingness received further action for creating the subgroups will be taken.

Item 5 DATE & PLACE OF THE NEXT MEETING

M/s GIFT City Company Ltd. kindly agreed to provide a tour of their facilities in about half a day followed by a meeting of this Panel. It was decided to hold the next meeting of the Panel in the GIFT City, Gandhinagar (in March 2024).

Item 6 ANY OTHER BUSINESS

Members thanked the Convener, Shri A. K. Mittal for ably conducting the meeting and providing leadership in the launching of this revision of the new chapter on Information and Communication Enabled Installations. BIS Secretariat also thanked the Convener and all the members for taking an active interest during the meeting resulting in useful deliberations.
