**BUREAU OF INDIAN STANDARDS**

**AGENDA**

10ᵗʰ **MEETING OF 'CODING AND PROCESSING OF AUDIO, PICTURE, MULTIMEDIA AND HYPERMEDIA INFORMATION SECTIONAL COMMITTEE, LITD 23**
(**ONLINE** Meeting)

| Time | 10:00 AM - 11:00 AM |
|---|---|
| Place | Virtual |
| Meeting link | https://bismanak.webex.com/bismanak/j.php?MTID=m6c51bc0d3ba5d696c28419b2fbff61ca |
| Meeting ID | 25105002880 |
| Password | 23@tenth (23183684 from video systems) |

**Chairperson:** Shri Mahesh Kulkarni, Ex-Senior Director, CDAC

**Member Secretary:** Shri Priyanshu Sharma, Scientist-B & Assistant Director, BIS

**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 (9ᵗʰ) meeting of Coding & Processing of Audio, Picture, Multimedia & Hypermedia Information Sectional Committee, LITD 23, which was held on 24 January 2023 were circulated vide email dated 01 February 2023. No comments have been received.

## ITEM 2 ISSUES ARISING OUT OF THE PREVIOUS MEETINGS

| S.No | Action Item | Action to be taken by | Status |
|------|-------------|-----------------------|--------|
| 1. | Review of Standards which are due for review in 2022-23 as per MOM of 9th meeting Item 5.2 | Member Secretary | 1. Reaffirmation completed |
| 2. | Reorganization of committee composition | Member Secretary | Done |
| 3. | Submission of white paper on various aspects and subdomain related to Audio and Video - Shri Madhuvarshitt | Shri Madhuvarshitt | Awaited |
| 4. | Modification of expert nomination in Working Group of SC-29 | Member Secretary | Done |
| 5. | Regarding update of Working Groups of SC 29 from Ittiam and Samsung | Nominated experts | Received from Samsung, Awaited from Ittiam |
| 6. | Updating the Committee composition & Sending Letters for co-option to organizations | Member Secretary | Done |

## ITEM 3 PROGRAM OF WORK

**3.1** The present program of work of LITD 23 is given in **Annex -2**.

*THE COMMITTEE MAY NOTE*

## ITEM 4 SCOPE & COMPOSITION OF SECTIONAL COMMITTEE

**4.1** As decided in last meeting, following academic institutions and organization were approached to provide nominations subject to their acceptance of offer of representation.

    a) IIT Jodhpur – Contact details are awaited from Fraunhofer India
    b) IIT Delhi – Letter has been sent to Director, IIT Delhi. Response is awaited.
    c) IIT Bhilai – Letter has been sent to Director, IIT Bhilai. Response is awaited.
    d) IIT Gandhinagar – Letter has been sent to Director, IIT Gandhinagar. Response is awaited.
    e) Reliance Jio – Letter for Co-option has sent Vice President. Response is awaited

*THE COMMITTEE MAY REVIEW & DECIDE*

**4.2** The Scope and composition of LITD 23 is given in **Annex 1**. The committee may review the scope & composition.

*THE COMMITTEE MAY CONSIDER.*

## ITEM 5 REVIEW OF PUBLISHED/UNDER DEVELOPMENT STANDARDS

### 5.1 Draft Indian Standards under Development

The following Indian standards have either completed Wide circulation stage or are currently under Wide circulation. The committee may decide.

| SI. No. | Doc. No. | Title | Secretariat Remarks |
|---|---|---|---|
| 1. | LITD/23/21432<br><br>Revision in line with ISO/IEC 14496-10 : 2020 | Information Technology - Coding of Audio-Visual Objects Part 10 Advanced Video Coding | The base standard has been further revised by ISO/IEC 14496-10 : 2022. The committee may decide. |
| 2. | LITD/23/21435<br><br>Revision in line with ISO/IEC 14496-12 : 2020 | Information Technology - Coding of Audio-Visual Objects Part 12 ISO Base Media File Format | The base standard has been further revised by ISO/IEC 14496-12 : 2022. The committee may decide. |

### 5.2 Review of Published Standards

In accordance with BIS procedures, Indian Standards which are in existence for more than 3 years are to be reviewed for reaffirmation/revision/withdrawal. The committee already reviewed 27 standards during the 9th meeting. The committee may also review the following standard since it is due in 2022-23, the latest status along with International standard on which this is based is provided below:

| SI. No. | IS No. | Title | Review due on | Base Standard | Secretariat Remarks |
|---|---|---|---|---|---|
| 1. | IS 16125 (Part 1) : 2014 | Information technology - Multimedia content description interface: Part 1 systems | September, 2023 | ISO/IEC 15938-1 : 2002<br>Not Revised | May be reaffirmed |
| 2. | IS 16125 (Part 2) : 2013 | Information technology - Multimedia content description interface: Part 2 description definition language | September, 2023 | ISO/IEC 15938-2 : 2002<br>Not Revised | May be reaffirmed |

## ITEM 6 INTERNATIONAL ACTIVITES

**6.1** LITD 23 is National Mirror Committee (NMC) to ISO/IEC/JTC 1 SC 24 **'Computer graphics, image processing and environmental data representation'** & ISO/IEC/JTC 1 SC 29 **'Coding of audio, picture, multimedia and hypermedia information'**. Scope of the committees is given in **Annex -3**.

*THE COMMITTEE MAY NOTE*

**6.2** India is Participating member (P) of ISO/IEC JTC 1/SC 29 and as P member has obligation to vote and send response on all the documents emanating from this subcommittee. India is currently observing member (O) of JTC1/ SC 24.

*THE COMMITTEE MAY NOTE*

**6.3** Experts registered in working groups of JTC1/SC 24 & JTC 1/SC 29 are mentioned in **Annex 3.**

Each Expert is requested to provide update (Major standards of WG, standards in which expert is contributing and brief of standard and their contribution in the standard) w.r.t their working group. The report submitted by Samsung experts is given in **Annex-7**

*THE COMMITTEE MAY REVIEW*

## 6.4 FUTURE ISO/IEC JTC 1 SC 24 & SC 29 MEETINGS

**6.4.1** 43rd **plenary** meeting of **JTC 1/SC 29** is scheduled to be held during **23-24 July 2023**, It is planned to be held in Geneva (Switzerland). SC 29 Meeting final draft agenda is attached in **Annex-4**. Members are requested to consider participation in the meeting.

**6.4.2** Dr Manish Gupta intends to attend the 100th **ISO/IEC JTC1/SC 29/WG 1** meetings scheduled to be held in Portugal from 15 - 21 July 2023 and the **ISO/IEC JTC1/SC 29** Plenary meetings from 23-24 July 2023 in Geneva, Switzerland **IN PERSON**. As apprised by him, he is working on the JPEG DNA exploration experiment with the current SC 29/WG1 Convenor Prof. Touradj of EPFL. He attended the 99th JPEG meeting virtually from 24 to 28 April 2023. As part of this project, he is contributing to some of the following experiments:

1. Exploration experiment on solutions to make JPEG DNA quaternary streams more robust
2. Exploration experiment for realistic and effective error simulations.

*THE COMMITTEE MAY FINALIZE THE INDIAN DELEGATION*

## 6.4.3 JTC 1/SC 29 WG meetings:

The various **SC 29/WG** meetings are scheduled during **11 July- 17 July 2023**

Registration & participation of members in working group meetings has to be approved by the Chair LITD 23 and competent authority of BIS.

Experts are expected to provide report of the participation in working group meeting and the report shall include:

1. Working group attended
2. Project of Working Group
3. Specific contribution by the expert for the project
4. Action item arising out of the meeting, specific to the project

*THE COMMITTEE MAY CONSIDER.*

## 6.5 Standard of JTC 1/SC 29 & JTC 1/SC 24

**6.5.1** A list of standards published in the last year by JTC 1/SC 29 is given in **Annex-5**.

**6.5.2** A list of standards published in the last year by JTC 1/SC 24 is given in **Annex-6**.

*THE COMMITTEE MAY EXAMINE AND IDENTIFY THE STANDARDS REQUIRED TO BE ADOPTED AS NATIONAL STANDARDS*

## 6.6 DOCUMENTS DUE FOR VOTING

Following documents have been circulated for inputs of committee members, last date to provide inputs to JTC 1/SC 29 is mentioned below:

| S. No | Ref No | Stage | Title | Due date for voting |
|---|---|---|---|---|
| 1. | ISO/IEC FDIS 23090-12 | FDIS | Information technology — Coded representation of immersive media — Part 12: MPEG immersive video | 4 Jul 2023 |
| 2. | ISO/IEC FDIS 23001-7 (Ed 4) | FDIS | Information technology — MPEG systems technologies — Part 7: Common encryption in ISO base media file format files | 5 Jul 2023 |
| 3. | ISO/IEC DIS 15444-4 (Ed 4) | DIS | Information technology — JPEG 2000 image coding system — Part 4: Conformance testing | 6 Jul 2023 |
| 4. | ISO/IEC 23094-2:2021/DAmd 1 | DIS | Information technology – General video coding — Part 2: Low complexity enhancement video coding — Amendment 1: Additional levels | 6 Jul 2023 |

| | | | | |
|---|---|---|---|---|
| 5. | ISO/IEC DIS 10918-4 (Ed 2) | DIS | Information technology — Digital compression and coding of continuous-tone still images — Part 4: APPn markers | 7 Jul 2023 |
| 6. | ISO/IEC 23094-1:2020/FDAmd 1 | FDIS | Information technology — General video coding — Part 1: Essential video coding — Amendment 1: Green metadata supplemental enhancement information | 7 Jul 2023 |
| 7. | ISO/IEC CD 21122-2 | CD | Information technology — JPEG XS low-latency lightweight image coding system — Part 2: Profiles and buffer models | 9 Jul 2023 |
| 8. | ISO/IEC CD 21122-3 | CD | Information technology — JPEG XS low-latency lightweight image coding system — Part 3: Transport and container formats | 9 Jul 2023 |
| 9. | ISO/IEC CD TR 23002-9 | CD | Information technology — MPEG video technologies — Part 9: Film grain synthesis technologies for video applications | 9 Jul 2023 |
| 10. | ISO/IEC 23008-12:2022/CD Amd 2 | CD | Information technology — MPEG systems technologies — Part 12: Image File Format — Amendment 2: Renderable text items and other improvements | 11 Jul 2023 |
| 11. | ISO/IEC CD 23090-32 | CD | Information technology — Coded representation of immersive media — Part 32: Carriage of haptics data | 11 Jul 2023 |
| 12. | ISO/IEC 23090-14/CD Amd 2 | CD | Information technology — Coded representation of immersive media — Part 32: Carriage of haptics data | 13 Jul 2023 |
| 13. | ISO/IEC NP 21617-1 | NP | JPEG Trust — Part 1: Core Foundation | 14 Jul 2023 |
| 14. | ISO/IEC 23090-7:2022/CD Amd 1 | CD | Information technology — Coded representation of immersive media — Part 7: Immersive media metadata — Amendment 1: Common metadata for immersive media | 16 Jul 2023 |
| 15. | ISO/IEC DIS 23001-17 | DIS | Information technology — MPEG systems technologies — Part 17: Carriage of uncompressed video and images in ISO Base Media File Format | 19 Jul 2023 |
| 16. | ISO/IEC 23000-18:2018 | SR | Information technology — Multimedia application formats (MPEG-A) — Part 18: Media linking application format | 2 Sep 2023 |

| 17. | ISO/IEC 23006-1:2018 (Ed 3) | SR | Information technology — Multimedia service platform technologies — Part 1: Architecture | 2 Sep 2023 |
|---|---|---|---|---|
| 18. | ISO/IEC 23091-1:2018 | SR | Information technology — Coding-independent code points — Part 1: Systems | 2 Sep 2023 |
| 19. | ISO/IEC 23091-3:2018 | SR | Information technology — Coding-independent code points — Part 3: Audio | 2 Sep 2023 |

*THE COMMITTEE MAY REVIEW AND PROVIDE INPUTS ON THE DOCUMENTS*

## ITEM 7 PROCESS REFORMS IN STANDARDIZATION ACTIVITY OF BIS

Member Secretary will be giving a presentation on the Process Reforms in Standardization Activity of BIS to the committee. The presentation is given in **Annex 8** of the agenda:

➢ Rolling Action plan for the year 2023-24

➢ Annual calendar of LITD 23 meetings

➢ Research projects to be taken up for inclusion of empirical data and insights

➢ Closer examination of the new work item proposals received from ISO/IEC

➢ Measures to ensure effective participation by the Indian experts at ISO/IEC levels

➢ National and international events to be participated

➢ Scientific journals and periodicals to be subscribed

➢ Creation of pool of experts

*THE COMMITTEE MAY NOTE & PROVIDE INPUTS*

## ITEM 8 DATE AND PLACE FOR THE NEXT MEETING

## ITEM 9 ANY OTHER BUSINESS

Scope: To prepare Indian Standards relating to:

a) Coded representation of audio, picture, multimedia and Hypermedia information and sets of compression and control functions for use with such information, and

b) Interfaces for information technology based applications relating to computer graphics and image processing

## Committee Composition

| S.No. | Organization | Member Name | 7th 17/01/2022 | 8th 01/08/2022 | 9th 24/01/2023 | Attendance in last 3 meetings |
|---|---|---|---|---|---|---|
| 1. | IN PERSONAL CAPACITY | Shri Mahesh Kulkarni (Chairperson) | Y | Y | Y | 3/3 |
| 2. | Broadcast Engineering Consultants India Limited, New Delhi | Shri Khushwinder Singh Bhatia (P) Shri Avinash Khanna (A) Ms Pooja Srivas (A) | N | N | Y | 1/3 |
| 3. | Centre for Development of Advanced Computing, Pune | Shri Vivek Khaneja (P) | Y | N | N | 1/3 |
| 4. | Consumer Electronics and Appliances Manufacturers Association, Noida | Shri Mohit Verma (P) Ravi Shankar Chaudhary (A) | Y | N | N | 1/3 |
| 5. | DA-IICT Gandhinagar | Prof Manish K Gupta(P) | - | - | Y | 1/1 |
| 6. | Directorate General Doordarshan, Prasar Bharti, New Delhi | Shri J.K. Chandira (P) Shri Harshit Kumar (A) | Y | Y | Y | 3/3 |
| 7. | Dolby Technology India Private Limited, Mumbai | Shri Jayant Shah (P) Shri Rajesh Bhat (A) Shri Ashok Kumar Bhatnagar (A) | Y | Y | Y | 3/3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8. | Fraunhofer Office India, Bengaluru | Ms. Anandi Iyer (P)<br>Shri Sharadindoo Sadhu (A) | Y | Y | Y | 3/3 |
| 9. | IIT Kanpur | Prof. Vipul Arora | - | - | Y | 1/1 |
| 10. | Instrive Softlabs Pvt Ltd | Smt Madhuvarshitt (P)<br>Shri Ashok (A) | - | Y | N | 1/2 |
| 11. | Intel India Technology Private Limited, Bengaluru | Shri Pradeep B.G (P) | N | N | N | 0/3 |
| 12. | Ittiam Systems Private Limited, Bengaluru | Shri Murali Babu Muthukrishnan (P)<br><br>Shri Shailesh Ramamurthy (A)<br>Shri Jeeva Raj (Y)<br>Shri Jay N. Shingala (A)<br>Shri Mukund Srinivasan (A) | Y | Y | Y | 3/3 |
| 13. | Ministry of Electronics and Information Technology, New Delhi | Smt Asha Nangia (P) | N | N | N | 0/3 |
| 14. | NXP Semiconductors India Private Limited, Bengaluru | Dr. Mahesh Chandra (P) | N | N | N | 0/3 |
| 15. | Peaple Link Unified Communications Pvt Ltd | Shri Asokan | - | Y | N | 1/2 |
| 16. | Samsung India Electronics Private Limited, New Delhi | Dr. Balvinder Singh(P)<br>Shri Raj Narayana Gadde (A)<br>Shri Anubhav Singh(A) | Y | Y | Y | 3/3 |
| 17. | Sasken Communication | Shri Pankaj Bansal | N | N | N | 0/3 |

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|---|---|---|---|---|---|---|
| | Technologies Limited, Bengaluru | (P) Shri Dorairaj Vembu (A) | | | | |
| 18. | Standardization Testing and Quality Certification (STQC) | Ms Anjali Jain (P) Ms Swati Gupta (A) | N | N | N | 0/3 |
| 19. | Texas Instruments (India) Private Limited, Bangalore | Shri Mihir Mody (P) | N | N | N | 0/3 |
| 20. | Xilinx India Technology Services Private Limited, Hyderabad | Shri Mahesh Narain Shukla (P) Shri Vijay Kumar Bansal (A) Shri Pankaj Kumar Bansal (A) | N | Y | N | 1/3 |