**** **ISO/IEC JTC 1/SC 29/WG 03 N0519**

**ISO/IEC JTC 1/SC 29/WG 03  
MPEG Systems   
Convenorship: KATS (Korea, Republic of)**

**Document type:** Output Document

**Title:** Summary of Systems standards for video codecs after the 6th WG03 meeting

**Status:** Approved

**Date of document:** 2022-01-31

**Source:** ISO/IEC JTC 1/SC 29/WG 03

**No. of pages:** 17 (with cover page)

**Email of Convenor:** young.L @ samsung . com

**Committee URL:** <https://isotc.iso.org/livelink/livelink/open/jtc1sc29wg3>

**INTERNATIONAL ORGANIZATION FOR STANDARDIZATION**

**ORGANISATION INTERNATIONALE DE NORMALISATION**

**ISO/IEC JTC 1/SC 29/WG 03 MPEG SYSTEMS**

**ISO/IEC JTC 1/SC 29/WG 03 N** **0519**

**January 2022, Virtual**

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| --- | --- |
| **Title** | **Summary of Systems standards for video codecs after the 6th WG03 meeting** |
| **Source** | **WG 03, MPEG Systems** |
| **Status** | **Approved** |
| **Serial Number** | **21354** |

# HEVC

## ISO/IEC 23000-19 2nd edition AMD 3 8K HEVC, 4K HFR HEVC and Chroma Location for CMAF

### Short Description

***Motivations:***

***Objective:***

### Project status

<https://sd.iso.org/projects/project/83528/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [CD](https://isotc.iso.org/livelink/eb3/part/view.do?id=460011) |  | 2021-08-01 | 2021-09-25 | OPEN |  |

| **Stage** | **Version** | **Description** | **Edit draft** | **Target date** | **Limit date** | **Started** | **Status** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **40.00** | **1** | **DIS registered** |  | **2021-10-30** | **2022-03-29** | **2022-01-10** | **Current** |
| 40.20 |  | DIS ballot initiated |  | 2022-03-14 |  |  | Awaiting |
| 40.60 |  | Close of voting |  | 2022-06-06 |  |  | Awaiting |
| 50.00 |  | Final text received or FDIS registered for formal approval |  | 2022-09-26 |  |  | Awaiting |
| 60.60 |  | International Standard published |  | 2023-01-10 | 2023-01-29 |  | Awaiting |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Title | In Charge | TBP | Available | S/N |
|  | ISO/IEC 23000-19 - Common Media Application Format |  |  |  |  |
| 378 | DoC on ISO/IEC 23000-19:2020 CDAM 3 8K HEVC, 4K HFR HEVC and Chroma Location for CMAF | Krasimir Kolarov | N | 2021-10-15 | 20855 |
| 384 | Text of ISO/IEC 23000-19:2020 DAM 3 8K HEVC, 4K HFR HEVC and Chroma Location for CMAF | Thomas Stockhammer | N | 2021-10-15 | 20861 |

# VVC

## ISO/IEC 23000-19:2019 AMD 2 CMAF Media Profiles for MPEG-H 3D Audio, EVC, VVC and other technologies

### Scope

* Definition of CMAF VVC media track
* Definition of CMAF VVC media profile

### Project status

<https://sd.iso.org/projects/project/82530/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [DIS](https://isotc.iso.org/livelink/eb3/part/view.do?id=457439) | 1 | 2021-07-19 | 2021-10-11 | CLOSED |  |
| [CD](https://isotc.iso.org/livelink/eb3/part/view.do?id=454904) |  | 2021-03-02 | 2021-04-06 | CLOSED | - |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Title | In Charge | TBP | Available | S/N |
|  | ISO/IEC 23000-19 - Common Media Application Format |  |  |  |  |
| 479 | Draft DoC on ISO/IEC 23000-19:2020 DAM 2 CMAF Media Profiles for MPEG-H 3D Audio, EVC, VVC and other technologies | Krasimir Kolarov | N | 2022-01-21 | 21195 |
| 480 | Draft text of ISO/IEC FDIS 23000-19 3rd edition Common Media Application Format | Krasimir Kolarov | N | 2022-01-21 | 21196 |

### Notes

* *Sent a liaison to 3GPP, ATSC, DVB, SCTE for review/feedback*

## ISO/IEC 23008-12:2017 AMD 3 Support for VVC, EVC, slideshows and other improvements

### Scope

* VVC image item definition
* VVC subpicture and operating points
* VVC image sequences

### Project status

<https://sd.iso.org/projects/project/81688/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [DIS](https://isotc.iso.org/livelink/eb3/part/view.do?id=454672) | 1 | 2021-04-15 | 2021-07-08 | CREATED |  |
| [CD](https://isotc.iso.org/livelink/eb3/part/view.do?id=451050) |  | 2020-11-10 | 2021-01-04 | CLOSED | - |

<https://sd.iso.org/projects/project/83650/overview>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 10.99 | 1 | New project approved |  |  | 2021-07-22 | Closed |
| **40.99** | **1** | **Full report circulated: DIS approved for registration as FDIS** |  |  | **2021-07-22** | **Current** |
| 50.00 |  | Final text received or FDIS registered for formal approval | 2021-09-29 |  |  | Awaiting |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Title | In Charge | TBP | Available | S/N |
|  | ISO/IEC 23008-12 - Image File Format |  |  |  |  |
| 325 | DoC on ISO/IEC 23008-12:2017 DAM 2 Support for VVC, EVC, slideshows and other improvements | David Singer | N | 2021-07-16 | 20579 |
| 331 | Text of ISO/IEC FDIS 23008-12 2nd edition Image File Format | Frederic MAZE | N | 2021-09-24 | 20585 |

### Notes

* To be published as 2nd edition.

## ISO/IEC 23090-2:202x AMD 1 VVC Support and other improvements

### Short Description

***Motivations:***

***Objective:***

### Project status

<https://sd.iso.org/projects/project/83661/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [CD](https://isotc.iso.org/livelink/eb3/part/view.do?id=463167) |  | 2021-11-08 | 2022-01-02 | CLOSED | - |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Title** | **In Charge** | **TBP** | **Available Date** | **S/N** |
|  | **ISO/IEC 23090-2 - Omnidirectional MediA Format** |  |  |  |  |
| 474 | Text of ISO/IEC DIS 23090-2 3rd edition Omnidirectional MediA Format | Miska Hannuksela | N | 2022-02-04 | 21190 |

### Notes

* To be published as 3rd edition

# EVC

## ISO/IEC 23000-19:2019 AMD 2 CMAF Media Profiles for MPEG-H 3D Audio, EVC, VVC and other technologies

### Scope

* Definition of CMAF VVC media track
* Definition of CMAF VVC media profile

### Project status

<https://sd.iso.org/projects/project/82530/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [DIS](https://isotc.iso.org/livelink/eb3/part/view.do?id=457439) | 1 | 2021-07-19 | 2021-10-11 | CLOSED |  |
| [CD](https://isotc.iso.org/livelink/eb3/part/view.do?id=454904) |  | 2021-03-02 | 2021-04-06 | CLOSED | - |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Title | In Charge | TBP | Available | S/N |
|  | ISO/IEC 23000-19 - Common Media Application Format |  |  |  |  |
| 479 | Draft DoC on ISO/IEC 23000-19:2020 DAM 2 CMAF Media Profiles for MPEG-H 3D Audio, EVC, VVC and other technologies | Krasimir Kolarov | N | 2022-01-21 | 21195 |
| 480 | Draft text of ISO/IEC FDIS 23000-19 3rd edition Common Media Application Format | Krasimir Kolarov | N | 2022-01-21 | 21196 |

### Notes

* *Sent a liaison to 3GPP, ATSC, DVB, SCTE for review/feedback*

## ISO/IEC 23008-12:2017 AMD 3 Support for VVC, EVC, slideshows and other improvements

### Scope

* EVC/VVC image item definition
* EVC/VVC subpicture and operating points
* EVC/VVC image sequences

### Project status

<https://sd.iso.org/projects/project/81688/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [DIS](https://isotc.iso.org/livelink/eb3/part/view.do?id=454672) | 1 | 2021-04-15 | 2021-07-08 | CREATED |  |
| [CD](https://isotc.iso.org/livelink/eb3/part/view.do?id=451050) |  | 2020-11-10 | 2021-01-04 | CLOSED | - |

<https://sd.iso.org/projects/project/83650/overview>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 10.99 | 1 | New project approved |  |  | 2021-07-22 | Closed |
| **40.99** | **1** | **Full report circulated: DIS approved for registration as FDIS** |  |  | **2021-07-22** | **Current** |
| 50.00 |  | Final text received or FDIS registered for formal approval | 2021-09-29 |  |  | Awaiting |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Title | In Charge | TBP | Available | S/N |
|  | ISO/IEC 23008-12 - Image File Format |  |  |  |  |
| 325 | DoC on ISO/IEC 23008-12:2017 DAM 2 Support for VVC, EVC, slideshows and other improvements | David Singer | N | 2021-07-16 | 20579 |
| 331 | Text of ISO/IEC FDIS 23008-12 2nd edition Image File Format | Frederic MAZE | N | 2021-09-24 | 20585 |

### Open issues

* To be published as 2nd edition.

# LCEVC

## ISO/IEC 13818-1:2021 AMD 1 Carriage of LCEVC and other improvements

### Scope

* a new stream type for ISO/IEC 23094-2 (LCEVC) elementary streams;
* descriptors carrying metadata for LCEVC elementary streams;
* constraints for the transport of LCEVC elementary streams;
* a new descriptor for ISO/IEC 23008-3 (kind\_media\_service\_descriptor)

### Project status

<https://sd.iso.org/projects/project/83253/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [DIS](https://isotc.iso.org/livelink/eb3/part/view.do?id=460165) | 1 | 2021-10-04 | 2021-12-27 | CREATED |  |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Title** | **In Charge** | **TBP** | **Available Date** | **S/N** |
|  | **ISO/IEC 13818-1 - Systems** |  |  |  |  |
| 488 | Draft DoC on ISO/IEC 13818-1 8th edition DAM 1 Carriage of LCEVC and other improvements | Karsten Grüneberg | N | 2022-01-21 | 21209 |
| 489 | Draft text of ISO/IEC 13818-1 8th edition FDAM 1 Carriage of LCEVC and other improvements | Yasser Syed | N | 2022-02-04 | 21210 |

### Open issue?

* Question on use of a "regsitration descriptor", in place of the PID, to realise the association between LCEVC and its respective Base bitstream

## ISO/IEC 14496-15:202x AMD 1 Support for LCEVC

### Short Description

***Objective:***

To support storage of LCEVC in ISOBMFF

### Project status

<https://sd.iso.org/projects/project/83337/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [DIS](https://isotc.iso.org/livelink/eb3/part/view.do?id=460223) | 1 | 2021-09-30 | 2021-12-23 | CREATED |  |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Title** | **In Charge** | **TBP** | **Available Date** | **S/N** |
|  | **ISO/IEC 14496-15 - Carriage of NAL unit structured video in the ISO Base Media File Format** |  |  |  |  |
| 472 | DoC on ISO/IEC 14496-15 DAM 1 Support for LCEVC | David Singer | N | 2022-01-21 | 21188 |
| 490 | Text of ISO/IEC 14496-15 FDAM 1 Support for LCEVC | Stefano Battista | N | 2022-01-21 | 21211 |

# Other topics

## *ISO/IEC 23090-13 Video Decoding Interface for Immersive Media*

### Scope

The scope of the VDI specification covers the interface between a media application and the Video Decoding Engine (VDE) of the devices implementing video decoders such as HEVC, VVC, EVC and so on. VDI defines new functions and operations extending the existing VDE capabilities exposed by a Khronos OpenMAX interface.

### Project status

<https://sd.iso.org/projects/project/80899/overview>

| **Type** | **Version** | **Started** | **End date** | **Status** | **Result** |
| --- | --- | --- | --- | --- | --- |
| [CD](https://isotc.iso.org/livelink/eb3/part/view.do?id=460186) |  | 2021-08-09 | 2021-10-03 | OPEN |  |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Title** | **In Charge** | **TBP** | **Available Date** | **S/N** |
|  | **ISO/IEC 23090-13 - Video Decoding Interface for Immersive Media** |  |  |  |  |
| 445 | DoC on ISO/IEC CD 23090-13 Video Decoding Interface for Immersive Media | Youngkwon Lim | N | 2022-01-21 | 21161 |
| 484 | Text of ISO/IEC DIS 23090-13 Video Decoding Interface for Immersive Media | Emmanuel Thomas | N | 2022-01-21 | 21200 |
| 446 | Procedures for standard development and software of ISO/IEC 23090-13 | Emmanuel Thomas | Y | 2022-01-21 | 21162 |
| 514 | Technologies under consideration for VDI | Emmanuel Thomas | Y | 2022-01-21 | 21330 |

## ISO/IEC 23001-11 3rd edition Energy-Efficient Media Consumption (Green Metadata)

### Short Description

***Motivations:***

***Objective:***

### Project status

<https://sd.iso.org/projects/project/83674/overview>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 10.99 | 1 | New project approved |  |  | 2021-07-22 | Closed |
| **20.99** | **1** | **WD approved for registration as CD** |  |  | **2021-07-22** | **Current** |
| 30.00 |  | Committee draft (CD) registered | 2021-10-30 |  |  | Awaiting |

### Reference output document

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Title | In Charge | TBP | Available | S/N |
|  | ISO/IEC 23001-11 - Green Metadata |  |  |  |  |
| 464 | DoC on ISO/IEC CD 23001-11 3rd edition Energy-Efficient Media Consumption (Green Metadata) | Edouard Francois | N | 2022-01-21 | 21180 |
| 495 | Text of ISO/IEC DIS 23001-11 3rd edition Energy-Efficient Media Consumption (Green Metadata) | Edouard Francois | N | 2022-01-28 | 21216 |