

P1857.4

Submitter Email: wgao@pku.edu.cn
Type of Project: New IEEE Standard
PAR Request Date: 28-Oct-2013
PAR Approval Date: 11-Dec-2013
PAR Expiration Date: 31-Dec-2017
Status: PAR for a New IEEE Standard

1.1 Project Number: P1857.4
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for 2nd Generation IEEE 1857 Video Coding

3.1 Working Group: Audio Video Coding Working Group (C/SAB/AVS_1857_WG)

Contact Information for Working Group Chair

Name: Wen Gao
Email Address: wgao@pku.edu.cn
Phone: +86-10-62758116

Contact Information for Working Group Vice-Chair

Name: Cliff Reader
Email Address: cliff@reader.com
Phone: +1-408-867 4884

3.2 Sponsoring Society and Committee: IEEE Computer Society/Standards Activities Board (C/SAB)

Contact Information for Sponsor Chair

Name: Charlene Walrad
Email Address: cwalrad@daven.com
Phone: 650-580-3003

Contact Information for Standards Representative

Name: p eastman
Email Address: peastman@cox.net
Phone: (602) 993-7085

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 06/2014

4.3 Projected Completion Date for Submittal to RevCom: 10/2014

5.1 Approximate number of people expected to be actively involved in the development of this project: 50

5.2 Scope: This standard defines a set of tools for efficient video coding and the corresponding decoding procedure, including intra prediction, inter prediction, transform, quantization, and entropy coding.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: This standard is the new generation of IEEE std 1857-2013 [IEEE Standard for Advanced Audio and Video Coding], which provides efficient coding tool sets for compression, decompression, and packaging of the video data which should double the coding efficiency of IEEE std 1857-2013. The target applications and services include but are not limited to Internet video, video surveillance, video conference, digital television broadcasting, user-generated video content, and other video/audio-enabled services and applications such as digital video storage and communication.

5.5 Need for the Project: There are some alternative specifications with similar purpose on video data compression by some organizations and companies, but they stay on the position of television broadcasting and telecommunication, their results are optimized for the demand of broadcasting and communication industry, but may not satisfy the demand of other industries such as internet and surveillance system. IEEE SA 1857 working group focuses on codec for internet and surveillance system, also covering other related industries. The working group views standardization as essential for improving the coding efficiency for high volume video data applications and low-bandwidth consumer devices.

5.6 Stakeholders for the Standard: Stakeholders being benefited includes but not limited to
- Audio and video products (hardware or software) manufacturers or vendors

- Video and audio service providers, including broadcasting operators, Internet video service providers
 - Aural and visual content providers
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Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: Yes

If Yes please explain: ITU-T Q.6/SG16 VCEG (video communication expert group) and ISO/IEC JTC1/SC29 WG11 MPEG (motion picture expert group) have established a series of video coding standards, including H.261, H.262/MPEG-2, H.263, H.264/MPEG-4 AVC, and the latest H.265/HEVC etc. They have achieved great success in TV broadcasting and IPTV etc. However they all underestimate the surging surveillance video and internet video data. The proposed PAR project achieves significant coding efficiency improvement over the preceding coding standards, especially for surveillance video.

and answer the following

Sponsor Organization: ISO/IEC and ITU-T

Project/Standard Number: H.261, H.262/MPEG-2, H.263, H.264/MPEG-4/AVC, H.265/HEVC

Project/Standard Date:

Project/Standard Title: H.261, H.262/MPEG-2, H.263, H.264/MPEG-4/AVC, H.265/HEVC

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): Information for 7.1:

Full title of the organizations: ISO/IEC JTC1/SC29/WG11, ITU

Title of the standard referenced:

H.261 (ISO/IEC 11172-2, CODING OF MOVING PICTURES AND ASSOCIATED AUDIO - FOR DIGITAL STORAGE MEDIA AT UP TO ABOUT 1.5 Mbit/s);

H.262/MPEG-2 (ISO/IEC 13818-2, Recommendation ITU-T H.262, INFORMATION TECHNOLOGY - GENERIC CODING OF MOVING PICTURES AND ASSOCIATED AUDIO);

H.263 (Recommendation ITU-T H.263 SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services - Coding of moving video, Video coding for low bit rate communication);

H.264/MPEG-4/AVC (Recommendation ITU-T H.264, ISO/IEC 14496-10, SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS Infrastructure of audiovisual services - Coding of moving video, Advanced video coding for generic audiovisual services);

H.265/HEVC (Recommendation ITU-T H.265, SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS Infrastructure of audiovisual services - High efficiency video coding).