

Revised Terms of Reference of the Joint Video Experts Team (JVET) for Video Coding Standard Development

Ref: [SG16-TD476/PLEN](#)

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Purpose

This document provides the Terms of Reference for a Joint Collaborative Team called the *Joint Video Experts Team (JVET)* established according to Annex A to [Recommendation ITU-T A.23](#) and [ISO/IEC JTC1 Standing Document 3](#). The JVET is established to collaboratively develop technically aligned twin text or common text for Recommendations | International Standards for video coding technology.

Parent Bodies

The parent bodies of the JVET are ITU-T WP3/16 and ISO/IEC JTC 1/SC 29 (or equivalent succeeding structures). The JVET shall report to its parent bodies.

Scope and Goals

The scope and goals of the JVET are achieved by conducting the following types of work projects:

- Exploration studies for the purpose of determining the potential need for joint standardization of future video coding technology.
- The development of new standards and/or amendments or revisions of existing standards for video coding technology that offer advances (in terms of achievable combinations of compression capability, computational complexity, application functionality, etc.) compared to previously-developed standards.
- Developing conformance test set, reference software, codepoint identifier, and supplemental enhancement information specifications associated with video coding technology standards in the domain of the JVET.
- Studying non-normative matters relating to video coding and developing non-normative technical reports on such topics.
- Coordinating and conducting exploration of new video coding technology that is intended to lead to formal standardization projects, such as Calls for Evidence, Calls for Proposals, or New Work Item Proposals.
- Maintaining standards for video coding technology previously developed by Joint Collaborative Teams of ITU-T and ISO/IEC JTC 1.

Any new JVET work projects shall be established with mutual consent of the parent bodies.

If there is uncertainty as to whether a particular matter is within the scope of the JVET, the matter shall be considered by the parent bodies, and only considered to be in scope if there is agreement between the parent bodies.

The development of video coding technology standards by either SG 16 or SC 29 (or equivalent succeeding structures) outside of the JVET which may have significant overlap with an ongoing JVET project (in terms of technology, features, utility, etc.) is to be discussed by the parent bodies prior to its commencement, and consideration given to the effect such an effort would have on the work of the JVET.

Deliverables and Naming

The intent is that any resulting joint ITU-T Recommendations and ISO/IEC International Standards be technically aligned and fully interoperable for all conformance points.

The resulting text will be converted by the parent bodies and higher-level committees into the appropriate paired ITU-T Recommendations and ISO/IEC International Standards and will be published as twin text or common text, as determined by mutual agreement.

Within the JVET and in communications emanating from it and the parent bodies, each ITU-T Recommendation | ISO/IEC International Standard should informally be referred to by an informal name to be selected in a timely fashion at the start of the project by the JVET with approval of both parent bodies, and formally as determined by the higher-level entities of ITU-T and ISO/IEC.

Participation

Those qualified to participate in either parent body under the corresponding ITU-T or ISO/IEC policies may participate in the JVET. To the extent permitted by ITU-T or ISO/IEC policies at the time the authority is invoked, the Chairs of the JVET have the authority to invite experts to participate.

Meetings

JVET meeting venues and dates will be arranged to coincide with meetings of the parent bodies. In exceptional circumstances, additional JVET meeting venues and dates may be arranged. When feasible, the parent bodies expect to meet in close proximity to each other as well as to the JVET.

The JVET can also use the days prior to an associated parent body meeting to conduct its work.

The parent bodies shall provide each other with information about their planned meeting schedule sufficiently in advance, along with any updates to existing plans dictated by circumstances.

The work of the JVET during an associated parent body meeting will be scheduled by the Chairs as part of the overall meeting schedule of that parent body, and may run concurrently with meetings of subgroups of the parent body. The oversight responsibility for the actions of the JVET during these meeting sessions lies with the hosting parent body. The JVET should avoid meeting during any plenary sessions of the hosting parent body, and the JVET meeting shall be concluded before the closing plenary of the hosting parent body.

Each parent body that sends an outgoing liaison statement discussing the work of the JVET will provide a copy of the liaison statement to the management of the other parent body. The primary responsibility for communication about the work of the JVET is with the hosting parent body.

Management

The management of the JVET will consist of two Chairs, one nominated by each parent body with the consent of the other, or of a single Chair established by mutual nomination. The nomination process may express a particular term of such an appointment.

The parent bodies must agree on any changes to the management team.

The JVET may establish an internal subgroup structure, and shall consult with the parent bodies when establishing such an internal structure.

Documents and Contributions

For reasons of expediency, the JVET will maintain a single document registry and an electronic archive that are distinct from those of the parent bodies. The registry and archive will be linked to both the parent body web sites, and the parent bodies may ingest the JVET documents for their own reference and archival purposes.

Every contribution document to a meeting of the JVET shall be registered in the document registry and uploaded to the electronic archive several days in advance of the meeting, to ensure that it is available for review by other participants. The Chairs will announce the precise deadline (which may be distinct from that of the parent bodies) prior to each meeting of the JVET. All JVET activities will use the same document registry system, but document deadlines may differ per activity. Documents that are not uploaded to the electronic distribution archive by the announced deadline are considered late, should be accepted only with the consensus of the meeting participants, and may be given a lower priority of consideration if accepted. This policy will be stated in the invitation announcement that is provided for every meeting to both organizations.

All documents and contributions will be in electronic form.

In order to facilitate cross-organizational communication, all input and output documents of the JVET will be public (including the drafts of the coding specifications, reference software, and conformance test data). The Chairs may approve exceptions to this policy on a case-by-case basis when requested by a contributor or when the Chairs determine that the submitted material is especially likely to be intended as non-public information. If such an exception applies, the document will be accessible only through a password-protected site accessible to members of the JVET and the parent bodies.

Working Methods

General Policies and Procedures

All group decisions will be made by the consensus of the JVET as determined by the Chairs.

All contributions falling under the terms of reference valid at the time of submission and intended to affect the work of the JVET shall be conveyed to the JVET (and may also be considered by the parent bodies). Contributions falling outside such terms of reference shall be submitted to the parent group(s), not directly to the JVET, and shall be subject to prior review by the parent bodies to establish an agreement on the scope of work to be delegated to the JVET.

The JVET may establish "ad hoc groups" to coordinate activities to perform specific tasks between meetings of the JVET. Ad hoc group chairs will be appointed by the Chairs with the consensus of the experts. Each ad hoc group shall submit a report of its activities as an input to the next meeting of the JVET. An ad hoc group may meet between meetings of the JVET, if the plan for such a meeting has been approved by the JVET.

Working relationship between the JVET and the parent bodies

As the goal of the JVET is to create technically aligned Specifications, the consensus on the content of each Recommendation | International Standard will be determined within the JVET.

All output of the JVET will undergo the approval process of each parent body.

Should the approval process produce a differing outcome in each parent body, the parent bodies may resolve the situation directly or, preferably, delegate the harmonization to the JVET. In the event of a joint meeting involving the JVET and one or more parent bodies (or subgroups thereof), agreements shall be subject to each parent body having the opportunity to discuss the outcome of the meeting and follow their own approval process.

To facilitate communication to the JVET, a parent body wishing to provide input to the work of the JVET should provide that input in written form to be recorded in the electronic archive of the JVET or in the JVET meeting report.

Any input to the JVET from a parent body shall be considered, taking into consideration the impact upon the requirements and concerns of the other parent body. When requested, the JVET shall report the action taken to the requesting parent body.

Document handling

The JVET will maintain a single master draft for each of the standards under its development (the video coding, reference software, and conformance testing specifications), each under the control of a single chief editor nominated by the Chairs with the consensus of the experts. The JVET document archive and software codebase will contain the text to be submitted to the parent bodies for approval. The versioning of the software codebase will be managed by a state-of-the art versioning system.

Exploration activities

With agreement of the parent bodies, the JVET may conduct explorations of new video coding technologies in order to determine whether a standardization project should commence, and to assist in determining the plans (goals, evaluation methodology, etc.) for such a project.

Discussion and consideration of technical contributions relevant to experimental technology evaluation will be open to members of both organizations and scheduled to accommodate such participation.

Common test conditions and video test sequences used for conducting and evaluating the results of such tests will be considered and established by common agreement and made available to both parent bodies. The conditions should match relevant application targets and be suitable for investigating the limits of the considered technology.

Any group-adopted simulation software or associated software tool library intended for collaborative study and development will be made publicly available under an appropriate license.

To obtain knowledge about video coding technology that may exist outside the collaborative exploratory work, other mechanisms such as issuing a Call for Evidence may be employed by one or both parent bodies (individually or jointly), with results to be shared and considered as part of the exploration.

When exploration has reached a sufficient maturity, one or more documents describing the convergence of ideas will be drafted and maintained by a team that will include experts from each parent body.

Each parent body retains its own decision-making authority for establishing its requirements for the work, which may be discussed and aligned at joint meetings. Given sufficient convergence of requirements and evidence of feasibility, a Call for Proposals may be issued by one or both parent bodies (individually or jointly). Following exploration activity, a standardization project shall only be launched within JVET upon agreement by both parent bodies.

Patent and Copyright Issues

The ITU-T/ITU-R/ISO/IEC common patent policy shall apply. Contributions proposing normative technical content shall contain a non-binding informal notice of whether the submitter may have patent rights that would be necessary for implementation of the resulting standard. The notice shall indicate the category of anticipated licensing terms according to the ITU-T/ITU-R/ISO/IEC patent statement and licensing declaration form. Contributions of software source code for incorporation into Reference Software for a standard shall be provided with a suitable copyright disclaimer text in a form acceptable to the parent bodies to enable publication of the source code and to enable users of the software to copy the software and use it for research and standardization purposes and as a basis for the development of products (while the submitter separately retains any associated patent rights for licensing to be conducted outside of ITU-T/ITU-R/ISO/IEC).

This obligation is supplemental to, and does not replace, any existing obligations of parties to submit formal IPR declarations to ITU-T/ITU-R/ISO/IEC.

Meeting Reports

A meeting report will be provided by the Chairs after the conclusion of each meeting and will be submitted to the parent bodies and posted to the JVET electronic archive.

The report should include:

- Dates and venue
 - Chairpersons of the meeting
 - Attendance list with affiliation
 - Agenda of the meeting
 - List of documents considered with source
 - Summary of results and an outline of any outstanding issues or resolutions
 - Future activity plans
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