

Number: L202003A

Subject: Reply Liaison Statement on DASH Related Matters

From: **DASH-IF**
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To: 3GPP SA4
3GPP Liaisons Coordinator <3GPPLiaison@etsi.org>

Attachments **Inline references**

Date: 14-Jan-2020

Dear 3GPP Colleagues,

DASH-IF would like to thank 3GPP for your LS in S4-191329 and would like to respond to the specific questions as follows:

- 1) *when the specification on "DASH Client Event and Timed Metadata APIs Work and other DASH-IF activities" is finally published by DASH-IF and preferably provide a reference to the specification.*

DASH-IF has published the IPR review for this document and after completion we expect to publish the document on our web site within Q1/2020. Integration into DASH-IF IOPv5 is expected for Q2/2020.

- 2) *On the interest and potential work plan to define Media Player APIs to be referenceable by 3GPP.*

DASH-IF discussed this matter and there is member interest to progress this work. This comes hand in hand with other activities, such as improved documentation of our reference client dash.js as well as recent discussion at our workshop on improved player specifications. DASH-IF would be interested in concrete requirements from 3GPP that may be addressed in a potentially starting work.

- 3) *for feedback on whether and how DASH-based Test Vectors for VR Streaming can be hosted on the DASH-IF test vector base.*

DASH-IF is always interested to support the industry in interoperability efforts on DASH-related matters. Hosting such vectors may be considered by DASH-IF pending that the amount of data is reasonable, similar to the size of existing test assets. Secondly, DASH-IF would not be able to provide any service and availability guarantees of such vectors. Thirdly, DASH-IF would like to understand on what makes a test vector a TEST VECTOR? Finally, test vectors are expected to be provided following the licensing terms of DASH-IF

Test assets. DASH-IF members will provide more information for the upcoming meeting on details of this issue.

Furthermore, DASH-IF would like to inform 3GPP on selected latest activities related to DASH.

1. We are progressing updates to v5 IOP guidelines which are expected to initially be published in Q1/2020.
2. DASH-IF continuously extends the DASH tests, conformance, and reference tools. The latest information is provided here:
 - Dash.js: dash.js recently released its V3.0.1 player which its release info can be found at <https://github.com/Dash-Industry-Forum/dash.js/releases/tag/v3.0.1>.
 - Other test and conformance tools can be accessed here: <https://testassets.dashif.org/>
 - We are currently working on adding Low-Latency DASH features in test tools, by extending FFMPEG and dash.js. The FFMPEG extension is close to finalization and is expected to be announced at the DASH-IF session at DVB World in March 2020.
3. DASH-IF has published the following documents for community review.
 - Low-Latency Live (2nd version): <https://dash-industry-forum.github.io/docs/DASH-IF-IOP-CR-Low-Latency-Live-Community-Review-Dec-2019.pdf> until Jan 31st, 2020.
 - Ad Insertion: <https://dash-industry-forum.github.io/docs/CR-Ad-Insertion-r4.pdf>. The community review is closed, but a revision will be published for a second community review shortly.
 - Live Media Ingest: <https://dashif-documents.azurewebsites.net/Ingest/master/DASH-IF-Ingest.pdf>. This community review is completed and the document will be published in Q1/2020.
 - DASH PLAYER'S APPLICATION EVENTS AND TIMED METADATA PROCESSING MODELS AND APIS: <https://dashif-documents.azurewebsites.net/Events/master/event.html> and the corresponding WebIDL: <https://dash-industry-forum.github.io/docs/Event%20API-WebIDL-r1.htm>.
 - Timing model for DASH: <https://dashif-documents.azurewebsites.net/Guidelines-TimingModel/master/Guidelines-TimingModel.pdf>.
 - Updates to Content Protection and Security. The change request against IOP v4.3 for Community Review is accessible here: <https://dashif-documents.azurewebsites.net/Guidelines-Security/master/Guidelines-Security.html>.

4. Along with its 21st face to face meeting on December 10-12 in Portland, OR, the DASH Industry Forum (DASH-IF) gathered experts from video distribution services, mobile operators and technology providers in order to look into 5G and Media Streaming. Around 50 experts joined and made the conference interactive and full of lively discussions.
- With the first 5G deployments having been kicked off, the workshop created an opportunity to understand some of the technical and non-technical challenges and opportunities for mobile video services. The collected information hopefully provides companies and standardization organizations relevant guidelines in order to create revenue-generating and interoperable video services, anticipating that video already is and will be to an increasing degree the majority of the traffic in mobile networks.
 - The workshop fulfilled its mission to identify the challenges and possible gaps for fully taking advantage of 5G networks for multimedia streaming and related applications. A summary of all work presentations and conclusions are available here: <https://dashif.org/docs/workshop-2019/17-Stockhammer-Summary.pdf>.
 - The program and slides are provided <https://dashif.org/docs/workshop-2019/Program.htm>.

We welcome feedback from 3GPP on any of the above issues and look forward to collaboration in the future in the context of your 5G endeavour.

Next Meeting:

DASH-IF#22

June 3-5, 2020

Istanbul, TR

Best Regards,
William Frantz
DASH-IF Liaison Officer