

Some of the questions that were asked during the webinar were answered in writing. See below.

Is IMSC-1 supported as MP4 fragmented subtitles format is DVB DASH?

Jon Piesing:

EBU-TT-D is mostly a subset of IMSC-1 so a content provider can fit in the intersection of the two.

I understand that DVB-I client applications can run on HbbTV platforms, but is it fair to say that HbbTV is losing its identify by DVB-I aligning closer with it?

Jon Piesing:

DVB-I service discovery is a replacement for DVB-SI so a completely different layer in the system from HbbTV. HbbTV builds on DVB-DASH just as DVB-I does. The linked application feature in DVB-I would likely use the HbbTV browser on a TV.

When you say TTML is supported, you mean any TTML or EBU-TT-D?

Jon Piesing:

EBU-TT-D

Paul Higgs:

The DVB-DASH specification (A168) says this.. Where provided, subtitles shall be formatted using the EBU-TT-D Subtitling Distribution Format as specified in EBU Tech 3380 [13] and encapsulated in ISO BMFF in accordance with Carriage of EBU-TT-D in ISO BMFF specified in EBU Tech 3381 [14].

Can we guarantee the stability of a low latency DASH like we do with DASH? (I mean, if we have less 'buffering' will it experiment more 'buffering errors' ands video freezings?

This question has been answered live

Jon Piesing:

A DASH player should be able to drop back from low latency to "normal" operation if there is too much buffering.

The DASH client has to estimate the channel bandwidth. Do we need a different approach when going to chunks?

Paul Higgs:

Yes, there are some different algorithms used to predict bandwidth when using smaller chunks. An interesting paper was recently published for ACM TOMM.

Hello!!, regarding additional features like: timeshifting TV or startover... Does the standard have an specification?

Paul Higgs:

These are not part of the DVB specifications, but relate to application specific behaviour - if the manifest indicates the media segments/chunks are still available then the application can "timeshift"

Jon Piesing:

DASH can support network-side timeshifting while the segments remain available. A broadcaster might choose to keep (say) 10 minutes of segments available behind the live edge.