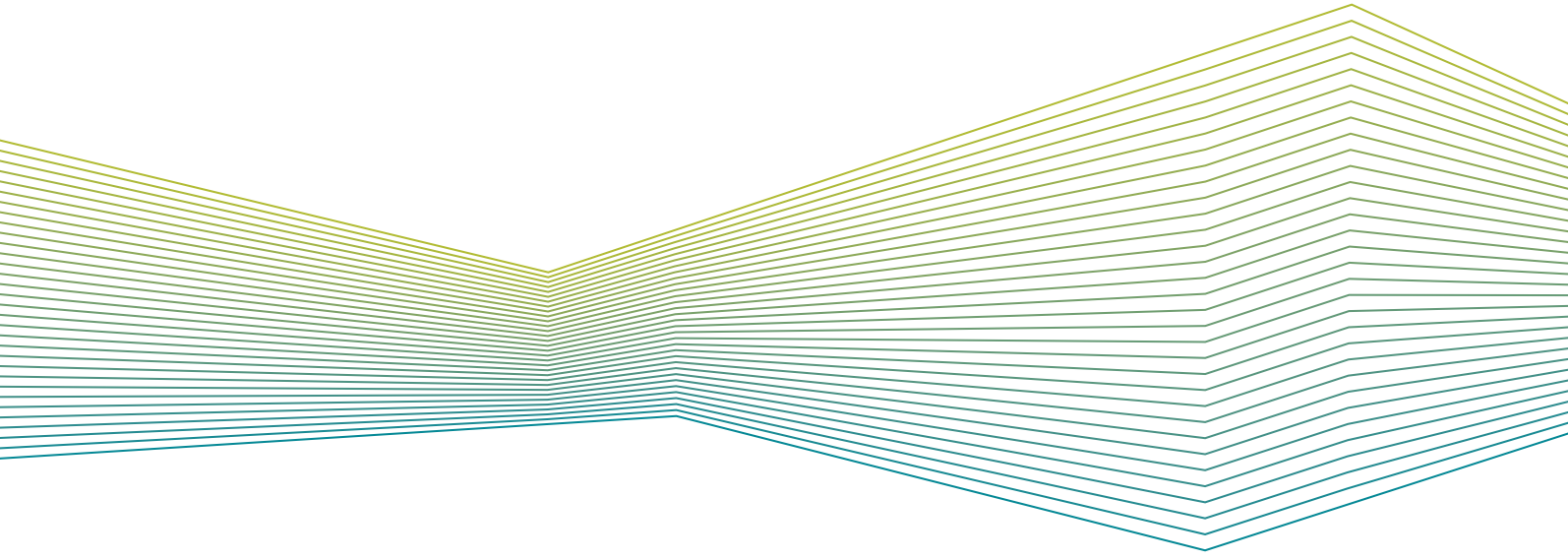

Dolby Vision streams within the MPEG-DASH format v1.1

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Contents

1 Introduction to Dolby Vision streams within the MPEG-DASH format

This document specifies the required data formatting and signaling between a server and its clients to enable Dolby Vision to be transported within MPEG Dynamic Adaptive Streaming over HTTP (MPEG-DASH) in conjunction with the ISO base media file format.

1.1 Dolby Vision encoding

Dolby Vision video content can be encoded in one single layer or two separate layers along with Dolby Vision metadata. Both schemes allow the format to deliver more dynamic range and a wider color gamut, while providing backward compatibility with standard dynamic range (SDR) playback devices in some of the dual-layer cases.

When encoded using the dual-layer scheme, the Dolby Vision stream consists of a base layer, an enhancement layer, and a reference picture unit.

- The base layer may or may not be SDR compliant (that is, compliant with ITU-R Recommendation BT.709 [Rec. 709] standards). When compliant with Rec. 709 standards, the base layer offers backward compatibility, allowing playback of Dolby Vision streams from SDR-compliant devices that do not support Dolby Vision.
- The enhancement layer carries the color and brightness differences between the graded source (that is, source that is graded to Dolby Vision standards) and base layer version of the source.
- The reference picture unit is a aspecial Network Abstraction Layer (NAL) unit that contains the Dolby Vision metadata. It is also a complete Dolby Vision metadata access unit for the current picture.

For a dual-layer Dolby Vision stream, these layers are encoded in either one or two video elementary streams. The video elementary stream codec is either Advanced Video Coding (AVC) or High-Efficiency Video Coding (HEVC), as defined in ISO/IEC 14496-10, ISO/IEC 14496-15, and ISO/IEC 23008-2.

When encoded using the single-layer scheme, the Dolby Vision stream consists of the base layer and reference picture unit only (without the enhancement layer) and is encoded in one 10-bit HEVC elementary stream. Because the base layer in this case is not SDR compliant, the single-layer scheme does not offer backward compatibility.

For detailed information, refer to the *Dolby Vision VES multiplexing specification*.

1.2 MPEG-DASH

MPEG-DASH is an adaptive bit-rate streaming technology that partitions a media presentation into segments and delivers them from a server to a client via HTTP.

The content on the server consists of two parts: a Media Presentation Description (MPD), and a sequence of small HTTP-based file segments, each of which can be downloaded independently. The MPD is a manifest of the available content, its various alternatives, their URL addresses, and other characteristics (including timing information and media attributes such as video resolution and bit rates). The content fragments are the actual media bitstreams in the form of chunks, in single or multiple files. Each segment contains a short interval of playback time (typically ten seconds). Segments may be played back sequentially to ensure that a program that is many hours in duration can be streamed. MPEG-DASH enables reuse of commonly available HTTP servers/caches to deliver media content to end users. MPEG-DASH supports commonly available container and media formats/codecs.

1.3 Dolby Vision stream multiplexing in MPEG-DASH

A Dolby Vision stream is transported in MPEG-DASH using a single- or dual-track scheme.

For transmission in a single track, the base-layer, enhancement-layer if available, and reference-picture-unit substreams are combined into a single Dolby Vision stream. This Dolby Vision stream is used as input for encoding of a regular AVC or HEVC elementary stream (using the MPEG transport stream system target decoder [T-STD] model). The resulting elementary stream can be multiplexed on a single Dolby Vision track in MPEG-DASH format.

For transmission in two tracks, the base layer, enhancement layer, and reference picture unit substreams are carried on two separate tracks. The base layer substream is directly encoded as a regular AVC or HEVC elementary stream (using the T-STD model), which is in turn multiplexed into one video track. The enhancement layer and reference picture unit substreams can be combined as input for encoding a regular AVC or HEVC elementary stream (using the T-STD model). The resulting elementary stream can be multiplexed into a separate video track. These two tracks are encapsulated in MPEG-DASH format.

There are two types of Dolby Vision stream configuration: a dual-layer Dolby Vision stream and a single-layer Dolby Vision stream. A dual-layer Dolby Vision stream is composed of both the base-layer and enhancement-layer substreams (and a reference-picture-unit substream). A single-layer Dolby Vision stream is composed of the base-layer and reference-picture-unit substreams only, without the enhancement layer.

A dual-layer or single-layer Dolby Vision stream can be multiplexed into a single track. A dual-layer Dolby Vision stream can also be multiplexed into two separate tracks. A single-layer Dolby Vision stream can be multiplexed only into a single track.

In either stream configuration, the base-layer substream is compliant with ISO/IEC 14496-10, ISO-IEC14496-15, and ISO/IEC 23008-2 and decodable by an AVC or HEVC–compliant decoder. Depending on whether or not the output of the decoder is an SDR signal, a Dolby Vision stream can be defined as an SDR or non-SDR-compliant stream, respectively.

For detailed information about the multiplexing process, refer to the *Dolby Vision VES multiplexing specification*.

1.4 Standards and Dolby documents

Standards and Dolby documents provide additional information to assist you in designing your product.

Standards

- ISO/IEC 23009-2:2014, *Information technology—Dynamic Adaptive Streaming over HTTP (DASH), part 1: Media presentation description and segment formats*, available from http://www.iso.org.
- ISO/IEC 14496-12:2012, *Information technology—Coding of audio-visual objects, part 12: ISO base media file format*, available from http://www.iso.org. This document is Part 12 of the MPEG-4 specification and describes storage of content in a media file.
- ISO/IEC 14496-15:2014, *Information technology—Coding of audio-visual objects, part 15: Carriage of network abstraction layer (NAL) unit structured video in ISO base media file format*, available from http://www.iso.org.
- ISO/IEC 14496-10:2009, *Information technology—Coding of audio-visual objects, part 10: Audio*, available from http://www.iso.org.
- ISO/IEC 23008-2:2013, *Information technology—High efficiency coding and media delivery in heterogeneous environments, part 2: High efficiency video coding*, available from http://www.iso.org.
- RFC 6381, *The 'codecs' and 'profiles' parameters for "bucket" media types*, August 2011, available from http://tools.ietf.org/html.

Dolby documents

- *Dolby Vision Video Elementary Stream multiplexing specification* (`dovi_proenc_ves_muxing_spec.pdf`), located in the documentation package of the kit.
- *Dolby Vision profiles and levels*, version 1.2.6 (`DolbyVisionProfilesLevels.pdf`), located in the documentation package of the kit.
- *Dolby Vision bitstreams within the ISO base media file format*, version 1.3`Dolby Vision bitstreams within the ISO base media file format.pdf`, located in the documentation package of the kit.

1.5 Contacting Dolby

Support services are available to address any questions and to provide advice about integrating Dolby technology into your product.

For product design or testing, contact Dolby at systemsupport@dolby.com. By utilizing Dolby expertise, especially during the design process, many problems that might require design revisions before a product is approved can be prevented.

Dolby is also available to review product plans, including preliminary design information, markings, displays, and control and menu layouts, with the goal of preventing problems early in the product development cycle.

If you have comments or feedback about this document, send us an email at documentation@dolby.com.

2 Dolby Vision profiles and levels

The Dolby Vision format provides many features, not all of which apply to every application. Subsets of Dolby Vision features are stipulated in profiles and levels. Develop your application to support one or more of these profiles and levels as needed.

2.1 Dolby Vision profiles

A Dolby Vision profile is a subset of Dolby Vision feature configurations predefined by Dolby.

This table only lists profiles that are supported in online streaming formats. There are more profiles applicable to other use cases. For details, refer to *Dolby Vision profiles and levels*.

Table 1: Dolby Vision profiles

Profile ID	Profile name	BL codec	EL codec	BL:EL	BL backward compatibility	BL/EL layer full alignment	BL codec profile	EL codec profile
0	dvav.per	AVC	AVC	1:¼	SDR	Yes	H.264 High	H.264 High
4	dvhe.dtr	HEVC10	HEVC10	1:¼	SDR	No	H.265 main10	H.265 main10
5	dvhe.stn	HEVC10	N/A	N/A	None	N/A	H.265 main10	N/A

In this table,

- **Profile name** is a string composed by following a common naming convention. This string contains all information about the associated profile. For details, see the *Dolby Vision profile string* section.
- **BL:EL** indicates the resolution ratio of base layer to enhancement layer.
- **BL/EL full alignment** indicates whether the enhancement-layer group of picture (GOP) and sub-GOP structures are fully aligned with the base layer. When fully aligned in decoding order, the base-layer and enhancement-layer instantaneous decoder refresh (IDR) frames are aligned, and the base-layer and enhancement-layer access units that belong to the same picture have identical picture order count (POC). In this situation, skipping and seeking operations can be performed anywhere in a stream and are not limited to IDR frames. We recommend encoders that produce dual-layer Dolby Vision streams generate base layer and enhancement layer with full GOP/sub-GOP structure alignment for all the profiles listed in the table.
- **Base-layer backward compatibility** indicates whether the base-layer substream can be decoded to an SDR-compliant signal. Dolby Vision encoders must only use the baseline profile composer for non-backward compatible profiles (with a backward compatibility value of None).

2.2 Dolby Vision levels

A Dolby Vision level specifies the maximum frame rate, bit rate, and resolution supported by a product within a given profile.

Typically, there is a limit on the maximum number of pixels a product can process per second within a given profile; the levels defined here generally correspond to the product processing capability.

Table 2: Dolby Vision levels

Level ID	Level name	Example maximum resolution × frame rate (fps)	Maximum bit rates (base layer and enhancement layer combined)	
			Main tier (Mbps)	High tier (Mbps)
1	hd24	1280 × 720 × 24	20	50
2	hd30	1280 × 720 × 30	20	50
3	fhd24	1920 × 1080 × 24	20	70
4	fhd30	1920 × 1080 × 30	20	70
5	fhd60	1920 × 1080 × 60	20	70
6	uhd24	3840 × 2160 × 24	25	130
7	uhd30	3840 × 2160 × 30	25	130
8	uhd48	3840 × 2160 × 48	40	130
9	uhd60	3840 × 2160 × 60	40	130

The columns in this table include:

- Level name: These are strings composed by following a common naming convention. These strings contain all information about the associated level. For details, see *Dolby Vision level string*.
- Example max resolution × frame rate (fps): This column lists imposed limits on arithmetic combinations of resolution and frame rate (resolution multiplied by frame rate). The maximum pixels per second is a constant for a given level. The resolution is inversely proportional to the frame rate, meaning that the resolution can be reduced for obtaining higher frame rate, and vice versa.

3 Signaling Dolby Vision in a Media Presentation Description file

Information about the Dolby Vision streams encapsulated in MPEG-DASH format can be signaled within a Media Presentation Description (MPD) file.

3.1 Media Presentation Description

A Media Presentation Description (MPD) file is a hierarchical XML document that provides information for an MPEG Dynamic Adaptive Streaming over HTTP (MPEG-DASH) client about the available content for a media presentation.

The media presentation contains the encoded audio and video streams that are segmented into chunks for online delivery. The MPD is a manifest of the available content. The MPEG-DASH client uses the information in the MPD for constructing the HTTP URLs that then allow it to access segments containing the actual audio and video content.

An MPD includes:

- The sequence of periods that make up a media presentation.
- The available adaptation sets within each period that contain encoded versions of media content. For example, one adaptation set can contain video, another can contain audio, and a third can contain a different language audio track or an audio description.
- The representations contained in each adaptation set (for example, content rendered for different bandwidths).
- The URLs for media segments contained in each representation.

The media engine in your product uses the information in the MPD for accessing media segments that contain the actual audio and video content and controlling playback.

3.2 Media Presentation Description with Dolby Vision

In MPEG-DASH, the main way of signaling the type of video to be streamed is by using the `mimeType` attribute in conjunction with the `codecs` attribute. Both attributes are registered in the MPEG-DASH MPD file.

3.2.1 Adaptation sets

A media presentation typically consists of multiple media content components, for example, a Dolby Vision video component and a Dolby Digital Plus audio component. Each media content component is represented by an `AdaptationSet` element in the MPD file.

In addition to the Dolby Vision adaptation set, Dolby recommends including a separate adaptation set that refers to an SDR version of the same content as the Dolby Vision stream. This alternate adaptation set ensures that the media presentation can be decoded and played back by a device that does not support Dolby Vision.

The frame rate of the Dolby Vision stream is indicated by the `frameRate` attribute in the `AdaptationSet` element.

3.2.2 Representations

An adaptation set consists of a group of interchangeable versions of one media content component. Each version is described with a `Representations` element in the MPD file.

All representations in an adaptation set must be perceptually identical, meaning that the bit rate is the only major parameter that may differ across the Dolby Vision streams in one adaptation set.

The resolution of the Dolby Vision stream is indicated by the `width` and `height` attributes in the `Representations` element.

3.2.3 mimeType and codecs attribute values

Use the `mimeType` and `codecs` attributes to signal the codec, profile, and level information of the referenced Dolby Vision stream.

The `mimeType` and `codecs` attributes can be placed within either the `AdaptationSet` or `Representations` element.

The `mimeType` attribute describes the encapsulation format used to store the Dolby Vision streams present in the adaptation set. For adaptation sets that conform to ISO/IEC 14496-12, the `mimeType` attribute must be set to `video/mp4` (for ISO base media files that contain both audio and video tracks).

The `codecs` attribute specifies the codec in which the Dolby Vision stream is encoded. For a Dolby Vision stream that is not backward compatible, the video codec value is composed in this format:

```
[Dolby_Vision_fourCC].[Dovi_Profile_ID].[Dovi_Level_ID]
```

In this string:

- The `[Dolby_Vision_fourCC]` is a four-character value as listed in the *Sample description entry code* table that indicates the codec type. This value can be obtained from Dolby Vision sample entries, as described in the *Dolby Vision streams within the ISO basemedia file format* specification.
- The `[Dovi_Profile_ID]` is a two-digit value representing the Dolby Vision profile ID as listed in the *Dolby Vision profiles* section. This value can be obtained from Dolby Vision configuration box, as described in the *Dolby Vision streams within the ISO basemedia file format* specification.
- The `[Dovi_Level_ID]` is a two-digit value representing the Dolby Vision level ID as listed in the *Dolby Vision levels* section. This value can be obtained from Dolby Vision configuration box, as described in the *Dolby Vision streams within the ISO basemedia file format* specification.

For a non-backward-compatible Dolby Vision stream, only Dolby Vision fourCC code is referenced in the MPEG-DASH MPD; for a backward-compatible Dolby Vision stream, the correlated SDR fourCC code and Dolby Vision fourCC code must be used in pairs as shown in this table.

Table 3: Sample description entry code

Codec	Codec variant	SDR fourCC code	Dolby Vision fourCC code
AVC	Parameter sets (PPS or SPS) are stored either in the sample entries or as part of the samples, or in both.	avc3	dvav
	Parameter sets (PPS or SPS) are stored either in the sample entries of the video stream or in the parameter set stream, but never in both.	avc1	dva1
HEVC	Parameter sets (VPS, PPS, or SPS) are stored either in the sample entries or as part of the samples, or in both.	hev1	dvhe
	Parameter sets (VPS, PPS, or SPS) are stored in the sample entries only.	hvc1	dvh1

For example:

```
mimeType="video/mp4" codecs="dvhe.05.07"
```

In this example, the highlighted string indicates that the video element is signaled as a single-layer, non-backward-compatible Dolby Vision stream encoded as 10-bit HEVC video with a maximum resolution of 3840 × 2160 at 30 fps. This corresponds to Dolby Vision profile ID 5 and level ID 7.

For a backward-compatible Dolby Vision stream, the codecs attribute must include the codec values for both the base layer and enhancement layer as a comma-separated list.

```
[BL_compatible_codec],[Dolby_Vision_fourCC].[Dovi_Profile_ID].[Dovi_Level_ID]
```

Note: The base-layer and enhancement-layer codec strings must be separated by a comma.

In the string, the `[BL_compatible_codec]` takes a standard SDR codec value format that begins with the SDR fourCC code and may optionally be followed by profile and level information; for details, refer to RFC 6381. The `[Dolby_Vision_fourCC]` takes a value of the Dolby Vision fourCC code, which indicates the codec type of the Dolby Vision enhancement layer, as listed in the *Sample description entry code* table.

For example:

```
mimeType="video/mp4" codecs="hvc1.1.0.L120.00,dvh1.04.09"
```

In this example, the highlighted string indicates that the video element is a dual-layer Dolby Vision stream encoded as 10-bit HEVC video in each layer with a maximum resolution of 3840 × 2160 at 60 fps, where the base layer is a backward-compatible, SDR Rec.709–compliant signal.

For another example:

```
mimeType="video/mp4" codecs="avc1.4D4028,dva1.00.04"
```

In this example, the highlighted string indicates that the video element is a dual-layer Dolby Vision stream encoded as 8-bit AVC video in each layer with a max resolution of 1920×1080 at 30 fps, where the base layer is a backward-compatible, SDR Rec.709–compliant signal.

Related information

Dolby Vision profiles on page 7

Dolby Vision levels on page 8

3.3 Media Presentation Description file examples

Examples of MPEG-DASH MPD files that contain Dolby Vision video elements, as well as Dolby Digital Plus audio media elements, are provided in this section.

3.3.1 Dual-layer AVC 8-bit backward-compatible Dolby Vision stream

This MPD example describes a media presentation that consists of a Dolby Vision video component with a Dolby Digital Plus audio component. The Dolby Vision base-layer and enhancement-layer substreams are multiplexed in two separate tracks. The essence of the Dolby Vision stream is a dual-layer signal encoded as 8-bit AVC video with a resolution of 1920 × 1080 at 30 fps in each layer, where the base layer is a backward-compatible, SDR Rec. 709–compliant signal.

```
<?xml version="1.0"?>
<MPD
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:dolby="http://www.dolby.com/ns/online/DASH"
        xmlns="urn:mpeg:dash:schema:mpd:2011"
        xsi:schemaLocation="urn:mpeg:dash:schema:mpd:2011"
        type="static"
        mediaPresentationDuration="PT0H1M2.550S"
        minBufferTime="PT1.2S"
        profiles="urn:mpeg:dash:profile:isoff-on-demand:2011">
        <BaseURL>./</BaseURL>
        <Period>
          <!-- Video -->
          <AdaptationSet mimeType="video/mp4" codecs="avc1.4D4028,dva1.00.04"
                subsegmentAlignment="true" subsegmentStartsWithSAP="1">
             <Representation id="1" bandwidth="17677192" width="1920" height="1080"
frameRate="30">
                <BaseURL>h264_dual_track_BC.mp4</BaseURL>
                <SegmentBase indexRange="812-1095">
                  <Initialization range="0-811"/>
                </SegmentBase>
             </Representation>
          </AdaptationSet>
          <!-- Audio -->
          <AdaptationSet mimeType="audio/mp4" codecs="ec-3" lang="und"
subsegmentAlignment="true"
            subsegmentStartsWithSAP="1">
             <Representation id="2" bandwidth="192000">
               <AudioChannelConfiguration
                 schemeIdUri="tag:dolby.com,2014:dash:audio_channel_configuration:
2011" value="F801"/>
                <BaseURL>audio.mp4</BaseURL>
                <SegmentBase indexRange="652-875">
                  <Initialization range="0-651"/>
                </SegmentBase>
             </Representation>
          </AdaptationSet>
```

```
        </Period>
</MPD>
```

In this MPD example, the SDR fourCC code for the base layer is avc1, which determines the Dolby Vision fourCC code must be set to dva1. In case the SDR fourCC code for the base layer is avc3, the Dolby Vision fourCC code must be set to dvav, as indicated in the *mimeType and codecs attribute values* section; consequently the video codecs attribute would be avc3.4D4028,dvav.00.04.

Related information

mimeType and codecs attribute values on page 10

3.3.2 Dual-layer HEVC 10-bit backward-compatible Dolby Vision stream

This MPD example describes a media presentation that consists of a Dolby Vision video component with a Dolby Digital Plus audio component. The Dolby Vision base-layer and enhancement-layer substreams are multiplexed in two separate tracks. The essence of each Dolby Vision track is a dual-layer signal encoded as 10-bit HEVC video with a resolution of 3840 × 2160 at 30 fps in each layer, where the base layer is a backward-compatible, SDR Rec. 709–compliant signal.

```
<?xml version="1.0"?>
<MPD
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:dolby="http://www.dolby.com/ns/online/DASH"
        xmlns="urn:mpeg:dash:schema:mpd:2011"
        xsi:schemaLocation="urn:mpeg:dash:schema:mpd:2011"
        type="static"
        mediaPresentationDuration="PT0H1M2.550S"
        minBufferTime="PT1.2S"
        profiles="urn:mpeg:dash:profile:isoff-on-demand:2011">
        <BaseURL>./</BaseURL>
        <Period>
          <!-- Video -->
          <AdaptationSet mimeType="video/mp4" codecs="hvc1.1.0.L120.00,dvh1.04.07"
                subsegmentAlignment="true" subsegmentStartsWithSAP="1">
             <Representation id="1" bandwidth="17677192"
              width="3840" height="2160" frameRate="30">
                <BaseURL>h265_dual_track_BC.mp4</BaseURL>
                <SegmentBase indexRange="812-1095">
                  <Initialization range="0-811"/>
                </SegmentBase>
             </Representation>
          </AdaptationSet>
          <!-- Audio -->
          <AdaptationSet mimeType="audio/mp4" codecs="ec-3" lang="und"
           subsegmentAlignment="true" subsegmentStartsWithSAP="1">
             <Representation id="2" bandwidth="192000">
               <AudioChannelConfiguration
             schemeIdUri="tag:dolby.com,2014:dash:audio_channel_configuration:2011"
             value="F801"/>
                <BaseURL>audio.mp4</BaseURL>
                <SegmentBase indexRange="652-875">
```

```
                <Initialization range="0-651"/>
              </SegmentBase>
            </Representation>
          </AdaptationSet>
        </Period>
</MPD>
```

In this MPD example, the SDR fourCC code for the base layer is hvc1, which determines the Dolby Vision fourCC code must be set to dvh1. In case the SDR fourCC code for the base layer is hev1, the Dolby Vision fourCC code must be set to dvhe, as indicated in the *mimeType and codecs attribute values* section; consequently the video codecs attribute would be `hev1.1.0.L120.00,dvhe.04.07`.

Related information

mimeType and codecs attribute values on page 10

3.3.3 Single-layer HEVC 10-bit non-backward-compatible Dolby Vision stream

This MPD example describes a media presentation that consists of a Dolby Vision video component with a Dolby Digital Plus audio component. The Dolby Vision base layer is multiplexed in one track without the enhancement-layer substreams. The essence the Dolby Vision track is a single-layer signal encoded as 10-bit HEVC video with a resolution of 3840 × 2160 at 30 fps, where the base layer is not backward compatible.

```
<?xml version="1.0"?>
<MPD
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:dolby="http://www.dolby.com/ns/online/DASH"
        xmlns="urn:mpeg:dash:schema:mpd:2011"
        xsi:schemaLocation="urn:mpeg:dash:schema:mpd:2011"
        type="static"
        mediaPresentationDuration="PT0H1M2.550S"
        minBufferTime="PT1.2S"
        profiles="urn:mpeg:dash:profile:isoff-on-demand:2011">
        <BaseURL>./</BaseURL>
        <Period>
          <!-- Video -->
          <AdaptationSet mimeType="video/mp4" codecs="dvhe.05.07"
           subsegmentAlignment="true" subsegmentStartsWithSAP="1">
            <Representation id="1" bandwidth="17677192" width="3840"
             height="2160" frameRate="30">
              <BaseURL>h265_single_track_NBC.mp4</BaseURL>
              <SegmentBase indexRange="812-1095">
                 <Initialization range="0-811"/>
              </SegmentBase>
            </Representation>
          </AdaptationSet>
          <!-- Audio -->
          <AdaptationSet mimeType="audio/mp4" codecs="ec-3" lang="und"
subsegmentAlignment="true"
        subsegmentStartsWithSAP="1">
            <Representation id="2" bandwidth="192000">
              <AudioChannelConfiguration
```

```
                schemeIdUri="tag:dolby.com,2014:dash:audio_channel_configuration:2011"
                value="F801"/>
               <BaseURL>audio.mp4</BaseURL>
               <SegmentBase indexRange="652-875">
                  <Initialization range="0-651"/>
               </SegmentBase>
            </Representation>
         </AdaptationSet>
      </Period>
</MPD>
```

In this MPD example, the base layer is non-backward-compatible, and the Dolby Vision fourCC code is dvhe. In case the Dolby Vision fourCC code is dvh1, the video codecs attribute must be set to dvh1.05.07.

Related information

mimeType and codecs attribute values on page 10

Glossary

AVC
: Advanced Video Coding. See H.264.

HEVC
: High-Efficiency Video Coding. See H.265.

MPD
: Media Presentation Description. A manifest used in MPEG-DASH to describe the available streaming content, its various alternatives, URL addresses, and other characteristics, as well as segments that contain the actual multimedia bitstreams in the form of chunks, in single or multiple files.

MPEG
: Moving Picture Experts Group. An ISO/IEC working group that develops video and audio encoding standards. Also the name of a family of digital video and audio coding standards.

MPEG-DASH
: MPEG Dynamic Adaptive Streaming over HTTP. An adaptive bit-rate streaming protocol that enables high-quality streaming of media content over the Internet delivered from HTTP.