

MPEG-DASH

HTTP Live Streaming

Largest video codec libraries on earth, supporting nearly every major format in use today in both consumer and professional markets.



MPEG-DASH, or Dynamic Adaptive Streaming over HTTP is an adaptive bitrate streaming format to enable high quality HTTP live streaming of media content over the Internet leveraging conventional HTTP servers, and is the latest ISO Standard that is quickly gaining popularity throughout the video distribution industry. MPEG-DASH specifies that media is broken apart into sequences and delivered to the client over existing Internet infrastructure. The MPEG-DASH playback client is responsible for selecting the optimized bitrate based on bandwidth and is agnostic across devices, thus reducing the total number of different adaptive formats needed to serve consumer devices regardless if it is television or smart phone.

The different parts of DASH

The MPEG-DASH standard covers a number of specific aspects of the streaming value chain, from playlist creation, multiplexing and packaging, HTTP server playlist/manifest file, and playback client. MainConcept SDKs can enable 3rd parties to integrate any part of the complete MPEG-DASH ecosystem into their applications, services or environments:

- File and Playlist Creation - HEVC/H.265 or AVC/H.264 encoded video with DASH compliant AAC audio packaged with DASH Common Encryption (CENC) and wrapped into ISO BMFF along with a playlist file.
- MPEG-DASH Playback Client - Available for PC and mobile platforms, DASH playback clients enable consumer devices to select the optimal bitrate file for the best playback experience.

MAINCONCEPT MPEG-DASH SDK PACKAGES

MPEG-DASH MULTIPLEXING & PACKAGING SDK

Multiplexing and Playlist generation components for generating ISO-BMFF compliant stream segments and MPEG-DASH Media Presentation Description (MPD) files. This SDK can be used in combination with MainConcept AVC/H.264 or HEVC/H.265 Video Encoding SDKs.

DASH / HLS DEMULTIPLEXING & CLIENT SDK

Network and Demultiplexing modules for receiving MPEG-DASH and Apple HLS streams from a network, network condition monitoring and intelligent bitrate and quality level switching. Can be combined with MainConcept AVC/H.264 or HEVC/H.265 Video Decoder SDKs or use hardware video and audio decoders available on the system.

FEATURES

DASH-264 and DASH-265 compliance

The MainConcept MPEG-DASH SDKs support creation and playback of DASH Content compliant with the guidelines from DASH Industry Forum for using AVC/H.264 and HEVC/H.265 media. While DASH-264 is common for resolutions up to HD using HEVC/H.265 in MPEG-DASH will significantly reduce the bandwidth requirements for delivering UHD content to the viewer.

VOD and Live modes

MainConcept MPEG-DASH SDKs support creation as well as playback of VOD content and Live streaming for real-time delivery via MPEG-DASH.

Common Encryption (CENC)

For premium content usually conditional access and content encryption is required. Common Encryption (CENC) is an essential step in protecting content from unauthorized access. MainConcept MPEG-DASH SDKs support CENC for content creation and delivery, compliant with the requirements set forth by DASH Industry Forum.

Intelligent Network Monitoring

Network conditions can vary per user and over time. MainConcept's Network Source module constantly monitors network quality and performance to enable seamless and intelligent adaptation between quality layers. In addition the user is able to override the automated selection and manually choose different quality levels for audio and video streams.

COMPONENTS

MPEG-DASH MULTIPLEXING & PACKAGING SDK

MP4 Multiplexer Broadcast
MPD Generator
MPD Combiner

DASH / HLS DEMULTIPLEXING & CLIENT SDK

Network Source Broadcast
SDP Parser
Stream Pump
MP4 Demultiplexer (Push & Pull)
MPEG-2 Demultiplexer (Push & Pull)

TECH SPECS

- **Microsoft® Windows® 7, Windows 8, Windows 10 (32-bit/64-bit)**
- **Apple Mac OS X 10.6 or higher (Mac/Intel), (32-bit/64-bit)**
- **Linux Ubuntu 10.04 LTS (32-bit/64-bit)**

For Windows, Mac OS X and Linux, the codec package consists of a Low Level API (in the C programming language). On Windows, the DASH / HLS Demultiplexing & Client SDK also includes DirectShow filters for playback.

MORE INFORMATION:
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