Test Signal Information for Dolby® Digital Plus and MPEG DASH Files

Issue 1

Dolby Laboratories Licensing Corporation

Corporate Headquarters

Dolby Laboratories, Inc.
Dolby Laboratories Licensing Corporation
100 Potrero Avenue
San Francisco, CA 94103-4813 USA
Telephone 415-558-0200
Fax 415-863-1373
www.dolby.com

European Licensing Liaison Office

Dolby Laboratories, Inc.
Wootton Bassett
Wiltshire SN4 8QJ England
Telephone 44-1793-842100
Fax 44-1793-842101

Asia

Dolby Japan K.K.
NBF Higashi-Ginza Square 3F
13–14 Tsukiji 1-Chome, Chuo-ku
Tokyo 104-0045 Japan
Telephone 81-3-3524-7300
Fax 81-3-3524-7389
www.dolby.co.jp

Dolby Laboratories Hong Kong Limited
Unit 5407, Central Plaza
18 Harbour Road
Wanchai, Hong Kong
Telephone 852-2519-0888
Fax 852-2519-8988

Dolby Laboratories International Services (Shanghai) Co., Ltd.
03–07a, Floor 18
The Center
989 Changle Road
Shanghai 200031 China
Telephone 86-21-6113-3456
Fax 86-21-6113-3400
www.dolby.com.cn

Issue 1
S12/25407

1 Introduction

This document contains general test signal format information. Please note the following:

- For every test case, there is a separate directory containing files with test signals.
- All test vectors are accompanied by video.
- The files are one manifest file with an .mpd extension, initial segment MP4 files with an .mp4 extension, and segment files with an .m4s extension.
- All test cases are provided in DASH Live profile format.
- Some of the test cases are additionally provided as DASH On-Demand profile format (ch_id/5.1, multi_rate, and dual_decoding).
- For clients that support the On-Demand profile in addition to the Live versions of the test signals, the On-Demand versions shall also be used for testing.

2 Technical Notes

Segments are contained in separate files. For example, the Media Presentation Description (MPD) refers to the files directly, not using any URL range requests.

Each MPD uses paths relative to the location of the MPD file, so the entire content can be moved to another directory or even a server location without trouble.

Test signals are unencrypted and do not employ digital rights management.

3 Test Case Descriptions

The following tables describe each transport stream provided with the development kit in detail.

Table 1 Test Case for Two Channel

Dolby Digital Plus Stereo, Single Bit Rate		
Audio	**Objective**	**Pass/Fail Criteria**
Dolby® Digital Plus .ec3 track, channel configuration 200 (2.0 stereo), voice identification of each channel	Testing proper .ec3 decoding and playback of a stereo track	1. The file plays properly (for example, no distortion). 2. The two channels are properly identified in the voice recording.

Live profile directory: Test_Signals/Live/ChID/ChID_voices_200_ddp/

Table 2 Test Case for 5.1 Channel

Dolby Digital Plus 5.1, Single Bit Rate		
Audio	**Objective**	**Pass/Fail Criteria**
One Dolby Digital Plus .ec3 track, channel configuration 321 (5.1), voice identification of each channel	Testing proper .ec3 decoding and playback of a 5.1 .ec3 track	1. The file plays properly (for example, no distortion). 2. The six channels are properly identified in the voice recording and signals.

Live profile directory: Test_Signals/Live/ChID/ChID_voices_321_ddp/

On-Demand profile directory: Test_Signals/OnDemand/ChID/ChID_voices_321_ddp/

Table 3 Test Case for 7.1 Channel

Dolby Digital Plus 7.1, Single Bit Rate		
Audio	**Objective**	**Pass/Fail Criteria**
One Dolby Digital Plus .ec3 track, channel configuration 341 (7.1), voice identification of each channel	Testing proper .ec3 decoding and playback of a 7.1 .ec3 track	1. The file plays properly (for example, no distortion). 2. The eight channels are properly identified in the voice recording and signals.

Live profile directory: Test_Signals/Live/ChID/ChID_voices_341_ddp/

Table 4 Test Case for Multiple Languages

Dolby Digital Plus 5.1 and Dolby Digital Plus 2.0 Multiple Languages, Single Bit Rate		
Audio	**Objective**	**Pass/Fail Criteria**
Two Dolby Digital Plus .ec3 tracks, channel configurations 321 (5.1) and 200 (2.0), one voice channel identification and one with music	Testing support for multiple language tracks and proper switching	1. The track selected by default is the music track. 2. The music track plays back properly. 3. If the player provides the user an option to switch between languages, the voice identification soundtrack plays correctly and the channels are properly identified. 4. If a visual identification of the selected tracks is provided, the music track is identified as a French language track, and the alternative track is identified as English.

Live profile directory: Test_Signals/Live/multi_lang/ChID_voices_DualTrack_321_200_ddp/

Table 5 Test Case for Multiple Bit Rates

Dolby Digital Plus 2.0 Stream with Multiple Bit Rates		
Audio	**Objective**	**Pass/Fail Criteria**
Two Dolby Digital Plus .ec3 tracks, each with voice identification of each channel (but at different bit rates)	Testing for proper switching between bit rates	1. The file plays properly. Upon changing the available bandwidth, switching between the two available .ec3 tracks occurs. 2. The switching is seamless (for example, no audible artifacts).

Live profile directory: Test_Signals/Live/multi_rate/ChID_voices_Multi_200_ddp/

On-Demand profile directory: Test_Signals/OnDemand/multi_rate/ChID_voices_Multi_200_ddp/

Note: Depending on how the client software is implemented (for example, if it allows forcing the available bandwidth to lower values in a debug mode), it may be necessary to use a manually controllable throttling proxy. In case the quality change caused by switching between different bit rates is not audible, it may be necessary to check which tracks are actually accessed by analyzing the HTTP server logs or using a network analysis tool (network sniffer).

Table 6 Test Case for Dual Decoding

Dolby Digital Plus 5.1 Main Audio and Dolby Digital Plus 1.0 Associated Audio, Single Bit Rate		
Audio	**Objective**	**Pass/Fail Criteria**
Two Dolby Digital Plus .ec3 tracks, channel configurations 321 (5.1) and 100 (1.0 mono), voice identification of each channel	Testing that the audio commentary feature is supported	1. The 5.1 audio track (main audio) plays back properly (voice identification of each channel). 2. The associated track (a voice saying "mono" in the Center channel) can be enabled and disabled and is played back properly, mixed with the main audio.

Live profile directory: Test_Signals/Live/dual_decoding/ChID_voices_AD_321_100_ddp/

On-Demand profile directory: Test_Signals/OnDemand/dual_decoding/ChID_voices_AD_321_100_ddp/