

Digital Cinema Initiatives, LLC

# **Stereoscopic Digital Cinema Addendum**

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Digital Cinema Initiatives, LLC, Member Representatives Committee

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## **1. INTRODUCTION**

This document defines high-level technical requirements and specifications for the mastering, distribution and theatrical playback of stereoscopic digital cinema content.

This document shall be integrated into DCI's Digital Cinema System Specification.

## **2. STEREOSCOPIC DIGITAL CINEMA REQUIREMENTS**

### **2.1. Single Inventory of Stereoscopic Digital Cinema Packages (DCP)**

A single stereoscopic DCP shall be able to be used for all stereoscopic implementations (e.g., no stereoscopic exhibition system shall require a unique color or density timing). It is not required or intended that the same image track file used for stereoscopic DCPs also be used for non-stereoscopic DCPs.

Additionally, no signal pre-processing unique to any single stereoscopic exhibition technology shall be required of a stereoscopic Digital Cinema Distribution Master (DCDM) or DCP.

### **2.2. Form of Stereoscopic DCPs**

DCPs for stereoscopic presentations shall interleave the left and right eye frames alternating at a 48 frames per second rate. The left and right eye material shall be captured for 24 frames per second presentation.

The first frame of each reel shall be left eye, and the last frame of each reel shall be right eye. Image and audio edit points of track files shall only be left eye based.

All edits to image and audio shall be performed at a 24 FPS edit rate and shall not disturb the left eye/right eye cadence.

Audio track files for non-stereoscopic DCPs and stereoscopic DCPs shall be interchangeable.

A single KDM shall be required to decrypt a stereoscopic DCP.

### **2.3. Dual Link Image Format**

In the case of 48 FPS stereoscopic exhibition, it is acceptable, but not recommended, to allow color subsampling over a dual link interface. Color subsampling is only allowed in the single combination of a DCDM\* at 2K, 48 FPS being transported over a link encrypted [SMPTE 372M Dual Link HD-SDI] connection.

For stereoscopic content, exhibition systems using [SMPTE 372M Dual Link HD-SDI] as an interface shall transport images across this interface as 4:2:2 color subsampled, Y,Cx,Cz, twelve (12) bits per sample.