

SMPTE ROADMAP

SMPTE Bit-Serial Interfaces at 3 Gb/s — Roadmap for the 425 Document Suite



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Document Roadmap

The SMPTE 425 suite of documents defines the mapping of various source image formats onto a single link, dual link and quad link serial digital interfaces operating at a nominal rate of 3 Gb/s. This informative “roadmap” describes the documents in the SMPTE 425 suite. The SMPTE 425 series documents specify a virtual interface that is carried on a physical link specified by SMPTE ST 424.

1 SMPTE ST 425-1 - Source Image Format and Ancillary Data Mapping for the 3 Gb/s Serial Interface

SMPTE ST 425-1 defines the mapping of various source image formats onto a single link serial digital interface operating at a nominal rate of 3 Gb/s. This standard defines three mapping formats: Level A, Level B Dual-Link mapping and Level B Dual-Stream mapping as described below.

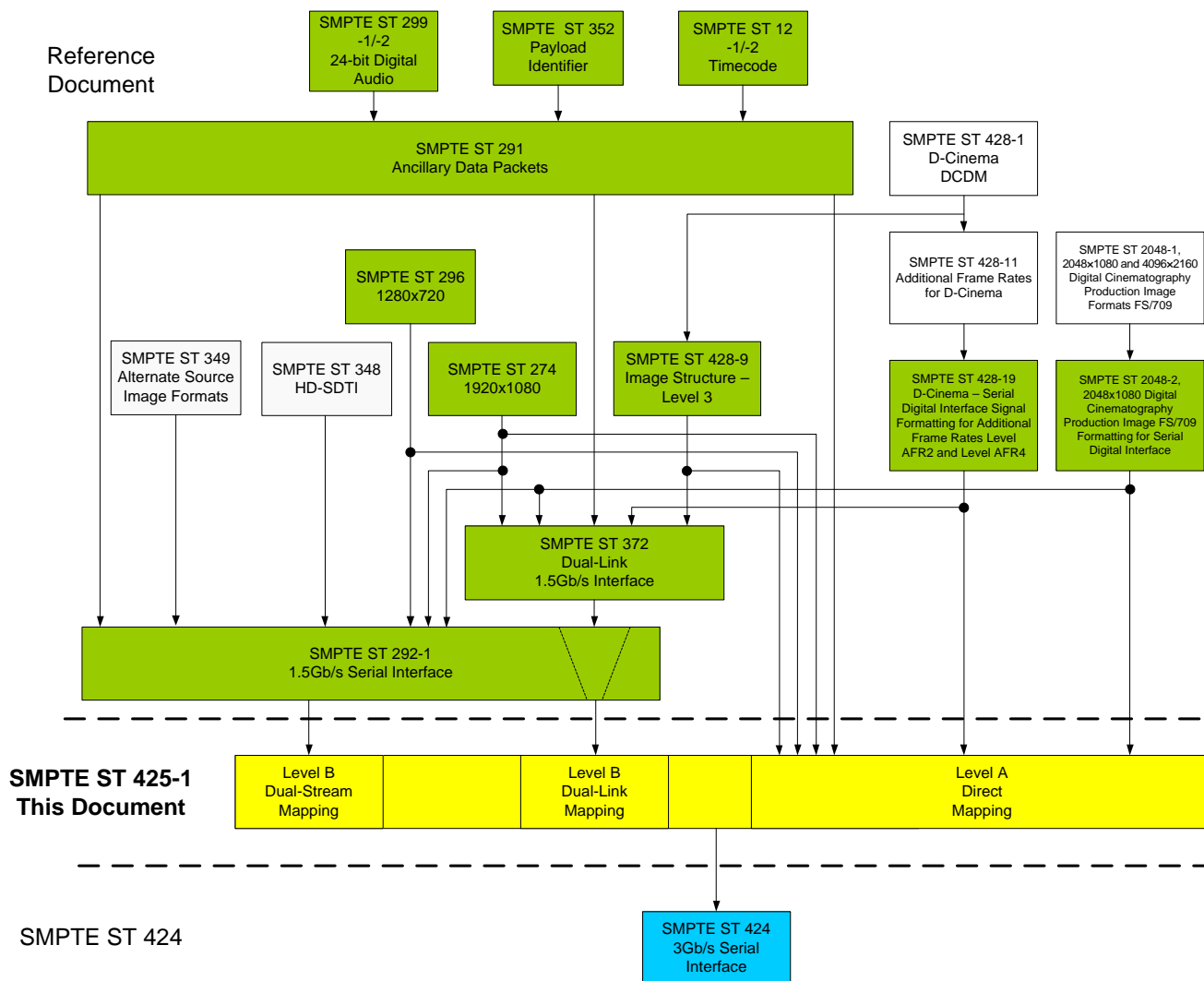
Level A specifies the direct mapping of various uncompressed video image formats and the direct mapping of packetized data into a serial digital interface operating at a nominal rate of 3 Gb/s. It also defines the carriage of ancillary data such as the audio data, the audio control packets, the payload ID, the time code, etc., for these direct mappings.

Level B Dual-Link mapping specifies the mapping of the SMPTE ST 372 Dual Link 1.5 Gb/s interface into a serial digital interface operating at a nominal rate of 3 Gb/s.

Level B Dual-Stream mapping specifies the mapping of two of the SMPTE ST 292-1 1.5 Gb/s HD-SDI interfaces into a serial digital interface operating at a nominal rate of 3 Gb/s.

Uncompressed video image formats or packetized data, and all applicable ancillary data such as the audio data, the audio control packets, the payload ID, the time code, etc., shall be mapped into SMPTE ST 372 Dual Link and 2 x SMPTE ST 292-1 interfaces prior to mapping into the virtual interfaces.

1.1 SMPTE ST 425-1 Document Roadmap illustrating “Data Flow Hierarchy”



Document Roadmap Color Legend

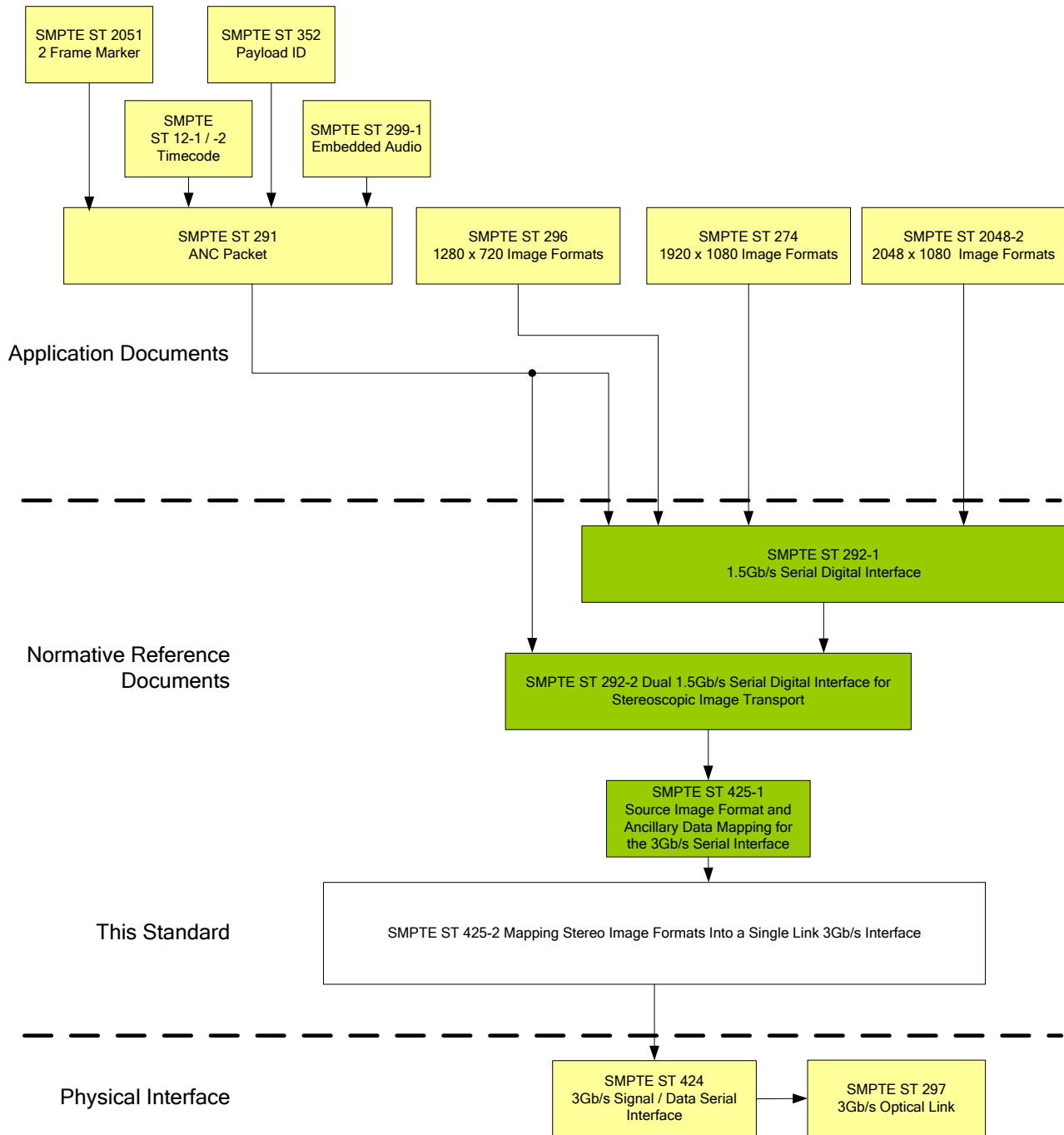
	Normative reference document
	Informative document
	This document
	Referencing document

2 SMPTE ST 425-2 - Source Image Format and Ancillary Data Mapping for Stereoscopic Image Formats on a Single-Link 3 Gb/s Serial Interface

SMPTE ST 292-2 defines a means of transporting stereoscopic images over 2 x 1.5 Gb/s (nominal) serial interfaces. The stereoscopic image formats to be transported by SMPTE 292-2 are those 4:2:2 10 bit image formats having a sampling frequency of 74.25 MHz or 74.25/1.001 MHz.

SMPTE ST 425-2 defines the mapping of the stereoscopic image formats referenced in SMPTE ST 292-2 into a single 3 Gb/s (nominal) serial interface, including a payload identifier that will identify the Left Eye and Right Eye (Le and Re) images, audio and other associated ancillary data.

2.1 SMPTE ST 425-2 Document Roadmap



3 SMPTE ST 425-4 - Dual 3 Gb/s Serial Digital Interface for Stereoscopic Image Transport

SMPTE ST 425-4 defines a means of transporting stereoscopic images (Left eye and Right eye images) using an interface consisting of two streams based on the SMPTE ST 425-1 data structures. The Left eye images are carried on one stream of the interface and the Right eye images are carried on the other stream.

The stereoscopic image formats to be transported using this standard are the 4:2:2 and 4:4:4 image formats defined by SMPTE ST 274, ST 296, ST 2048-2, ST 428-9 or ST 428-19, which have a payload capacity of nominally 3Gb/s and can be transported by a single SMPTE ST 424 serial interface.

3.1 SMPTE ST 425-4 Document Roadmap

