CEA Standard

On-Screen Display Specification

CEA-799-A

July 2006

CEA
Consumer Electronics Association

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(Formulated under the cognizance of the CEA's **R4.8 DTV Interface Subcommittee**.)

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FOREWORD

This standard was developed under the auspices of the Consumer Electronics Association (CEA) R4.8 DTV Interface Subcommittee.

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On-Screen Display Specification

1 Scope

This standard, CEA-799-A, specifies syntax and semantics for bitmapped graphics data typically used for on-screen display (OSD). CEA-799-A is applicable whenever it is necessary to specify a standard method for delivery of bitmapped graphics data. The pixel formats include optional alpha-blend and transparency attributes to support composition of graphics over analog or digitally decoded video within the display. In CEA-799-A, the source of the bitmapped graphics data is called the OSD Producer and the device receiving and processing the data is called the OSD Consumer. CEA-799-A is designed such that it may be referenced in part or in whole.

2 Normative References

The following standards contain provisions that, through reference in this text, constitute normative provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying for the most recent editions of the standards listed in Section 2.1.

2.1 Normative Reference List

ITU-R BT.709-5, Basic Parameter Values for the HDTV standards for production and International Programme Exchange, April 2002

ITU-R BT.601-5, Studio Encoding parameters of digital television for standard 4:3 and wide-screen aspect ratios, October 1995

2.2 Normative Reference Acquisition

ITU Standards

- ITU Sales and Marketing Service, International Telecommunication Union, Place des Nations CH-1211, Geneva 20, Switzerland; Phone +41 22 730 6141; Fax +41 22 730 5194; Internet http://www.itu.org; Email sales@itu.int

2.3 Definitions

For the purposes of this document, the following definitions apply.

Byte	8 bits of data
Quadlet	Four bytes of data

A number with a subscript of “16” indicates that the number is hexadecimal.

2.4 Symbols and Abbreviations

bslbf	Bit string, left bit first
CLUT	Color Look-up Table
ILUT	Image Look-up Table
lsb	least significant bit
msb	most significant bit
OSD	On-Screen Display
RLE	Run Length Encoding
RF	RLE_Flag
uimsbf	Unsigned integer, most significant bit first

2.5 Compliance Notation

As used in CEA-761-B, *“shall”* denotes a mandatory provision. *“Should”* denotes a provision that is recommended but not mandatory. *“May”* denotes a feature whose presence does not preclude compliance, that may or may not be present at the option of the implementor. *“Optional”* denotes items that may or may not be present in a compliant implementation. The 00 parameter denotes unused bits. Unused bits denoted by the 00 parameter shall be set to zero, and reserved for future use until defined.