

CEA Standard

DTV 1394 Interface Specification

CEA-775-C R-2013

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FOREWORD

Users of CEA-775-C should be aware that ongoing standardization work in the 1394 Trade Association may have a future impact on CEA-775-C. CEA has stated its intention to harmonize its standard with those developed within the 1394 Trade Association, and likewise the TA has indicated its willingness to coordinate standards development with CEA.

CEA-775-C supersedes EIA-775-A, CEA-775-A, and CEA-775-B.

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DTV 1394 Interface Specification

1 Scope

CEA-775-C defines mechanisms to allow a source of MPEG service, such as a cable or terrestrial set-top box, digital VCR, or DTV to utilize the MPEG decoding and display capabilities in a DTV. A method is included to allow the OSD Producer to supply bitmap graphic overlays for blending and composition in the DTV over decoded video.

CEA-775-C supports an optional baseband analog audio/video connection between an audio/video source device and the DTV. Mechanisms are provided to allow the source device to control the selection of the audio/video source for display in the DTV between an MPEG service decoded in the DTV and incoming analog audio/video supplied to it via an external input.

Nothing in CEA-775-C is intended to constrain the use of other 1394-based protocols.

1.1 Background

The currently implemented analog audio/video home entertainment cluster consists of various signal sources and various display devices. Possible audio/video sources in this system include a video cassette recorder, a DVD player, and a DBS or cable set top box. In the analog system the audio/video source can overlay its graphical user interface on its output video as shown in Figure 1. This allows the user to control the source based on information shown on the TV display.

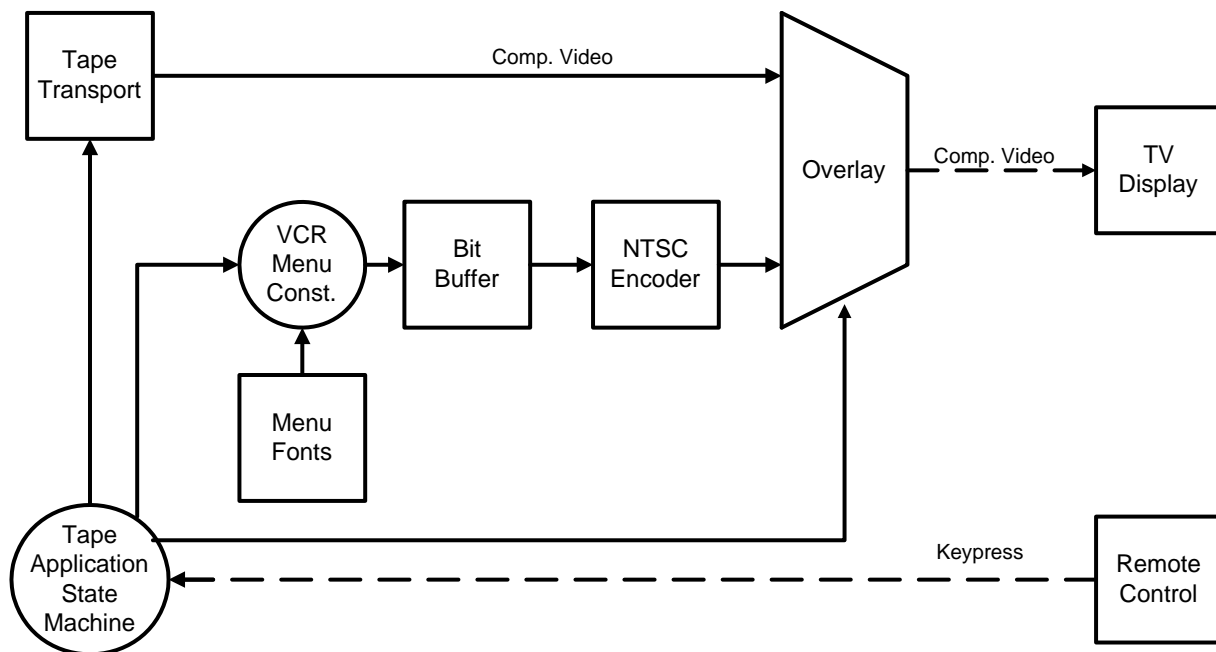


Figure 1 Typical NTSC System

A Digital Television (DTV) system using a similar model is not currently practical. Figure 2 shows an example of what would be required. The process of decoding the original bitstream to include the GUI overlay and then re-encoding for transmission to the DTV adds significant complexity and usually degrades picture quality.