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**STANDARD FOR CARRIAGE OF NTSC VBI DATA IN
CABLE DIGITAL TRANSPORT STREAMS**

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1. Introduction

1.1 Purpose

This document defines a standard for the carriage of Vertical Blanking Interval (VBI) services in MPEG-2 compliant bitstreams constructed in accordance with *ISO/IEC 13818-2*. The approach builds upon a data structure defined in the *ATSC A/53 Digital Television Standard*, and is designed to be backwards-compatible with that method.

1.2 Scope

The sections in this standard describing video user data extensions to MPEG-2 are organized as follows:

- **Section 1**—Provides an introduction
- **Section 2**—Lists applicable documents
- **Section 3**—Defines the acronyms and abbreviations used in this specification
- **Section 4**—Provides an overview of the VBI services supported
- **Section 5**—Specifies the video bitstream syntax and semantics for picture user data extensions

2. Applicable Documents

The following documents may enhance the understanding of this specification:

1. *Generic Coding of Moving Pictures and Associated Audio, ISO/IEC 13818-2: 1995 (E)* International Standard (MPEG-2 Video).
2. *Generic Coding of Moving Pictures and Associated Audio, ISO/IEC 13818-1*, International Standard, November, 1994 (MPEG-2 Systems).
3. *Characteristics of Systems for Monochrome and Colour Television*, CCIR Report 624-4, 1990.
4. *Encoding Parameters of Digital Television for Studios*, CCIR Recommendation 601-2, 1990.
5. ATSC A/53, *Digital Television Standard* (1995).
6. Lewis, Boyd A. and Kempter P., *AMOL Signal Specifications*, Nielsen Engineering and Technology, January, 1994, Revision Level 1.1, Document Number ACN 403-1122-000.
7. Code of Federal Regulations, Title 47 (Telecommunication), Part 73, Section 699.
8. NTC Report No. 7, Video Facility Testing Technical Performance Objectives, 1976.
9. EIA-708-B, *Digital Television (DTV) Closed Captioning* October 1999.
10. ANSI/EIA-608-1994, *Recommended Practice for Line 21 Data Service*, September 1994.
11. *AMOL Signal Specification*, Nielsen Engineering and Technology, Document Number ACN 403-1122-000, Revision Level 1.4, January 16, 1995.
12. *AMOL II Signal Specification*, Nielsen Engineering and Technology, Document Number ACN 403-1193-024, Revision Level 3.2, May 19, 1995.
13. EIA-516, *Joint EIA/CVCC Recommended Practice for Teletext: North American Basic Teletext Specification (NABTS)*, May 1988.
14. *World System Teletext and Data Broadcasting System*, Technical Specification, The Department of Trade and Industry, London, England, May 1987.
15. IEC-461, *Time and Control Code for Video Tape Recorders (VITC)*, Publication 461, International Electrotechnical Commission, 1986.
16. SCTE DVS 157[r1](#), SCTE Proposed Standard methods for carriage of closed captions and non real-time sampled video, [March 1999](#).