Introduction to Proposed Recommended Practice "E-VSB Implementation Guidelines"

1. ORIGIN

PS-677, "Proposed Recommended Practice: E-VSB Implementation Guidelines," was developed by subgroup S9-2 under the direction of TSG and specialists groups S6, S8 and S9.

2. PURPOSE AND SCOPE

The purpose of this document is to provide a very detailed explanation of the ATSC standards related to E-VSB (Enhanced VSB), and provide guidelines to parameter selection and implementation scenarios where useful.

The document contains no normative specifications. Readers are referred to the relevant ATSC standards (A/52B, A/53D, A/65B, and A/110A) and are cautioned not to rely on this document for precise specification of normative standards.

The document assumes some familiarity with features of ATSC 8-VSB transmission and the ATSC transport and source coding standards that were developed prior to E-VSB, and refers readers to A/53D, "ATSC Digital Television Standard," and A/54A, "Guide to the Use of the ATSC Digital Television Standard," as well as other ATSC standards where appropriate.

3. HIGHLIGHTS OF CONTENTS

This document provides detailed discussion of exemplary implementations of the transmission (physical) layer of E-VSB, the available data rates, and the effects of the physical layer on system delay and timing. It provides workable examples of both transmitter and receiver implementation of the physical layer.

The document includes an extensive discussion of implementation for the ATSC Enhanced AC-3 audio coding standard, intended for use in the enhanced stream, including exemplary implementation of decoding and fallback audio applications.

The document also includes two appendices. Appendix A enumerates data rates for the main, ½-rate enhanced and ¼-rate enhanced streams, sorted by stream type and rate. Appendix B lists the relative delays of the three streams for the available combinations of data rate.