

## Change Summary for Revision of A/65B

This document provides a description of changes contained in the proposed revision of A/65B. This summary does not necessarily describe all of the details and ramifications incorporated in the draft revision. Readers are encouraged to carefully review the details of the proposed changes to make their own assessment.

| Section                                   | Page Change |   | Reason  |
|---|-------------|---|---|
| Throughout                                |             | Updated references  |   |
| Throughout                                |             | Replace statements of the form "The bit stream syntax for "xyz" table is found in Table y.z" with "The bit stream syntax for "xyz" table shall be as defined in Table y.z" (or modifications as appropriate).   | Syntax tables do not carry normative language stating that the syntax "shall" be as follows. Instead they say "is" (example: "The bit stream syntax for the xyz Table is found in Table y.z" These corrections make the syntax table definitions normative.   |
| Section 1.1.1 Terrestrial and 1.1.2 Cable | 10          | Added "(rating information) to "The Rating Region Table (RRT) defining the TV parental guideline (rating information) system referenced by any content advisory descriptor carried within the Transport Stream, except the RRT corresponding to rating_region 0x01 (US + possessions)."   | Clarification text to match usage.  |
| 2, References                             | 11          | Remove references to A/55 and A/56.   | A/56 has been withdrawn and ATSC is considering the withdrawal of A/55. These references therefore were removed.  |
| 2, References                             | 11          | Separate references into normative and informative.   | Clarity and ease of reading.  |
| 2., References                            | 12          | Delete Informative reference to "Record of Test Results for Digital HDTV Grand Alliance System."  | While it may be historically interesting, reference is not useful for readers of standard (and no longer referenced by text).   |
| 3.1, Compliance notation                  | 12          | Modified first sentence to "As used in this document, "shall" denotes a mandatory provision of the standard." By removing "...or will..."   | All normative instances of "will's" have been replaced with "shall's" in the standard.  |
| 3, Definitions                            | 13          | Added "The collection of all the TS_program_map_section(s)." to the definition of PMT   | Correcting the definition of PMT, rather than continuing the common (but incorrect usage).  |
| 3.3, Definition of Terms                  | 14          | Modified definition of Event:<br><br><b>event</b> – A collection of associated program elements that have a common timeline for a defined period. An event is equivalent to the common industry usage of "television program." An event may also be an analog "television program."   | Brought the definition of the term "event" into line with other usage in ATSC standards.  |
| 4.2, Extensibility                        | 17          | Added:<br><br><b>Table length extensions</b> – Future amendments to this Standard may include new fields at the ends of certain tables. Tables that may be extensible in this way include those in which the last byte of the field just preceding the CRC may be determined without use of the section_length field. Such an extension is a backwards compatible addition.<br><br><b>Descriptor length extensions</b> – Future amendments to this Standard may include new fields at the ends of certain descriptors. Descriptors extensible in this way | Added a warning to implementers of the standard that ATSC (and MPEG) rules allow (and have always allowed) future revisions by adding extra fields at the end of descriptors and extra fields at the end of table sections. This is a point that many implementers have missed in the past, resulting in considerable pain. This explicit reminder will hopefully avoid problems in the future. |

| Section                                       | Page Change |   | Reason  |
|---|-------------|---|---|
|   |             | include those in which the last byte of the last currently defined field may be determined without the use of the descriptor_length field."   |   |
| 5, Table Hierarchy and Structure Requirements | 18          | <p>Modify text to say: "The base PID (base_PID) is an explicitly defined value (0x1FFB) used to identify the TS packets for the following tables for terrestrial and cable systems:"</p> <p>New footnote added: "The ATSC DTV Standards do not define a Network Information Table (NIT) as specified in MPEG-2 Systems. The use of program_number 0x0000 in the PAT to point to the PSIP base_PID (0x1FFB) should be avoided as MPEG-2 Systems reserves this value for the network_PID, which in turn is used to identify the TS packets of a NIT. See [A/53D], Annex C for further details."</p>     | Confusion has been observed in the field regarding whether the MGT is a NIT (Network Information Table). Some people have been pointing to the MGT in program #0 of the PAT. In reality, ATSC has no concept of a NIT – this modification explicitly states that. |
| 6.3.1, Terrestrial Virtual Channel Table      | 31          | <p>Add to semantics of major_channel_number: "The value of major_channel_number shall be set such that in no case is a major_channel_number/minor_channel_number pair duplicated within the TVCT."</p> <p>Add to semantics of minor_channel_number: The value of minor_channel_number shall be set such that in no case is a major_channel_number/minor_channel_number pair duplicated within the TVCT."</p>  | Avoids potential viewer (and receiver) confusion in channel selection. Felt that there was no broadcaster need to duplicate the major/minor pair within a transport.  |
| 6.3.1, Virtual Channel Table                  | 32          | Changed values in Table 6.6 (ETM_location) from 0xnn to 'nn'  | ETM_location is a 2 bit field, 0xnn is the wrong usage.   |
| 6.3.2, Semantics of Major Channel Number      | 34          | Fixed direction of quote character.   |   |
| 6.3.2, Cable Virtual Channel Table            | 34          | Add to semantics of major_channel_number, minor_channel_number: "Channel number values shall be set such that in no case is a major_channel_number/ minor_channel_number pair duplicated within the CVCT."  | Avoids potential viewer (and receiver) confusion in channel selection. Felt that there was no broadcaster need to duplicate the major/minor pair within a transport.  |
| 6.3.2, Cable Virtual Channel Table            | 36          | Change "cable_VCT_section" to "cable_virtual_channel_table_section"   | Correct terminology   |
| 6.5, Event Information Table                  | 40          | Add footnote to: "The Event Information Table (EIT) contains information..." stating:<br>"Note that the FCC said (in relevant part) in paragraph 152 of the FCC R&O on the Second Periodic Review of the Commissions Rules and Policies Affecting the Conversion to Digital Television (FCC 04-192): "We expect broadcasters to populate the required tables and descriptors with the proper information to help receivers assemble functioning guides. ... These EITs should be populated with the correct information, so that the user knows what programs are on for this [9 to] 12 hour period." | Clarify the usage of "describe" as related to an EIT event.   |
| 6.7, Directed Channel Change                  | 50          | Switched explanatory paragraphs in dcc_from_minor_channel_number and dcc_to_minor_channel_number  | Paragraphs were in wrong place and described other semantic.  |
| 6.11, Core Descriptors                        | 69          | Update Tables 6.25a and 6.25b to reflect descriptors defined in A/53.   | Added ATSC Private Information Descriptor and Content Identification Descriptor to tables. Later work led   |

| Section   | Page Change | Reason  |   |
|---|-------------|---|---|
|   |             | to the addition of the newly defined Genre Descriptor to the tables (see Ref 31 for further discussion).  |   |
| 6.11.1, AC-3 Audio Descriptor   | 70          | Changed wording to: "The AC-3_audio_stream_descriptor() (AC-3 audio descriptor), of Ref. [1] shall be used in the EIT when there is one or more audio services planned for or present as an element of the event. This enables, for example, announcement of audio language and stereo or 5.1 channels. If there is no audio service associated with the EIT event, the AC-3_audio_stream_descriptor() shall not be present for that event."  | Re-enabling ability to announce audio language for an upcoming event.   |
| Original Section 6.11.2, Program Identifier Descriptor                                      | 70          | Section removed   | The program_identifier_descriptor disappeared from A/57, with the revision to A/57A.  |
| 6.11.2, Caption_service descriptor  | 71          | Various wording changes in informative text and semantic definitions. Changed name of field "cc_type" to "digital_cc" to avoid overloading the term "cc_type" used in other standards.  | Clarifying how the caption_service descriptor is used & meaning of its fields.  |
| 6.11.3, Content Advisory Descriptor   | 71          | From: "This descriptor shall appear in the descriptor() loop for each EIT event that has closed captions."<br>To: "This descriptor shall appear in the descriptor() loop for each EIT event that has one or more ratings."  | Original had cut and paste error. New wording requires the use of the content_advisory descriptor for events that have one or more ratings. |
| 6.11.13, Genre Descriptor   | 80          | Genre Descriptor defined. Allows association of DCC genre codes with individual events in the EIT.  | Felt to be useful, low cost feature. The DCC syntax already has defined the genre codes, which are used here.                               |
| Annex B   | 88          | Change "is" in introductory sentence to "shall be": The assignment of major_channel_number values in the U.S. shall be based on the rules below.  | The word "is" does not carry normative meaning.   |
| Annex B: 1, Assignment of Major Channel Number Values for Terrestrial Broadcast In the U.S. | 88          | Replace "...current actual..." with "...originally allocated..." as below.<br><br>"If, after the transition, a previously used NTSC RF channel in a market is assigned to a newly-licensed DTV broadcaster in that market, the newly-licensed DTV broadcaster shall use, as his major_channel_number, the number of the originally allocated DTV RF channel being used by the previous NTSC licensee of the assigned channel."  | Avoids possible channel numbering problem which could arise after spectrum repacking.   |
| Annex D, 3, Elements of PSIP  | 110         | Modify text to include "...as required..." and change "...different countries..." to "... different regions..."<br><br>"Transmission syntax for the United States' voluntary program rating system is included in this standard. When required, the Rating Region Table (RRT) has been designed to transmit the rating standard in use for each country using the standard. Provisions were made for different rating systems for different regions and multi-country regions as well." | Original wording implied that RRT must always be present, which is no longer the case for some regions.                                     |
| Annex G, An Overview of PSIP for Cable  | 142         | Complete redraft of Annex G   | Annex G needed to be updated and was redrafted considering the perspective of current ATSC carriage on cable.                               |
| Annex H, Location Codes...  | 149         | Contents of Annex H have been replaced with: "Editorially removed."   | Annex H was originally present, since FIPS 6-4 had known errors. FIPS 6-4 has been corrected, so a  |

---

| Section | Page Change | Reason   |
|---------|-------------|--|
|         |             | list of "corrected" codes is no longer necessary and is the better reference. Prior references to Annex H have been modified to point directly to FIPS6-4. |