FREE TV AUSTRALIA OPERATIONAL PRACTICE OP- 44
Implementation Guide for DVB EIT Present/Following Information (EITp/f)

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1. SCOPE

This document recommends the method of usage and application of descriptors within the Event Information Table (EIT) present/following[1] sections to convey program information, for digital terrestrial television broadcasting in Australia.

Australian television broadcasters indicate their scheduled programs by the transmission of EITpresent/following$_{actual}$ and EITschedule$_{actual}$ information in accordance with Clause 5.2.4 of ETSI EN 300 468.

Note: EITpresent/following$_{other}$ and EITschedule$_{other}$ are not currently transmitted by Australian television broadcasters.

This Free TV OP 44 provides instruction for Australian television broadcasters in the transmission of EITpresent/following$_{actual}$ and for its use by a TV receiver.

Similar guidance for use of EITschedule$_{actual}$ is given in Free TV OP 58 "Implementation Guide for DVB EIT Schedule Information (EITschedule$_{actual}$)".

Guidance on implementation of Content Reference IDs (CRIDs) by Australian Television Broadcasters can be found in Free TV *OP72 Implementation of Content Reference IDs by Australian Television Broadcasters*

In the Australian application of the EITp/f, detailed information regarding a program event is added by the use of DVB descriptors.

One essential descriptor is the parental_rating_descriptor (tag value 0x55), needed by receivers to comply with mandatory parental lock requirements[2]. It is this descriptor that requires accurate time alignment of the EITp/f with the associated program's start time.

Four other descriptor types are typically in use
  * short_event_descriptor (tag value 0x4D),
  * extended_event_descriptor (tag value 0x4E),
  * content_descriptor (tag value 0x54) (aka Genre)
  * content_identifier_descriptor (tag value 0x76)

Other descriptors may also be present such as the component_descriptor but are not necessarily carried by all broadcasters.

Within the EIT table sections, the use of these descriptors comply with the Australian digital terrestrial television transmission standard, AS 4599 [1] and references Clauses 6.2.37 and 6.2.15 of ETSI standard EN 300 468 [2]

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[1] Known locally in Australia as "now/next"
[2] Broadcasting and Datacasting Services (Parental Lock) Technical Standard 2010 (BSA 1992 : Federal Register of Legislative Instruments F2010L02220)

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2. APPLICATION

2.1   DVB and Usage Recommendations

The following rules apply to the EITp/f:

1)   In Australia, transmission of the EIT is mandatory for the actual delivery system and shall be in PID 0x0012 with a table_id value of 0x4E.

2)   All sections of the EITp/f shall be transmitted at least every 2 seconds.

3)   It is intended that all transmissions will maintain a strict relationship between the transmitted programme content start / finish times and the information carried in the EITp/f$_{actual}$ tables.

2.2   short_event_descriptor

This descriptor provides text for:
*   the name of the event (limited to 40 characters), and
*   a short description of the event in text form (limited to 200 characters).

Text strings shall be coded using the Latin Alphabet as specified in ISO/IEC 6937 [3] (i.e. use of the full table of values including primary and supplementary sets of graphic characters and non-spacing diacritical marks for text communication as in Figure A.1 of Annex A of ETSI EN 300 468 [1]).   This descriptor shall be broadcast at least in English, as signalled in the ISO_639_language_code field as 'eng'.

Note that the combined length of the text fields given below could be up to 250 bytes but are limited to accommodate the display space on the receiver screen. The actual number of bytes required will represent the displayable characters (including spaces) and depend on the use of control codes and whether one or two byte character representation is used.

2.2.1   event_name_char Field

Broadcasters shall provide the scheduled EVENT name, as the name of the scheduled program event, within the event_name_char field according to the syntax of Table 85 of ETSI EN 300 468 [2].

For example the Scheduled Event name might be "The Sunday Night Movie".

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2.2.2 text_char Field

Broadcasters shall provide either the "episode" name (as the title of the scheduled episode), or other brief information further describing the program, in the text_char field according to the syntax of Table 85 of ETSI EN 300 468 [2].

For example, the Scheduled Episode title might be "Star Wars Part V: The Empire Strikes Back" or a brief synopsis of the event.

It is intended that receivers will decode the values of the short_event_descriptor in accordance with ETSI EN 300 468 Clause 6.2.37 [2].

2.3 extended_event_descriptor

The purpose of the extended_event_descriptor is to provide a longer text description or synopsis of an event, which may be used either in addition, or complimentary to, the short_event_descriptor.

For example, the synopsis text might state;

"The path of a Jedi is often difficult, filled with conflict and pain. Luke Skywalker's life which began as a simple farmboy and saw him become the greatest hero the galaxy has ever known is an amazing example of this. Skywalker spent his restless childhood on the backwater desert planet of Tatooine, toiling away on his uncle's moisture farm. His guardians, Beru and Owen Lars, never told Luke of his true heritage. While Luke believed his father to have been a navigator on a spice freighter, he never suspected that Anakin Skywalker was once a famed Jedi Knight and incredible starpilot".

Broadcasters may provide the synopsis text (illustrated above) as extended text in the text_char field of the extended_event_descriptor (Table 51 of ETSI EN 300 468 [2]).

In accordance with ETSI EN 300 468 [2], the number of displayable characters in the text_char field shall be limited to 249 bytes, i.e.; the maximum 255 byte descriptor length less six bytes of header information. To permit even longer lengths of text, Clause 6.2.15 in ETSI EN 300 468 [2] prescribes a mechanism allowing **repetitive instances of the extended_event_descriptor** and thereby permitting long text to be transmitted in 249 byte multiples.

The synopsis example above contains 594 characters (including spaces) which will fit into three (3) instances of the extended_event_descriptor.

It is intended that receivers will decode the values of the extended_event_descriptor in accordance with Clause 6.2.15 in ETSI EN 300 468 [2].

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The text contained in each instance of the extended_event_descriptor *should be appended for display in the correct order.*

Broadcasters will limit the amount of extended text to the minimum amount necessary to adequately describe the synopsis information. In general, no more than three (3) instances of the extended_event_descriptor should be required.

The order of the information contained in each instance of the extended_event_descriptor is controlled by the use of the descriptor_number and last_descriptor_number fields of the extended_event_descriptor.

2.4   parental_rating_descriptor

This descriptor incorporates the country code (AUS) followed by an 8-bit number that corresponds to the parental guidance rating as per the classification code in the Australian Parental Guide Code. Coding of the rating value is specific to Australian classifications according to Table 4.10 of AS4599 [1]. Note: this is different to the DVB use of this 8-bit number.

2.5   content_descriptor (Genre)

The use of this descriptor is fully described in Free TV Operational Practice OP-39 [4].

2.6   content_identifier_descriptor (CRID)

The use of this descriptor is fully described in Free TV Operational Practice OP-72 [8].

3.0   RECEIVER BEHAVIOUR

It is recommended that:

1)   Receivers display the short_event_descriptor text_char field appended with information from the extended_event_descriptor text_char field when displaying event information details.

2)   A scrolling navigation function is employed in the receiver to ensure that all information transmitted by broadcasters can be displayed.

3)   Receivers should regularly check (every 4 seconds or less), and use the EITp/f$_{actual}$ information to correctly identify the present event and provide enforcement of the Parental Rating restrictions that may be configured on the receiver by the viewer with respect to the signaled present event. EITschedule timing information is not suitable for this purpose.

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4.0   REFERENCES

Reference	Title	Designation
[1]	Australian Standard, Digital television – Terrestrial broadcasting Part 1: Characteristics of digital terrestrial television transmissions	AS4599.1-2011
[2]	Digital Video Broadcasting (DVB);Specification for Service Information (SI) in DVB systems	ETSI EN 300 468 V1.11.1 (2010-04)
[3]	Information technology – Coded graphic character set for text communication – Latin alphabet	ISO / IEC 6937 2001
[4]	Free TV Operational Practice OP-39, Content Descriptor	OP-39 Issue 5 August 2008
[5]	Free TV Operational Practice OP-58, Implementation Guide for DVB EIT Schedule Information (EITschedule$_{actual}$)	Issue 2 October 2012
[6]	Digital Video Broadcasting (DVB); Carriage and signalling of TV-Anytime information in DVB transport streams	ETSI TS 102 323 V1.5.1 (January 5, 2012)
[7]	Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 4: Phase 1 - Content referencing	ETSI TS 102 822-4 V1.7.1 (2012-12)
[8]	Free TV Operational Practice OP-72, Implementation of Content Reference IDs by Australian Television Broadcasters	Issue 1 November 2014