

# **ETSI TS 102 796 v1.2.1 Errata 2**

*7<sup>th</sup> August 2014*



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# 1 Introduction

This document contains the currently identified and resolved errata to ETSI TS 102 796 v1.2.1. It is a living document which will be updated based on experience of implementing receivers, services and tests. Versions of this document will periodically be made publicly available via the [www.hbbtv.org](http://www.hbbtv.org) web site.

Errata 2 includes all errata from errata 1 and obsoletes that document.

For avoidance of doubt, the contents of this document have not been reviewed or approved by ETSI.

# 2 Conventions

In this document, text quoted from other documents or to be added to other documents is indented except where it appears in a table. Fine-grained changes in text from other documents are shown using the underline and strikethrough convention.

# 3 Summary

The following table summarises the changes included in this document.

<b>HbbTV internal ref.</b>	<b>Short Description</b>	<b>Category</b>	<b>Clauses Impacted</b>	<b>Clause in this document</b>
1317	getSIDescriptors optional argument	Ambiguity	A.1	4.8.1
1356	Error in default xmlCapabilities re trick mode support	Ambiguity	10.2.4	4.7.2
1442	Clarification of URL example	Editorial	9.2	4.6.1
1443	Dynamic MPD served with cache control off	Ambiguity	E.2.1	4.10.1
1446	Sample application no longer provided	Editorial	10.2.5	4.7.4
1451	Incorrect section names	Editorial	A.1	4.8.7
1461	StreamEvent event description	Ambiguity	8.2.1.2	4.5.2
1462	Mismatch in removeStreamEventListener arguments	Editorial	8.2.1.1	4.5.1
1488	Misspelling of countryId	Editorial	A.1	4.8.6
1492	Missing text in 6.2.2.4	Editorial	6.2.2.4	4.3.1
1493	DVB-SI parental rating	Ambiguity	A.1	4.8.2
1525	Video scaling and visibility of decoded video	Editorial	10.2.1	4.7.1

<b>HbbTV internal ref.</b>	<b>Short Description</b>	<b>Category</b>	<b>Clauses Impacted</b>	<b>Clause in this document</b>
1531	Trick modes with adaptive bitrate content	Editorial	9.4	4.6.1
1531	Clarify support for PlaySpeedChange	Error	A.1	4.8.4
1544	Missing window.onload property	Implementation	A.2.8.1	4.8.9
1554	Errors in the example XML capabilities	Ambiguity	10.2.4	4.7.2
1554	Location of the DRM information in the XML capabilities	Editorial	10.2.4	4.7.3
1569	Missing text in E.4.2.1	Editorial	E.4.2.1	4.10.2
1577	Explicitly linking EIT to metadata search	Ambiguity	A.2.9	4.8.10
1581	Missing channel.nid property	Error	A.1	4.8.5
1615	Definition of programmeID	Ambiguity	A.1	4.8.3
1628	Location of the DRM information in the XML capabilities	Ambiguity	10.2.4	4.7.3
1633	Incorrect references to DAE Annex B	Editorial	A.1	4.8.8
1635	HTTP User Agent	Implementation	7.3.2.4	4.4.1
1640	Editorial correction	Editorial	7.3.2.5	4.4.2
1715	Queue management on type change	Ambiguity	A.2.5	4.8.12
1767	Modification to application lifecycle on channel selection	Ambiguity	6.2.2.2	4.3.2
1784	Mandatory argument to sendDRMMessage	Error	A.1	4.8.11
1848	Remove reference to external application authorisation descriptor	Editorial	6.2.2.3	4.3.3
1887	Audio from memory	Error	A.1	4.8.13
1894	OIPF errata to R1 V1.2	Ambiguity	2.1	4.1.1
1914	Examples of different application types	Editorial	4.1	4.2.1
2007-1	Reference to table off by one	Editorial	6.2.2.7	4.3.6
2043	Broken reference in annex B	Editorial	B.1	4.9.2
2066	Segment length	Error	E.3.2	4.10.5
2067	flags=0 is wrong	Ambiguity	B.2.5.1	4.9.1

<b>HbbTV internal ref.</b>	<b>Short Description</b>	<b>Category</b>	<b>Clauses Impacted</b>	<b>Clause in this document</b>
2068	Remove use of display:none	Implementation	A.2.4.1, A.2.5, new A.2.14	4.8.14
2083	Extensions to A/V object for parental rating errors	Error	10.2.6, A.1	4.7.5, 4.8.15
2086	Remove ApplicationSpecificDescriptor	Implementation	7.2.3	4.4.3
2121	DASH technical corrigendum 1	Error	2.1, 9.4	4.1.3, 4.6.3
2130	DASH video resolutions	Implementation	2.1, E.4.2.1	4.1.2, 4.10.4
2163	Capitalisation of roles incorrect	Error	E.2.4	4.10.3
2184	ScheduledRecording constants not included	Ambiguity	A.1	4.8.16
2186	Copy/paste error in A.2.4.2	Ambiguity	A.2.4.2	4.8.17
2262	Ambiguity when stopping broadband video	Ambiguity	9.1.1.1	4.6.4
2273	Switching between Representations	Ambiguity	E.4.2	4.10.6
2282	statusText attribute of XHR with DSMCC	Implementation	8.2.2	4.6.5
2298	is audio channels unselect asynchronous?	Ambiguity	A.1	4.8.18
2309	Origins for carousel delivered applications	Error	6.3, A.2.8.1	4.3.4, 4.8.19, 4.1.4
2313	onPlaySpeedChanged - Should always dispatch when play() is called	-	A.1	4.8.21
2396	Clarification on DASH video resolutions	Ambiguity	7.3.1.3	4.4.4
2399	Use of "may" in OIPF section 8.4.2	Error	A.1	4.8.20
2417	Application types in the AIT	Error	7.2.3.1	4.4.5
2495	Clarify behaviour if AIT PID changes	Ambiguity	6.2.2.3	4.3.5
2497	Changes to the set of available components in video/broadcast object	Ambiguity	A.1	4.8.18

#### Key to categories

Ambiguity	Feature where different implementations may behave in different ways. This includes under-specified features as well as inconsistencies within the specification.
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Editorial	Purely editorial change
Error	Clear technical error in the specification. Cannot be implemented as written.
Implementation	Feature removed, simplified or modified in order to simplify implementation and testing.

## 4 Changes to TS 102 796 v1.2.1

### 4.1 Clause 2 – References

#### 4.1.1 OIPF errata to R1 V1.2

Implementations shall take into account any changes to the OIPF specifications as indicated in the OIPF Release 1 IPTV Solution V1.2 Errata 1.

#### 4.1.2 DASH video resolutions

The following additional normative reference shall be added;

- [36] Digital Video Broadcasting (DVB); MPEG-DASH Profile for Transport of ISO BMFF Based DVB Services over IP Based Networks

NOTE: Currently available as DVB Blue Book A168

#### 4.1.3 DASH Technical Corrigendum 1

The following additional normative reference shall be added.

- [37] ISO/IEC 23009 1 (2012): “Information technology — Dynamic adaptive streaming over HTTP (DASH) — Part 1: Media presentation description and segment formats, TECHNICAL CORRIGENDUM 1”

#### 4.1.4 Origins for carousel delivered applications

The following additional normative reference shall be added.

- [38] W3C Recommendation (16 January 2014) “Cross-Origin Resource Sharing”

### 4.2 Clause 4 – Overview

#### 4.2.1 Examples of different application types

Modify the first set of bullets as follows:

- Broadcast-independent application (i.e. not associated with any broadcast service). This type of application is downloaded via broadband and accesses all of its associated data via broadband.
  - Examples of this type of service are catch-up services and games where the application does not need access to any broadcast resources.
- Broadcast-related application (i.e. associated with one or more broadcast services or one or more

broadcast events within a service) that may be launched automatically ("autostart") or explicitly upon user request. This type of application may be downloaded via broadband or broadcast and may access its data via either method.

- Examples of this type of service are electronic program guides and teletext-like services where the application may wish to present the broadcast video in a window and access other broadcast resources (e.g. EIT metadata)..

### **4.3 Clause 6 – Service and application model**

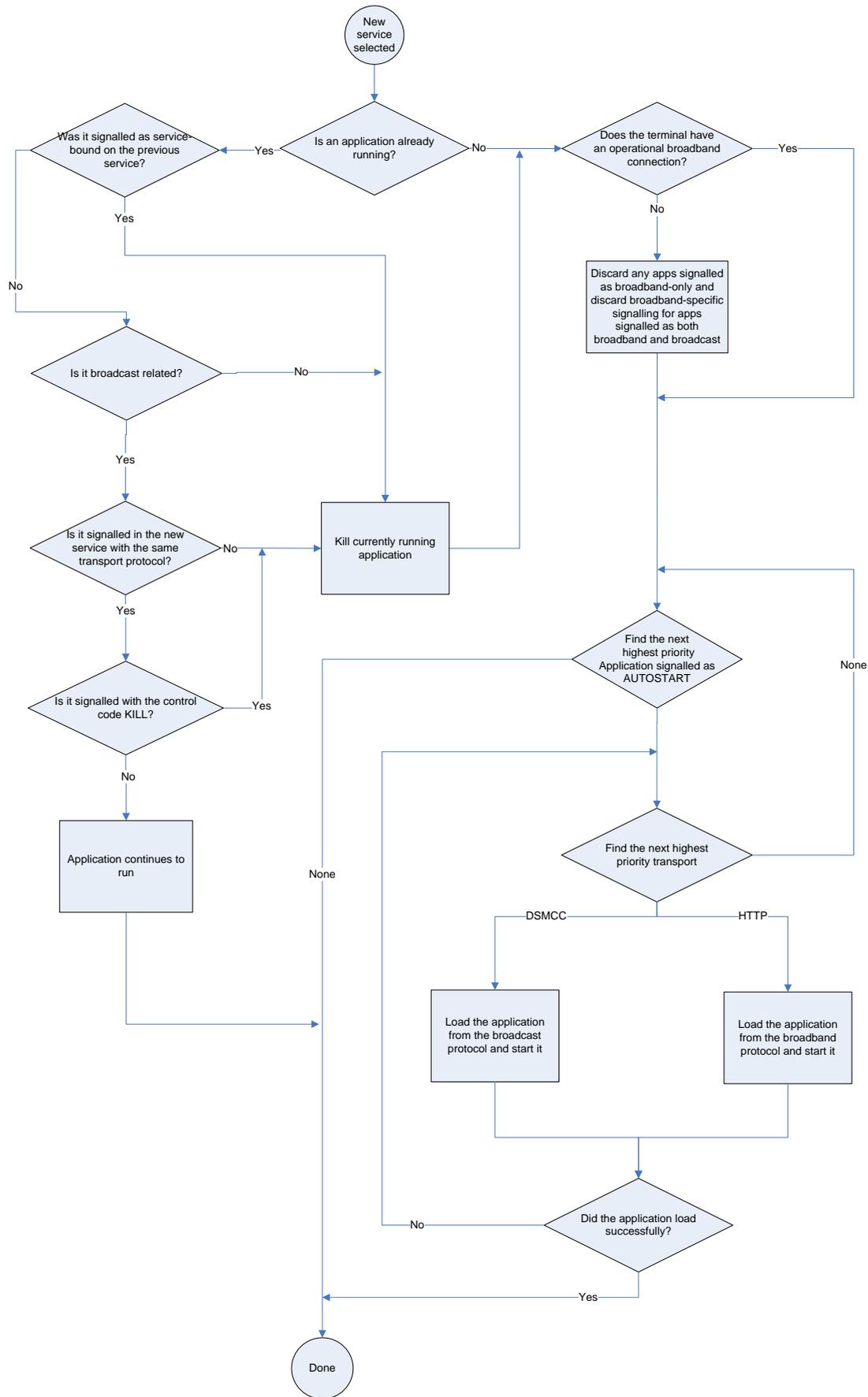
#### **4.3.1 Missing text in 6.2.2.4**

Modify the text in section 6.2.2.4 as follows:

- The timeShiftSynchronized property of the Configuration class shall be set to true (see clause A.2.4.3).

#### **4.3.2 Modification to application lifecycle on channel selection**

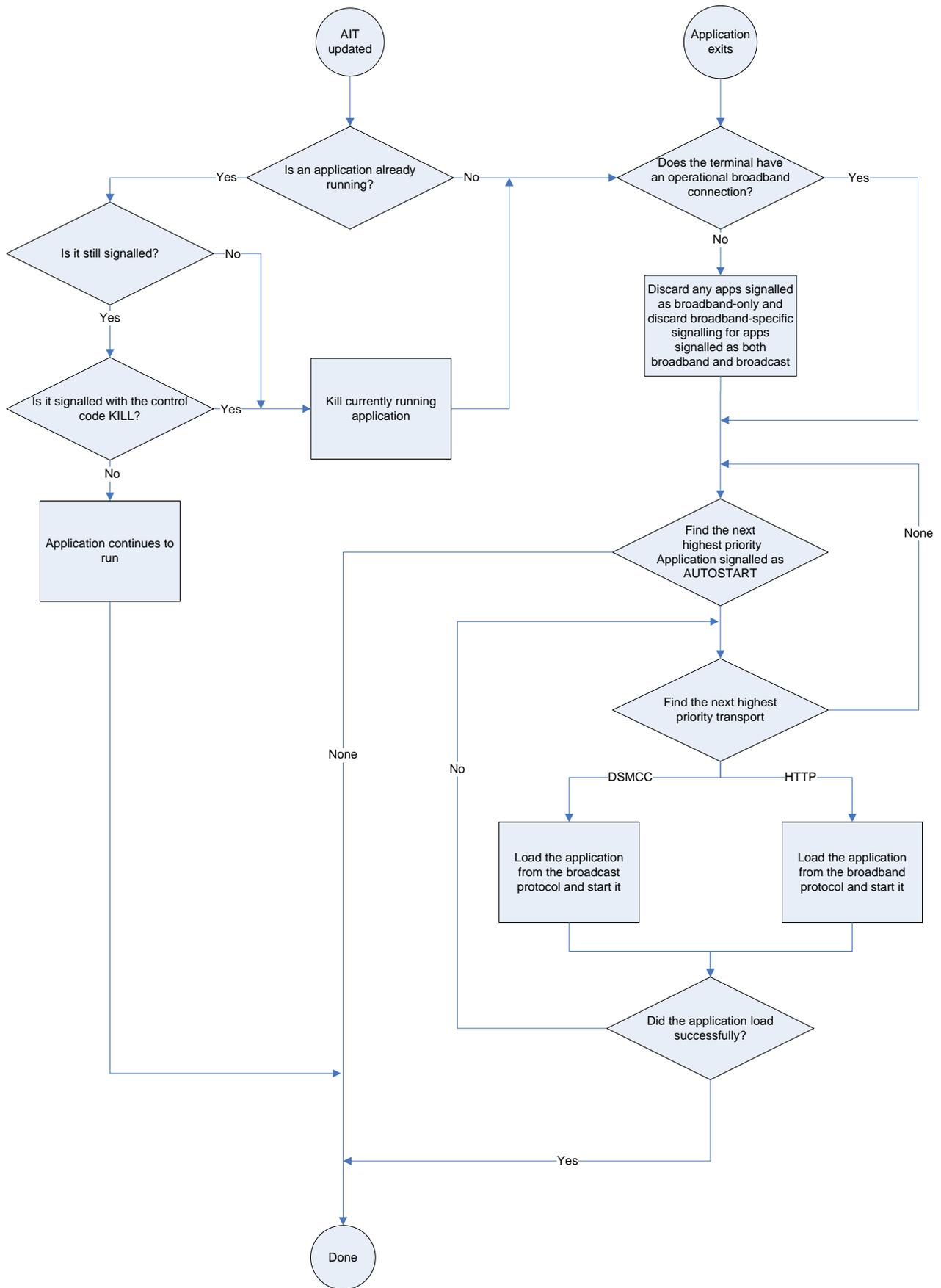
Replace Figure 13 with:



Note: The change is that “Is it signalled in the new service?” has been replaced by “Is it signalled in the new service with the same transport protocol?”

### **4.3.3 Remove reference to external application authorisation descriptor**

Replace Figure 14 with:



Note: The change is that “Is it still signalled, as a separate entity or through an external application authorization descriptor?” has been replaced by “Is it still signalled?”.

#### 4.3.4 Origins for carousel delivered applications

The following changes shall be made to clause 6.3.

- The existing text shall be renumbered to 6.3.2 “Application boundary”
- The heading for 6.3 itself shall be renamed to “Origins and application boundary”
- A new clause 6.3.1 shall be inserted as below.

##### 6.3.1 Origin

An origin can be derived for each document or other resource loaded by the terminal.

- For resources loaded via HTTP or HTTPS, the origin shall be derived from the URL as defined in the "The Web Origin Concept" specification [].
- For resources loaded via DSMCC object carousel, the origin shall be the DVB URI in the form (as defined in TS 102 851 [xx] section 6.3.1):

```
"dvb" ":" "/" original_network_id "." transport_stream_id "." service_id "."  
component_tag
```

NOTE 1: In this case, the "host" is the DVB triplet plus the component\_tag.

For resources loaded via DSM-CC, this origin shall be used in all cases where a document or resource origin is used in web specifications including but not limited to cross-origin resource sharing [38].

- “An application boundary is a set of URL origins and object carousels” shall be replaced with  
“An application boundary is a set of URL origins as defined in clause 6.3.1”
- “default” shall be added in the following point as shown;  
“For applications loaded via object carousel, the default application boundary shall include the carousel from which the first page of the application was loaded”
- The following point shall be deleted;  
“For files requested with XMLHttpRequest, the Same-Origin Policy shall be extended using the application boundary i.e. any origin in the application boundary will be considered of same origin”.

#### 4.3.5 Clarify behaviour if AIT PID changes

In clause 6.2.2.3, the following text shall be added immediately following note 3.

The PID on which an AIT component is carried may change. Terminals shall treat this in the same manner defined in clause 5.3.4.2 of ETSI TS 102 809 for the case where an AIT is removed from the PMT and then reinstated. This means that the sub-table shall be considered to have changed, regardless of whether the AIT version number changes, and the normal “AIT updated” sequence

defined in Figure 14 shall be followed.

### 4.3.6 Reference to table off by one

In clause 6.2.2.7, the table in table "State transitions for the video/broadcast embedded object" of the OIPF DAE specification [1] is table 12 and not table 11 as shown.

## 4.4 Clause 7 - Formats and Protocols

### 4.4.1 HTTP User Agent

Add a note after the first paragraph of 7.3.2.4:

NOTE: This does not apply to HTTP requests made by the MPEG DASH player or the DRM agent.

### 4.4.2 Editorial correction

Change the first sentence of 7.3.2.5 to:

HTTP redirects as defined in [HTTP] in response to a an HTTP request shall be supported as described in this clause.

### 4.4.3 Remove ApplicationSpecificDescriptor

Clause 7.2.3 is changed as follows;

- In Table 7 “Contents of XML AIT for Broadcast-independent applications”, the row for “applicationSpecificDescriptor” is changed to read as follows;

applicationSpecificDescriptor/	Optional	Outside the scope of the present document.
--------------------------------	----------	--

- The following text at the end of the clause is removed.

TS 102 809 [3] requires the definition of an "application specific descriptor" which is not used by the present document.

The following applicationSpecificDescriptor shall be supported;

```
<xs:complexType name="HBBTVApplicationSpecificDescriptor">  
  <xs:complexContent>  
    <xs:extension base="mis:ApplicationSpecificDescriptor">  
    </xs:extension>  
  </xs:complexContent>  
</xs:complexType>
```

### 4.4.4 Clarification on DASH video resolutions

The following shall be added at the end of clause 7.3.1.3.

Different requirements on video resolutions apply to content delivered using MPEG DASH as defined in Annex E.

### 4.4.5 Application types in the AIT

In Table 5: “Supported application signalling features”, in the row "5.3.4 Application Information

Table", the following text shall be added to the "Notes" column;

Terminals shall ignore AIT sub-tables within the selected service which have an `application_type` that the terminal cannot decode.

## **4.5 Clause 8 – Browser Application Environment**

### **4.5.1 Mismatch in removeStreamEventListener arguments**

Change the definition of the `removeStreamEventListener` method in section 8.2.1.1 to:

```
void removeStreamEventListener(String targetURL eventURL, String eventName, EventListener listener)
```

### **4.5.2 StreamEvent event description**

Change the description of the `status` property in section 8.2.1.2 to:

Equal to "trigger" when the event is dispatched in response to a trigger in the stream or "error" when an error occurred (e.g. attempting to add a listener for an event that does not exist, or when a `StreamEvent` object with registered listeners is removed from the carousel).

~~Circumstances under which an event shall be dispatched with an error status include An event might be dispatched with an error status if:~~

- the `StreamEvent` object pointed to by `targetURL` is not found in the carousel or via broadband;
- the `StreamEvent` object pointed to by `targetURL` does not contain the event specified by the `eventName` parameter;
- the carousel cannot be mounted;
- the elementary stream which contains the `StreamEvent` event descriptor is no longer being monitored (e.g. due to another monitoring request or because it disappears from the PMT).

Once an error is dispatched, the listener is automatically unregistered by the terminal.

## **4.6 Clause 9 – System Integration**

### **4.6.1 Clarification of URL example**

Change the text of the third sub-bullet of examples of URLs:

The application is signaled in a DSMCC Carousel with a Component Tag of 4 and a Base URL of `/index.phphtml?param1=value1` and the current service location is `dvb://1.2.3`

createApplication URL: `dvb://current.ait/1.1?param2=value2#foo`

Resulting URL: `dvb://1.2.3.4/index.phphtml?param1=value1&param2=value2#foo`

Add new text at the end of the section:

NOTE: Some browsers may use the filename suffix as a means for detecting the content type for files not served via HTTP. Application authors should be careful about filename suffixes used as incorrect suffixes may result in unexpected behaviour.

### **4.6.2 Trick modes with adaptive bitrate content**

Change the text in section 9.4:

~~If the terminal supports trick modes, the behaviour defined in clause A.2.3 shall be supported including the generation of a `PlaySpeedChanged` event reporting the actual speed of fast forwards and fast rewind. It is optional for a terminal to support trick modes for adaptive bitrate content.~~

### 4.6.3 DASH technical corrigendum

In clause 9.4, the references to “DASH [29]” shall all be replaced with references to “DASH [29] and the DASH Corrigendum [37]”.

### 4.6.4 Ambiguity when stopping broadband video

The following text shall be added after the third bullet in clause 9.1.1.1.

NOTE: An AV Control object that is not presenting video can obscure other parts of the application UI, including video being presented by other elements in the application or in the background.

### 4.6.5 statusText attribute of XHR with DSMCC

In clause 8.2.2, in the line referring to `statusText`, “Set to an empty string” shall be replaced with “Implementation dependent”.

## 4.7 Clause 10 – Capabilities

### 4.7.1 Video scaling and visibility of decoded video

Change Table 11 in section 10.2.1 to:

Video scaling	<p>Terminals shall be able to present video at sizes down to 1/8 by 1/8 of the width and height of the logical video plane - equivalent to 160 x 90 pixels in the Hybrid Broadcast Broadband TV application graphics plane.</p> <p>Terminals shall be able to scale video down to 1/4 by 1/4 and should be able to scale video down to 1/8 by 1/8. For sizes between 1/4 by 1/4 and 1/8 by 1/8, terminals which cannot scale video shall crop the video instead and display it centered in the according video object of the Hybrid Broadcast Broadband TV application graphics plane.</p> <p>Terminals shall be able to scale video up to 2 x 2 of the width and height of the logical video plane.</p> <p>Within these limits, any arbitrary scaling factor shall be allowed. <del>The aspect ratio of decoded video shall be preserved such that all of the decoded video is visible within the area of the video/broadcast or AV-Control object. The aspect ratio of the video shall be preserved at all scaling factors.</del></p> <p>See OIPF DAE Annex H.2 for more information.</p>	
---------------	---	--

### 4.7.2 Errors in the example XML capabilities

Change the xml text in section 10.2.4 to:

```
<profilelist xmlns="urn:oipf:config:oitf:oitfCapabilities:2009-1"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:oipf:config:oitf:oitfCapabilities:2011-1 config-oitf-
```

```

oitfCapabilities.xsd">
  <ui_profile name="OITF_HD_UIPROF+DVB_S+TRICK_MODE+TRICKMODE">
    <ext>
      <parentalcontrol schemes="dvb-si">true</parentalcontrol>
      <clientMetadata type="dvb-si">true</clientMetadata>
    </ext>
  </ui_profile>
  <clientMetadata type="dvb-si">true</clientMetadata>
  <video_profile name="MP4_AVC_SD_25_HEAAC" type="video/mp4" transport="dash"/>
  <video_profile name="MP4_AVC_HD_25_HEAAC" type="video/mp4" transport="dash"/>
  <audio_profile name="MPEG1_L3" type="audio/mpeg"/>
  <audio_profile name="HEAAC" type="audio/mp4"/>
  <video_profile name="MP4_AVC_SD_25_HEAAC" type="video/mp4" transport="dash"/>
  <video_profile name="MP4_AVC_HD_25_HEAAC" type="video/mp4" transport="dash"/>
  <video_profile name="TS_AVC_SD_25_HEAAC" type="video/mpeg"/>
  <video_profile name="TS_AVC_HD_25_HEAAC" type="video/mpeg"/>
  <video_profile name="MP4_AVC_SD_25_HEAAC" type="video/mp4"/>
  <video_profile name="MP4_AVC_HD_25_HEAAC" type="video/mp4"/>
  <audio_profile name="MPEG1_L3" type="audio/mpeg"/>
  <audio_profile name="HEAAC" type="audio/mp4"/>
</profilelist>

```

### 4.7.3 Location of the DRM information in the XML capabilities

Modify the paragraph following Table 13 to:

The support of the DRM feature shall be indicated by the addition of one or more <drm> elements in the OIPF extension to the <profileList> as defined in section 9.3.10 and Annex F of the OIPF DAE specification [1] ~~to the end of the profilelist element in the above XML.~~ For example:

### 4.7.4 Sample application no longer provided

Section 10.2.5 is deleted.

### 4.7.5 Extensions to A/V object for parental rating errors

In clauses 10.2.6.3 and 10.2.6.4, the paragraphs beginning “*If playback which was initiated by an Hybrid Broadcast Broadband TV application is blocked*” shall be extended with “*and an onParentalRatingChange event posted*”.

## 4.8 Annex A – OIPF DAE Specification Profile

### 4.8.1 getSIDescriptors optional argument

Change Table A.1 in Annex A.1 to:

Basics	7.16.2.1, 7.16.2.2	M(*)	<p>The following properties are required:</p> <ul style="list-style-type: none"> <li>- name</li> <li>- programmeID</li> <li>- programmeIDType</li> <li>- description</li> <li>- longDescription</li> <li>- startTime</li> <li>- duration</li> <li>- channelID</li> <li>- parentalRatings</li> </ul> <p>All other properties and methods are not included.</p> <p>The constants defined in clause 7.16.2.1 shall be supported however support for CRIDs is outside the scope of the present document.</p> <p><del>The following method is required for Programme objects returned by the programmes property of the video/broadcast object:</del></p> <ul style="list-style-type: none"> <li><del>- getSIDescriptors</del></li> </ul>	Broadcast-related
Metadata extensions to Programme	7.16.2.3	NI		
DVB-SI extensions to Programme	7.16.2.4	<del>NI</del> M	<p><u>The optional argument descriptorTagExtension to the method getSIDescriptors is mandatory when descriptorTag is 0x7f and ignored in all other cases.</u></p>	

## 4.8.2 DVB-SI parental rating

Change Table A.1 in Annex A.1 to:

The ParentalRatingScheme class	7.9.2	M M(*)	<p>A scheme supporting DVB-SI age based rating shall be supported.</p> <p>The description of the “dvb-si” rating scheme in the name property is changed to:</p> <ul style="list-style-type: none"> <li>the string value “dvb-si”: this means that the scheme of a minimum recommended age encoded as per ratings 0x01 to 0x0f in the parental rating descriptor from [EN300468], is used to represent the parental rating values.</li> </ul> <p>NOTE: If the broadcaster defined range from 0x10 to 0xff is used then that would be a different parental rating scheme and not “dvb-si”.</p>	None
--------------------------------	-------	--------	--	------

### 4.8.3 Definition of programmeID

Change Table A.1 in Annex A.1 to:

Programme, ScheduledRecording, Recording and Download	8.4.4	M(*)	<p>Only for properties that are required by the present document.</p> <p>The property programmeID shall contain a DVB URI including the event id and not an integer.</p>	
---	-------	------	--	--

### 4.8.4 Clarify support for PlaySpeedChange

Change Table A.1 in Annex A.1 to:

Extensions for recording and timeshift	7.13.2	M(*), M-P	<p>Terminals that support time-shift of broadcast video shall support the following events and properties even if they do not support the full PVR option:</p> <ul style="list-style-type: none"> <li>onRecordingEvent <del>RecordingEvent</del></li> <li>recordingState</li> <li>playPosition</li> <li>onPlayPositionChanged</li> <li>playSpeed</li> <li>onPlaySpeedChanged</li> </ul>	
Extensions to AV object for	7.14.3	M(*)	<p>Only the onPlayPositionChanged <del>property and event</del> and onPlaySpeedChanged properties and events are required.</p>	None

trickmodes				
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#### 4.8.5 Missing channel.nid property

Change Table A.1 in Annex A.1 to:

Channel class	7.13.11	M(*)	<p>The following properties shall be supported:</p> <ul style="list-style-type: none"> <li>- channelType</li> <li>- ccid</li> <li>- dsd</li> <li>- <u>nid</u></li> <li>- onid</li> <li>- tsid</li> <li>- sid</li> <li>- name</li> </ul> <p>All other properties and methods are not included.</p>	Broadcast-related
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#### 4.8.6 Misspelling of countryId

Change Table A.1 in Annex A.1 to:

The Configuration class	7.3.2	M(*)	<p>Support for read-only access to the following properties is mandatory:</p> <ul style="list-style-type: none"> <li>- preferredAudioLanguage</li> <li>- preferredSubtitleLanguage</li> <li>- preferredUILanguage</li> <li>- <del>countryID</del> <u>countryId</u></li> </ul> <p>All other properties and methods are optional.</p>	None
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#### 4.8.7 Incorrect section names

Change Table A.1 in Annex A.1 to:

<del>IMS-Related</del> <u>Communication Services</u> APIs	7.8	NI		
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<b>Broadcast video Scheduled content and hybrid tuner APIs</b>				
video/broadcast embedded object	7.13.1	M(*)	In the <code>setChannel()</code> method, the optional <code>contentAccessDescriptorURL</code> parameter may be ignored.  The <code>setVolume()</code> and <code>getVolume()</code> methods are not included.  The modifications in clause A.2.4 shall be supported.	See clause A.2.4
Extensions to video/broadcast for recording and timeshift	7.13.2	M(*), M-P	Terminals that support time-shift of broadcast video shall support the following events and properties even if they do not support the full PVR option: - <code>RecordingEvent</code> - <code>recordingState</code> - <code>playPosition</code> - <code>playSpeed</code>	Broadcast-related
Extensions to video/broadcast for access to <del>DVB-S</del> EIT p/f	7.13.3	M		Broadcast-related

Extensions to video/broadcast for <del>channel scan</del> <u>current channel information</u>	7.13.7	M	Access to the <code>currentChannel</code> property by broadcast-independent applications shall return <code>null</code> .	Broadcast-related
Extensions to video/broadcast for creating Channel lists from SD&S fragments	7.13.8	NI		
ChannelConfig <del>object</del> <u>class</u>	7.13.9	M(*)	The <code>channelList</code> property shall be supported. Other properties, methods and events are not included.	Broadcast-related

<u>IMS Communication Services API Support</u>	9.3.9	NI		
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#### 4.8.8 Incorrect references to DAE Annex B

Change Table A.1 in Annex A.1 to:

<del>5.4 Compatibility with CEA-2027-A</del>	<del>B</del>	<del>M</del>		
5.4 Window scripting object changes	B	M(*)	See clause A.2.8	None
<del>5.4 Omit Window.download()</del>	<del>B</del>	<del>M</del>		

5.7 <del>addition</del> <u>modifications</u> to 5.7.1.f and 5.7.1.g	B	M		None
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#### 4.8.9 Missing window.onload property

Change the text in section A.2.8.1 to:

The window object shall be supported as defined in annex B of the OIPF DAE specification [1] except as follows. The following properties shall be supported on the window object:

document, frames, history, innerHeight, innerWidth, location, name, navigator, oipfObjectFactory, onkeypress, onkeydown, onkeyup, onload, parent, self, top, window, XMLHttpRequest, onblur, onfocus, frameElement

## 4.8.10 Explicitly linking EIT to metadata search

Add new section A.2.9:

### A.2.9 Access to EIT Schedule Information

The Metadata APIs listed in table A.1 of this document shall allow access to DVB-SI EIT event schedule information for the actual transport stream and for the other transport streams (as defined in EN 300 468 [16]) that are carried on the transport stream of the currently selected broadcast service, unless access to broadcast resources is suspended according to 6.2.2.7. The terminal shall use EIT-schedule information if it is present, or EIT-present/following information otherwise. If both EIT-schedule and EIT-present/following information are present, it is implementation dependent which shall be used in cases where there are conflicts.

## 4.8.11 Mandatory argument to sendDRMMessage

Change Table A.1 in Annex A.1 to:

Content Service Protection AP	7.6	M-C, M-M	Mandatory if the DRM feature is supported or if the terminal supports CI+.  The DRMSystemID argument for the sendDRMMessage method shall be specified and shall not be null.	Trusted
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## 4.8.12 Queue management on type change

Make the following change in Annex A.2.5:

Calling stop(), modifying the data and/or type property or entering the error state shall cause any queued media item to be discarded.

## 4.8.13 Audio from memory

Change Table A.1 in Annex A.1 to:

Media control	4.4.5	M(*)	Shall be modified as defined in clause A.2.1. In addition, all references to playing audio from memory in this clause shall not apply.	
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## 4.8.14 Remove use of display:none

In clause A.2.4.1, the following changes shall be made;

- The introduction to the clause shall have “a set of changes to the state machine” changed to “a set of changes to the state machine and following text”.
- The following text shall be added to the end of the clause

A video/broadcast object with a CSS rule of display:none shall not be loaded and hence shall not be decoding audio or video.

In clause A.2.5, the following changes shall be made;

- The current text of clause A.2.5 shall be renumbered to become A.2.5.1 by the insertion of a new heading “A.2.5.1 New queue method”.

A new clause A.2.10 shall be added as follows;

#### A.2.10 Modification to application visibility

Clause 4.4.6 of the OIPF DAE specification [1] suggests setting the BODY element of an application to display:none when it does not ever need to be visible. Instead of this method, it is suggested that visibility:hidden would be more appropriate.

### 4.8.15 Extensions to A/V object for parental rating errors

Change table A.1 in annex A.1 as shown;

Extensions to A/V object for parental rating errors	7.14.5	O-M, <u>M-D</u> , <u>M-P</u>	The description of how a particular DRM technology integrates with the present document may make this mandatory	None
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### 4.8.16 ScheduledRecording constants not included

The following text shall be added before table A.1 in annex A.1.

Where constants are defined in in the OIPF specification as input parameters and/or return values for methods or as values for properties, these constants shall be supported if any method or property is supported that uses them and if the constant is not explicitly excluded by name above. Although the constants defined in the OIPF specification are expressed in JavaScript as properties, statements in the table above that “Only the following properties shall be supported” do not apply to these constants.

### 4.8.17 Copy/paste error in A.2.4.2

The following changes shall be made to the second paragraph of clause A.2.4.2.

Broadcast-related applications shall have full access to the video/broadcast object. If a new broadcast service is selected then this may result in the broadcast-related application being killed as defined in clause 6.2.2.24. As defined in clause 6.2.2.2, selecting Access to MPEG programs which are not broadcast services and which do not contain an AIT will not have these consequences cause the running broadcast-related application to be killed.

### 4.8.18 Changes to Extensions for playback of selected media components

Change Table A.1 in Annex A to;

Extensions for playback of selected media components	7.16.5	M(*)	The <code>selectComponent</code> and <code>unselectComponent</code> methods shall be asynchronous. The <code>getComponents</code> method shall always return fresh information. For example, in the case of an MPEG-2 transport stream, after a change to the PMT.	
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#### 4.8.19 Origins for carousel delivered applications

The following sentence shall be added at the end of clause A.2.8.1.

The support for XMLHttpRequest shall include cross-origin resource sharing (CORS) as defined in CORS [38].

#### 4.8.20 Use of "may" in OIPF section 8.4.2

Change Table A.1 in Annex A to;

AVComponent	8.4.2	M(*)	Only for properties that are required by the present document. <u>Statements that a property "may" be derived in a particular way shall be read as "shall" be derived in that way.</u>	
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#### 4.8.21 onPlaySpeedChanged - Should always dispatch when play() is called

Change Table A.1 in Annex A to;

State diagram for A/V control objects	7.14.1.1	M(*)	An <code>onPlaySpeedChanged</code> event shall be generated for all calls to the <code>play()</code> method regardless of the value returned by the method call and whether the play speed changes or not.	None
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### 4.9 Annex B - Support for protected content delivered via broadband

#### 4.9.1 Flags=0 is wrong

In clause B.2.5.1, in the definition of the syntax of the `SampleEncryptionBox`, "flags=0" shall read "flags".

#### 4.9.2 Broken reference in annex B

In clause B.1, the reference to "table 10 of the OIPF Metadata specification [18];" shall be replaced with "table 6 ("DRMControlInformation Type Semantics") of the OIPF Metadata specification [18];"

## **4.10 Annex E – Profiles of MPEG DASH**

### **4.10.1 Dynamic MPD served with cache control off**

Add new text at the end of Annex E.2.1:

If a dynamic MPD is not served with "Cache-Control: no-cache" then terminals may not be able to acquire the updated version.

### **4.10.2 Missing text in E.4.2.1**

Between the first set of numbered bullets and the lettered bullets, add the following text:

Notes:

### **4.10.3 Capitalisation of roles incorrect**

In table E.2, “Role and Accessibility descriptor values for Audio Description”, in the “Role descriptor” column, “Alternate” shall be “alternate” and “Commentary” shall be “commentary”.

### **4.10.4 DASH video resolutions**

In clause E.4.2.1, the following text;

4) Between Representations with the same full-screen resolution but different luminance resolutions as defined in table 9 "Table 9: Resolutions for Full-screen Display from 25 Hz H.264/AVC SDTV IRD and supported by 25 Hz H.264/AVC HDTV IRD, 50 Hz H.264/AVC HDTV IRD, 25 Hz SVC HDTV IRD and 50 Hz SVC HDTV IRD" and table 12 "Resolutions for Full-screen Display from H.264/AVC HDTV IRD and SVC HDTV IRD" of TS 101 154 [] (e.g. 1 920 × 1 080 and 1 440 × 1 080) (note b).

Shall be replaced as follows;

4) Between Representations with the same full-screen resolution but different luminance resolutions as follows  
- as defined in clause 10.3 of the DVB DASH profile [35]  
- The resolution of 720x576 for interlaced content only

### **4.10.5 Segment length**

In E.3.2, “*Segments shall be at least 1s long, except for the last segment in an MPD which may be shorter*” shall be replaced with “*Segments shall be at least 1s long, except for the last segment of a Period which may be shorter.*”

### **4.10.6 Switching between representations**

In clauses E.4.2.1 and E.4.2.2, “in the same Adaptation Set” shall be added as shown. In E.4.2.1;

During playback of adaptively streamed content encoded using AVC, terminals shall support transitions between video Representations in the same Adaptation Set as follows:

Likewise in E.4.2.2:

During playback of adaptively streamed content encoded using HE-AAC or E-AC3, terminals shall support transitions between audio Representations in the same Adaptation Set as follows: