



**ATSC**

ADVANCED TELEVISION  
SYSTEMS COMMITTEE

**ATSC Standard:  
A/331:2019 Amendment No. 8, Uniqueness of  
@serviceID**

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Doc. A/331:2019 Amend. No. 8  
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**Advanced Television Systems Committee**  
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### Revision History

Version	Date
Amendment approved	1 January 2020

## ATSC Standard: A/331:2019 Amendment No. 8, Uniqueness of @serviceId

### 1. OVERVIEW

#### 1.1 Definition

An Amendment is generated to document an enhancement, an addition or a deletion of functionality to previously agreed technical provisions in an existing ATSC document. Amendments shall be published as attachments to the original ATSC document. Distribution by ATSC of existing documents shall include any approved Amendments.

#### 1.2 Scope

This document defines the scope of @serviceId.

#### 1.3 Rationale for Changes

The scope of the value of @serviceId is ill-defined. It is stated that it is unique within a “broadcast area” which is not a defined term and not a term of art. Some possible scopes are:

- 1) **A single set of related LLS and SLS tables.** It is just a simple data structure linkage between, e.g. SLT.Service and [USBD].UserServiceDescription.
- 2) **All LLS and SLS tables in a single RF channel (single BSID).** There can be more than one set in an RF channel in the channel packing use case.
- 3) **All LLS and SLS tables in a bonded set of BSIDs.**
- 4) **A single DMA.**
- 5) **Regulatory Region, e.g. North America.**
- 6) **The set of RF channels that a decoder can receive and decode.**

#1 is arguably too constrained.

#2 would require that broadcasters sharing a single RF channel and creating their own signaling coordinate on the value of serviceId. One cannot assume a single signaling encoder is being used.

#4 is basically the same as major channel number, so that could be used.

#5 is the same as BSID, so that could be used. Note that the value of BSID in North America is undefined except that it is region-specific. See related Amendment to A/351 on this.

#6 is only known to an individual decoder. But it is the broadcast equipment that has to set the value. To the broadcaster, this scope includes uncertainties over time, space, atmospheric conditions, transmitter power, decoder sensitivity, etc. It therefore forces it to be at least the same scope as BSID. And, if reception can occur across regulatory regions (which it can), then it is effectively forced to be the same as globalServiceId, so use that.

#3 appears to be the only manageable scope that does not replicate an existing identifier and does not create an unreasonable coordination burden for either broadcasters, encoder manufacturers, or Receiver manufacturers.

#### 1.4 Backwards Compatibility

This proposed addition is backwards compatible in the encoding since the scope of serviceId is currently undefined. Decoder assumptions may not be aligned.

## 2. LIST OF CHANGES

Change instructions are given below in *italics*. Unless otherwise noted, inserted text, tables, and drawings are shown in blue; deletions of existing text are shown in ~~red-strikeout~~. The text “[ref]” indicates that a cross reference to a cited referenced document should be inserted.

*Modify the following sections:*

### Section 5.6:

Each service is identified by two forms of service identifier: a compact form that is used in the SLT **that is unique within a single set of bonded PLPs**, and ~~is unique only within the broadcast area, and~~ a globally unique form that is used in the ESG.

### Section 6.3.2:

@serviceId – 16-bit integer that shall uniquely identify this Service within **a single set of bonded PLPs. Note that there can be more than one set of tables in an RF channel**~~the scope of this Broadcast area.~~

### Section 7.1.3.1:

@serviceId – A 16-bit integer value that shall identify the ~~ATSC 3.0 s~~Service named in the parent USBD fragment ~~and whose uniqueness pertains to the scope of this Broadcast area~~. Its value shall be identical to that of the SLT.Service@serviceId attribute in the SLT which references the LCT channel carrying the USBD fragment for this service.

– End of Document –