ATSC Standard: A/344:2019 Amendment No. 5, Capabilities

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Revision History

Version	Date
Amendment approved	23 December 2019

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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 adds "capabilities" as defined in Service Announcement (A/332) to the Device Info Query. Note that the modified text overlaps Amendment #1, Persistent Identifiers.

1.3 Rationale for Changes

Apps can alter their behavior based on the capabilities of the runtime platform. Currently, the only information available to the app is the make and model which would only allow gross assumptions about the actual feature variations with the model. Apps can be made more robust with this additional information.

1.4 Compatibility Considerations

This amendment is backwards compatible since the changes are the addition of one data item that is optional. (Existing) receiver implementations need not support the items. And, when supported by a receiver, apps are expected to ignore items that they do not understand per the provisions of Section 9.1: "The Broadcaster Application is expected to gracefully ignore unknown keys and unknown values for existing keys, including unknown enumeration values."

2. LIST OF CHANGES

Change instructions are given below in *italics*. Unless otherwise noted, inserted text, tables, and drawings are shown in blue[1]; 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.

A/344 maintains a "revision log" of its included APIs from revision to revision by listing the changes in Table 9.1. In addition, each revision includes an Annex which captures the API from the previous edition in unchanged form. By maintaining the previous API definition in the document, implementers may look at the history of each API. When this amendment is finally rolled into the main revision document, Table 9.1 will need to be updated and the original text of the API modified below may be copied into the Annex for the revision.

Modify Section 9.13 as follows:

9.13 Query Device Info API

The Query Device Info API provides an interface between a Broadcaster Application and the Receiver to retrieve device-specific information. It is a generic conduit between the Receiver and

[1] Note that changes to JSON schema are shown in red.

the Broadcaster Application to provide basic device information including make and model of device, along with optional additional key/value pair information about the device. The format and definition of the optional additional key/value pairs are manufacturer-specific and not specified here. Specific parameters may be defined as part of a business relationship between a broadcaster and a device manufacturer.

The Query Device Info API request `params` object is optional. If `params` is omitted (or if `deviceInfoProperties` is omitted or is an empty array), the Receiver shall respond with only the device make and model. The Broadcaster Application can then use the device make and model to determine which additional properties to query. The `deviceInfoProperties` is an array of desired properties, and the Receiver provides the values of these properties in the response.

The Query Device Info API shall be defined as follows:

method: "`org.atsc.query.deviceInfo`"

params: An optional JSON object.

params JSON Schema:

```
{
   "type": "object",
   "properties": {"deviceInfoProperties": {
      "type": "array",
      "items": {"type": "string"}
   }}
}
```

`deviceInfoProperties` – This parameter is an array of strings, each representing a particular aspect of the device about which the Broadcaster Application is interested.

Response:

result: a JSON object containing the device make and model and optionally a request for additional information about a given device make/model.

result JSON Schema:

```
{
   "type": "object",
   "properties": {
      "deviceMake": {"type": "string"},
      "deviceModel": {"type": "string"},
      "deviceInput": {"type": "object"},
      "deviceInfo": {"type": "object"},
      "deviceCapabilities": {"type": "string"}
   },
   "required": ["deviceMake", "deviceModel", "deviceInput"]
}
```

`deviceMake:` – This required string indicates the manufacturer of the Receiver.

`deviceModel:` – This required string indicates the model of the Receiver.

`deviceInput:` – This required object indicates the user input name and codes of the Receiver user interface. It is a collection of input key/value pairs where the key is the user input name and the value is the associated integer code. The minimum set of user input names is listed in [9.4].

`deviceInfo`: – This optional object includes key/value pairs. The `deviceInfo` is included in the response if the request included one or more `deviceInfoProperties` strings corresponding to information the Receiver can supply.

`deviceCapabillities`: – This optional string describes the capabilities, or features, of the receiver and shall conform to A/332, Section 5.2.2.3.3.2 “Device Capabilities Syntax and Semantics” [2]. This is, in essence, a standardized version of the `deviceInfo` string.

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