



ATSC

ADVANCED TELEVISION
SYSTEMS COMMITTEE

ATSC Standard: A/331:2021 Amendment No. 4, “User-Agent”

Doc. A/331:2021 Amend. No. 4
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Advanced Television Systems Committee
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Revision History

Version	Date
Amendment approved	1 October 2021

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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 clarifies the User-Agent string syntax and adds new parameters.

1.3 Rationale for Changes

The use of A/332 capabilities is imprecise due to issues with the A/332 ABNF. Variations in API support and behavior of the runtime dictates platform-dependent app execution and knowledge of the platform details.

1.4 Compatibility Considerations

The changes described in this document are backward-compatible relative to the currently published version of the standard to which this Amendment pertains and any previously approved Amendments for that standard.

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.

2.1 Normative References

2.2 Informative References

[Enter changes to the Informative Reference section, if any.]

2.3 Acronyms and Abbreviations

2.4 Terms

[Enter changes to the Terms section, if any.]

2.5 Change Instructions

Change 7.1.2.4 HTTP User-Agent Header Field as follows:

7.1.2.4 HTTP User-Agent Header Field

In order for HTTP servers to customize the delivery of apps, HTTP requests from the receiver on behalf of a Broadcast Application, including the launch URL request, shall provide a User-Agent header field as defined in HTTP [31] and this section.

The syntax shall conform to HTTP [31] Section 5.5.3 and the syntax defined below:

```
"ATSC3/"<yyyy>[-mm] "("<capabilities>; <vendorName>; <modelName>;
<softwareVersion>; <familyName>;[ hardwareVersion]"")" <HTML>
```

where:

- `yyyy` shall be the **required** year of publication of A/300;
- `mm` shall be the optional month of publication of A/300, which is required if it is the second or more publication in that year;
- `capabilities` shall be a **required** string conforming to the syntax of sa:Capabilities as defined in A/332 [5] Section 5.2.2.3.3;
- `vendorName` shall be a **required** string of the Receiver vendor's name;
- `modelName` shall be a **required** string of the Receiver vendor's model name (vendor-dependent);
- `softwareVersion` shall be a **required** string of the Receiver vendor's software version (vendor-dependent);
- `familyName` shall be a **required** string of the Receiver vendor's family name, e.g. `org.vendor.x` (vendor-dependent);
- `hardwareVersion` shall be an optional string of the Receiver vendor's model name (vendor-dependent); and
- `HTML` shall be the receiver's HTML User-Agent information.

Although the full syntax of "capabilities" is permitted, it is expected that supported capabilities are ANDed together (e.g., "509 50a &"), and it is expected that the OR ("|") is not used.

The ABNF [22] below is authoritative over the pseudocode and description above.

```
; !syntax("abnf")
ATSCUser-Agent = ATSCproduct RWS ATSCcomment
ATSCproduct    = "ATSC3/" date
ATSCcomment    = "(" SAcapabilities vendorName modelName softwareVersion
familyName [hardwareVersion] ")"
date           = year ["-" month]
year           = 4DIGIT
month         = 2DIGIT
SAcapabilities = capabilities
vendorName    = commentBody
modelName     = commentBody
softwareVersion = commentBody
familyName    = commentBody
hardwareVersion = commentBody
commentBody   = ";" RWS 1*(ATSCc;textNSP / quoted-pair)
ATSCc;text    = HTAB / SP / ATSCc;textNSP
ATSCc;textNSP = %x21-27 / %x2A-3A / %x3C-5B / %x5D-7E / obs-text ;except
semicolon

; A/332
ccode         = 1*4HEXDIG
string-code   = ubyte "=" 1*UTF8-char
```

```

ubyte          = 1*3DIGIT
boperator      = "&" / "|"
expr           = ccode / string-code
               / expr WSP expr WSP boperator
capabilities   = expr

; RFC 7231
User-Agent     = product *( RWS ( product / comment ) )
product        = token ["/" product-version]
product-version = token

; RFC 7230
token          = 1*tchar
tchar          = "!" / "#" / "$" / "%" / "&" / "'" / "*"
               / "+" / "-" / "." / "^" / "_" / "`" / "|" / "~"
               / DIGIT / ALPHA
comment        = "(" *( ctext / quoted-pair / comment ) ")"
ctext          = HTAB / SP / %x21-27 / %x2A-5B / %x5D-7E / obs-text
quoted-pair    = "\" ( HTAB / SP / VCHAR / obs-text )
obs-text       = %x80-FF
RWS            = 1*( SP / HTAB )

; RFC 5234
ALPHA          = %x41-5A / %x61-7A ; A-Z / a-z
DIGIT          = %x30-39
HEXDIG         = DIGIT / "A" / "B" / "C" / "D" / "E" / "F"
HTAB           = %x09
SP             = " "
VCHAR          = %x21-7E
WSP            = " " / %x09

; RFC 3629
UTF8-char      = UTF8-1 / UTF8-2 / UTF8-3 / UTF8-4
UTF8-1         = %x00-7F
UTF8-2         = %xC2-DF UTF8-tail
UTF8-3         = %xE0 %xA0-BF UTF8-tail / %xE1-EC 2( UTF8-tail ) /
               %xED %x80-9F UTF8-tail / %xEE-EF 2( UTF8-tail )
UTF8-4         = %xF0 %x90-BF 2( UTF8-tail ) / %xF1-F3 3( UTF8-tail ) /
               %xF4 %x80-8F 2( UTF8-tail )
UTF8-tail      = %x80-BF

```

An example for a receiver conforming to A/300:2022~~20~~ that signals **SHEVC** and **AC-4 HDR** and with “HTML” strings from a popular web browser is as follows:

```

ATSC3/202220-06 (050A50B 512 &; TVco; Model55; R4.2; com.tvco.55; 5.234)
Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like
Gecko) Chrome/75.0.3770.142 Safari/537.36

```

– End of Document –