Host Operating Environment

Host Operating Environment Identifiers

ClientExecutableURL substitution strings

The operating environment identifier strings have the following format, based on a format used by the GNU AutoConfig tools.

--[-][][-]

The general rule is that is that a new identifier should only be defined as required to differentiate incompatible operating environments concerning an executable file image. That is, for example different -tags should not be used for compatible versions of the same operating system.

* Third-party brands and names are the property of their respective owners.

Currently defined tags:

CPU-type ID	Description
alpha	Digital Alpha* compatible
arm	ARM* core or compatible
i86	Any Intel* 80x86-family compatible CPU
i960	Intel* i960 compatible
jvm	Java Virtual Machine*
mips	MIPS MIPS* compatible
ppc	IBM/Motorola PowerPC* compatible
sh3	Hitachi SH-3* compatible
sh4	Hitachi SH-4* compatible
sparc	Sun Sparc* compatible

Kernel ID
chorus
javaos
linux
os9
qnx
vxworks

An 'OS identifier' as listed below, might appear in the field when the requested OS platform is Java based.

OS+Version-Identifiers	Notes
beos	Replaces beos4.4

ejava	
epocc	
epoce	
epocq	
epocs	
gnu	
jre1.1	
jre1.2	
macos	
macosx	
os9	
palmos	
photon	
pjava	
pjava1.1	
plan9	
qnx	
rtjava	
win32	Replaces win98, winNT4 etc
win64	Replaces win98, winNT4 etc

Object Format Identifiers [Ref #9]
aout
bout
coff
elf
jar

[Ref #9: Only applicable when the object format is not otherwise uniquely implied by the identifier string.]

Manufacturer Identifiers
amiga*
apple*
be*
ericsson*
ibm*
intel*
lucent*
microsoft*
microware*
motorola*

nokia*
palm*
psion*
qnx*
sun*
symbian*
toshiba*
unknown [Ref #10]

[Ref #10: Use when no other applies]

For Linux, the 'manufacturer' field may be used to indicate Linux distribution if so required (in which case indicates the version of the distribution). Otherwise use 'unknown'.

Linux distribution identifiers
caldera
debian
dlx
doslinux
linuxpro
linuxware
mandrake
mklinux
redhat
slackware
stampede
suse
turbolinux
yggdrasil

Example Operating Environment Identifier Strings
i86-microsoft-win32
i86-unknown-linux-gnu
i86-redhat-linux-gnu6

IconURL substitution strings

The IconURL operating environment identifier strings have the following general format:

xx[m].

The optional tag 'm' indicates monochrome or grayscale. The host is free to try to match/request any graphics file format as indicated by a tag, however at a minimum files conforming to the Portable Network Graphic (PNG) standard should be made available at the resulting URL (indicated by =png).

File format tag	Description
png	Portable Network Graphics

gif	Graphics Interchange File format
bmp	Windows bitmap

Currently defined IconURL Icon format identifier strings:

Example Icon format Identifier Strings	
32x32x8.png	256 color 32 by 32 icon (or 255 colors + transparent)
16x16x8.png	
16x16x1m.png	Black and white (or monochrome + transparent)
10x10x2m.png	4 gray-scales

Character Set repertoires

The Character Set Repertoire codes have the following general format:

Bit No.	Character Repertoire	Description
0	ISO-8859-1	Latin alphabet No. 1
1	ISO-8859-2	Latin alphabet No. 2
2	ISO-8859-3	Latin alphabet No. 3
3	ISO-8859-4	Latin alphabet No. 4
4	ISO-8859-5	Latin/Cyrillic alphabet
5	ISO-8859-6	Latin/Arabic alphabet
6	ISO-8859-7	Latin/Greek alphabet
7	ISO-8859-8	Latin/Hebrew alphabet
8	ISO-8859-9	Latin alphabet No. 5
9	ISO-8859-10	Latin alphabet No. 6
10	ISO-8859-13	Latin alphabet No. 7
11	ISO-8859-14	Latin alphabet No. 8
12	ISO-8859-15	Latin alphabet No. 9
13	GB18030	Chinese (People's Republic of China)
14	JIS X0208-1990, JIS X0201-1976	Japanese
15	KSC 5601-1992	Korean
16	Big5	Chinese (Taiwan)
17	TIS-620	Thai

A/V Distribution Transport Protocol (AVDTP)

- **Media Type**

The table below identifies the possible values that the "Media Type" field in AVDTP can have. The information element identifies the media type of a stream end-point.

3	2	1	0	Description
0	0	0	0	Audio
0	0	0	1	Video

0	0	1	0	Multimedia
X	X	X	X	All other values reserved

- **A/V Content Protection method**

Mnemonic	Identifier (16 bits)	Content Security (reference)	Usage in *Bluetooth* (reference)
DTCP	0x0001	See Note #1	Refer to section 8.19.6 of the *Bluetooth* A/V Distribution Transport Protocol Specification "Content Protection Capabilities"
SCMS-T	0x0002	See Note #2	See Note #3

Note #1. Please refer to the website www.dtcp.com, for the details of how the Digital Transmission Content Protection (DTCP) is mapped to *Bluetooth* AV transport services and for DTCP licensing by the Digital Transmission Licensing Administrator (DTLA).

Note #2. SCMS-T uses Cp-bit and L-bit that are defined by IEC60958-3:1999 and IEC61119-6:1992. For definition of L-bit, normal logic instead of reverse situation defined in section 4.3.1 of IEC60958-3 shall be applied.

Note #3. The Contents Protection Header(CP Header) defined by A2DP is used for transmitting these two bits (Cp-bit and L-bit). CP Header has one byte length. The bit0 field of CP Header is used for the L-bit and the bit1 field of CP Header is used for the Cp-bit. Other bits (from bit2 to bit7) are defined as the RFA field.

General note. Before an identifier is assigned the following requirements must be fulfilled

- the Content Protection method should come with a valid reference to either the relevant controlling entity or a description of the method
- the Content Protection method should indicate how it is to be used in the context of *Bluetooth* A/V

A/V Remote Control Profile (AVRCP)

- **Major Player Type**

Value	Parameter Description
Bit 0 (0x01)	Audio
Bit 1 (0x02)	Video
Bit 2 (0x04)	Broadcasting Audio
Bit 3 (0x08)	Broadcasting Video
Bit 4-7	Reserved

- **Player Sub Type**

Value	Parameter Description
Bit 0 (0x00000001)	Audio Book
Bit 1 (0x00000002)	Podcast
Bit 2-31	Reserved

- **Folder Type**

Value	Parameter Description
0x00	Mixed

0x01	Titles
0x02	Albums
0x03	Artists
0x04	Genres
0x05	Playlists
0x06	Years
0x07-0xFF	Reserved

- **Media Type**

Value	Parameter Description
0x00	Audio
0x01	Video
0x02-0xFF	Reserved

- **List of Media Attributes**

Attribute ID	Description	Allowed Values	Mandatory / Optional
0x0	Illegal, Should not be used	-	-
0x1	Title of the media	Any text encoded in specified character set	M
0x2	Name of the artist	Any text encoded in specified character set	O
0x3	Name of the album	Any text encoded in specified character set	O
0x4	Number of the media (ex. Track number of the CD)	Numeric ASCII text with zero suppresses	O
0x5	Total number of the media (ex. Total track number of the CD)	Numeric ASCII text with zero suppresses	O
0x6	Genre	Any text encoded in specified character set	O
0x7	Playing time in millisecond	Numeric ASCII text with zero suppresses (ex. 2min30sec = 150000)	O
0x8-0xFFFFFFFF	Reserved for future use	-	-

- **Player Application Settings**

Player Application Setting Attribute	Attribute Description	Defined Values	M/O
0x00	Illegal , Should not be used	None	O

<table>
<tr><td>0x01</td><td>Equalizer ON/OFF status</td><td>PlayerApplicationSettingValueID<table><tr><th>ValueID</th><th>Description</th></tr><tr><td>0x01</td><td>OFF</td></tr><tr><td>0x02</td><td>ON</td></tr><tr><td>0x03-0xFF</td><td>Reserved for future use</td></tr></table></td><td>O</td></tr>
<tr><td>0x02</td><td>Repeat Mode status</td><td>PlayerApplicationSettingValueID<table><tr><th>ValueID</th><th>Description</th></tr><tr><td>0x01</td><td>OFF</td></tr><tr><td>0x02</td><td>Single track repeat</td></tr><tr><td>0x03</td><td>All track repeat</td></tr><tr><td>0x04</td><td>Group repeat</td></tr><tr><td>0x05-0xFF</td><td>Reserved for future use</td></tr></table></td><td>O</td></tr>
<tr><td>0x03</td><td>Shuffle ON/OFF status</td><td>PlayerApplicationSettingValueID<table><tr><th>ValueID</th><th>Description</th></tr><tr><td>0x01</td><td>OFF</td></tr><tr><td>0x02</td><td>All tracks shuffle</td></tr><tr><td>0x03</td><td>Group shuffle</td></tr><tr><td>0x04-0xFF</td><td>Reserved for future use</td></tr></table></td><td>O</td></tr>
<tr><td>0x04</td><td>Scan ON/OFF status</td><td>PlayerApplicationSettingValueID<table><tr><th>ValueID</th><th>Description</th></tr><tr><td>0x01</td><td>OFF</td></tr><tr><td>0x02</td><td>All tracks scan</td></tr><tr><td>0x03</td><td>Group scan</td></tr><tr><td>0x04-0xFF</td><td>Reserved for future use</td></tr></table></td><td>O</td></tr>
<tr><td>0x05 – 0x7F</td><td>Reserved for future use</td><td></td><td>O</td></tr>
<tr><td>0x80 – 0xFF</td><td>Provided for TG driven static media player menu extension by CT</td><td></td><td>O</td></tr>
</table>

Advanced Audio Distribution Profile (A2DP)

- **Audio Codec ID**

The table below specifies the audio codecs that are available for signaling in A2DP and where they are used and specified.

7	6	5	4	3	2	1	0	Codec	Specified in	Used in
0	0	0	0	0	0	0	0	SBC	A2DP	A2DP
0	0	0	0	0	0	0	1	MPEG-1,2 Audio	A2DP	A2DP
0	0	0	0	0	0	1	0	MPEG-2,4 AAC	A2DP	A2DP
0	0	0	0	0	1	0	0	ATRAC family	A2DP	A2DP
1	1	1	1	1	1	1	1	non-A2DP	n/a	A2DP
X	X	X	X	X	X	X	X	All other values reserved		

The process for adding new optional 3rd party audio codecs to the table above for use with A2DP is as follows:

- The proposed codec shall be successfully tested in a formal interoperability (IOP) testing session
  - Successfully testing a codec means that at least two source and two sink devices shall provide evidence to the BARB that the proposed codec has been successfully implemented
  - The formal IOP test plan shall be submitted to and approved by BARB prior to the formal IOP testing session
- Any license applicable to the proposed codec shall be available under fair and reasonable terms and accessible in a non-discriminatory way
- The specification of the proposed codec shall be available to all companies that plan to implement the codec, under NDA if needed

Video Distribution Profile (VDP)

- **Video Codec ID**

The table below specifies the video codecs that are available for signaling in VDP and where they are specified and used.

7	6	5	4	3	2	1	0	Codec	Specified in	Used in
0	0	0	0	0	0	0	1	H.263 baseline	VDP	VDP
0	0	0	0	0	0	1	0	MPEG-4 Visual Simple Profile	VDP	VDP
0	0	0	0	0	0	1	1	H.263 profile 3	VDP	VDP
0	0	0	0	0	1	0	0	H.263 profile 8	VDP	VDP
1	1	1	1	1	1	1	1	Non-VDP	n/a	VDP
X	X	X	X	X	X	X	X	All other values reserved		

Health Device Profile (HDP)

- **Data Exchange Specifications**

The table below specifies the allowable Data Exchange Specifications.

Data Exchange Specification	Document Number	Document Name

0x01	ISO/IEEE 11073-20601	Health informatics - Personal health device communication - Application profile - Optimized exchange protocol
0xXX	All other values reserved	

- **Device Data Specializations**

The information in the table below only applies to implementations using the ISO/IEEE 11073-20601 Data Exchange Specification. The following table specifies the allowable Device Data Specializations for the Health Device Profile (HDP). Other Device Data Specializations may be added as they are approved by the IEEE 11073 Personal Health Devices Working Group and the Medical Devices Working Group.

To request additional HDP MDEP Data Type numbers to support new or future IEEE 11073 Device Data Specializations, please contact the MED WG at med-feedback@bluetooth.org. All requests shall be initiated by contacting the MED WG and will follow the process defined by the MED WG and BARB.

Data Type	MDEP Data Type (IEEE 11073-10101 Nomenclature Data Type Code)	IEEE 11073 Document Number	IEEE 11073 Document Name
Pulse oximeter	0x1004 (4100 decimal)	11073-10404	Health informatics - Personal health device communication - Device specialization - Pulse oximeter
Blood pressure monitor	0x1007 (4103 decimal)	11073-10407	Health informatics - Personal health device communication - Device specialization - Blood pressure monitor
Body thermometer	0x1008 (4104 decimal)	11073-10408	Health informatics - Personal health device communication - Device specialization - Thermometer
Body weight scale	0x100F (4111 decimal)	11073-10415	Health informatics - Personal health device communication - Device specialization - Weighing scale
Glucose meter	0x1011 (4113 decimal)	11073-10417	Health informatics - Personal health device communication - Device Specialization - Glucose meter
All other values reserved	0xXXXX		

Document Tools