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Information technology — UPnP Device Architecture

Part 25-11:
Telephony device control protocol — Input configuration service

Technologies de l'information — Architecture de dispositif UPnP —

Partie 25-11

ICS 35.200

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The ballot on the transposition of a PAS into an International Standard follows the JTC 1 PAS procedures contained in the JTC 1 Supplement, F.3.

Reflecting the importance of the PAS process, the JTC 1 secretariat shall also inform JTC 1 national bodies and Liaison Organisations, and those organisations authorized to be PAS submitters, of the initiation of any PAS ballot, the results of the ballot, and the identity of the JTC 1 subcommittee which will be responsible for any future work.

For ballot, JTC 1 National Bodies and the PAS Submitter shall receive both the PAS to be transposed and the accompanying Explanatory Report. During the ballot JTC 1 members may propose changes to the PAS. These can be resolved with the PAS Submitter after completion of the ballot.

The period for combined DIS voting shall be five months. In order to be accepted the DIS must be supported by 75 % of the votes cast (abstention is not counted as a vote) and by two-thirds of the P-members voting of JTC 1.

In the case of a failure of the ballot, JTC 1 shall make known to the Submitter the reasons which have led to the negative result. Based on this information, the Submitter may choose to re-submit a modified specification as a new PAS submission.

Once the Draft International Standard has been approved by JTC 1, it shall progress to the approval stage (FDIS).

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Normative Terminology Changes

You ***must*** use the command `Old LoCase` from the Review group of the UPnP ribbon tab to locate and process lower case terms whose ISO/IEC meanings differ from their former UPnP meanings. Each such term is marked with a hidden bookmark, so there is no other easy way to identify them. (The former macro, `Review_OldLowerCase_Terms`, has been removed from the Word template `upnp4iecAdjunct.dotm`.)

Unlike upper case normative terms, lower case terms with new meanings cannot be mechanically corrected in the conversion for ISO/IEC. Each Working Committee needs to evaluate each of these terms in context to determine what changes to make.

Marked terms fall into one of the four following categories:

- **Non-normative in UPnP** (possibly with normative intent) → **normative in ISO/IEC**.
  Examples: "required", "shall", "recommended", "should", "may".
  - *Do not change*: Instances that actually had normative intent, but were not upper-cased.
  - *Change*: Instances that really were non-normative, to remain non-normative.

- **Non-normative in UPnP** (possibly with normative intent) → **statutory (legal or regulatory compliance) in ISO/IEC.**
  Example: "must".
  - *Do not change*: Instances that actually had statutory intent.
  - *Change*: Instances that actually had normative intent, but were not upper-cased. Example: "must" → "shall".
  - *Change*: Instances that really were non-normative, to remain non-statutory.

- **Non-normative in UPnP** (probably with normative intent) → **non-normative in ISO/IEC.**
  Examples: "mandatory", "prohibited", "optional".
  - *Change*: Instances that actually had normative intent, to be normative in ISO/IEC.

    Common replacements:
    "mandatory" → "required" "… is mandatory" → "shall …"
    "prohibited" → "not allowed"
    "optional" → "allowed"
  - *Change*: Instances of "mandatory" and "prohibit(s | ed | ing | ion)" that really were non-normative, to remain non-normative. The *ISO/IEC Directives* use the word "prohibit" in the definition of normative terms, and the word "mandatory" even more broadly in the definition of both normative and statutory terms.
  - *No need to change*: Non-normative instances of "optional".

- **Non-normative in UPnP → normative in ISO/IEC.**
  Examples: "ought", "allow", "permissible", "permit", "accept".

  Change: All instances, to avoid becoming normative.

More information about ISO/IEC normative (and more general "provisioning") terms may be found in the *ISO/IEC Directives, Part 2*, Annex H.

Table 0 — Open issues for ISO/IEC conversion

Status [a]	Document Locations [b]	Description [c]	UPnP Notes
U	[1], [7]	The original document had two bookmarks each associated with the Normative references entries for *UPnP Device Architecture* and *TelephonyArchitecture:1*—"deviceRef" and "UPnPDataStrRef" for UDA, and "raarchRef" and "AVArchRef" for Telephony Architecture. There were no cross-references to either "UPnPDataStrRef" or "AVArchRef", so these latter two bookmarks were deleted.	
U	3.4.4	Technical disagreement between abbreviated term ID and its use in document.	
U	5.3.2.2	The XML model and its textual description in this subclause differ technically. The element type of `<supportSecureChannel>` differs between the sender and receiver in the model, and its child element names differ between the model and the description. Also, in the original document, the model indicates by indentation that <inputModeList> is a child of <capability>, whereas the description indentation of <inputModeList> indicated that it was a child element of <deviceInputCapability>. In this conversion, the description indentation was modified to match the model.	
U	5.3.5.2	The element <sessionParameters> was completely missing from the description text.	
U	5.3.7	There are two occurrences of "DeviceProtecion" in this subclause. They appear to be a misspelled reference to the UPnP spec DeviceProtection. If so, that spec needs an entry in Clause 2 and the occurrences in 5.3.7 need to be replaced by cross-references to that entry.	
U	Table 3	The Eventing and Moderation table structure is non-standard. Please copy a model from another document that has been prepared this year for IEC submittal.	
U	A.1.1, A.1.3	Replaced two hardcoded manual figure references with hyperlinked cross-references. WC to confirm that the new cross-references point to the right figures.	
U	Table A.1 Table A.2 Table A.3	WC needs to confirm the captions for the first 2 of these tables. All 3 tables were originally labeled as 2 figures, but they are tables, not figures and need to be labeled as such.	
U	Annex B	The bracketed text labels on the unreferenced entries in the Bibliography have been replaced by the ISO 690 conformant numbered labels. The original labels were [USBSPEC], [USBHID], [USBHUT], [BTHID] and [RFC4347]. Since the originals were unreferenced and not bookmarked, the new ISO 690 labels are also not bookmarked.	

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Status [a]	Document Locations [b]	Description [c]	UPnP Notes
AU	#	As in other telephony specs, this document contained a large number of instances of inappropriately applied character styles. Among these were: • direct formatting to achieve the *forum* and *vendor* character styles instead of using the named styles • instances where the visually apparent style of text was "Default Paragraph Font", but it was achieved by applying direct formatting to the text *on top of* a named character style to *negate* the effects of the named style. Many of these instances were in white space on either side of text where the named style is properly used • occurrences of the style **In-line Guidance - 8 pt**. Most of these were overridden with direct formatting to achieve other effects. Many were were space characters between words where their effect was not visible. • Many table headings were made bold by direct formatting rather than using the normal UPnP table style (which is now obsolete and has been replaced by ISO/IEC required styles.)	
G-U	#	**Hanging paragraphs, singleton subdivisions** When a clause/subclause is subdivided into subclauses or an annex is subdivided into clauses, neither hanging paragraphs nor singleton subdivisions are allowed. • A *hanging paragraph* is any text, table, figure or any other content between the parent numbered paragraph and the first child subdivision. • A *singleton subdivision* is when there is only one subdivision at any level. There must be at least 2. **Pending GSC action:** GSC [c] will provide a command to detect both hanging paragraphs and singleton subdivisions. **Pending UPnP action:** UPnP editors should correct all hanging paragraphs and singleton subdivisions as they encounter them, but the tool to identify them is coming.	
G-U	#	**Notes and Examples** The *ISO/IEC Directives* require that Notes and Examples be set off by a distinctive font style and/or indentation. Notes and Examples are also not allowed to contain normative statements. **Pending GSC action:** GSC will provide a command for the following UPnP use: **Pending UPnP action:** UPnP editors will use new command to walk through the document, stopping at each Note and Example that does not use the IEC ¶ style "NOTE". Proper informative instances need to be restyled. Instances with normative content need to be reworded, or the normative content moved elsewhere.	
G-U	#	**Cross-reference form** The *ISO/IEC Directives* require that all document cross-references to tables, figures, clauses, subclauses and subclauses be to the referent's (alpha)numeric designator, *not* to its title/caption/label. **Pending GSC action:** GSC will provide a command for the following UPnP use: **Pending UPnP action:** UPnP editors will use new command to walk through the document, stopping at each cross-reference that references the target's text instead of its alphanumeric designator, so that the editor can correct it.	

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Status [a]	Document Locations [b]	Description [c]	UPnP Notes
G	—	**Remove old styles** This document still contains ¶ and character styles used before the ISO/IEC conversion. These style need to be removed. **Pending GSC action:** GSC will provide a command that will automatically remove all of the old styles.	
G	—	**Use only approved styles** Word 2007 and 2010 can be configured to disable use of all styles not in the approved style sets for UPnP and ISO/IEC documents. **Pending GSC action:** GSC will provide a command to toggle the allowing and disallowing of unapproved styles.	
G-U	—	**Dual publishers** UPnP specifications are intended to be published by both UPnP and ISO/IEC. There are some minor differences in content and style between the two publishers. **Pending GSC action:** GSC will provide a command to toggle between publishers and check for document features disallowed by the designated target publisher. This includes but is not limited to: • Normative references may include UPnP documents when UPnP is the publisher. Only their ISO/IEC equivalents are allowed in ISO/IEC publications. • Header/footer contents differ. • Self-references to "this document" in UPnP become "this part of ISO/IEC 29341" in ISO/IEC. **Pending UPnP action:** Be aware of and manage these differences when preparing final versions for publication.	

[a] **Status key:**
- • Informational, requires no action by anyone.
- G An issue that awaits action by G Shults Consulting (GSC).
- G-U An issue that awaits action by GSC, and then requires follow-up action by UPnP.
- U An issue that requires action by UPnP.
- U? An issue that GSC considers closed, but UPnP might disagree. UPnP should review.
- AU An issue that was resolved during conversion by GSC, but that UPnP needs to understand to avoid problem recurrence
- ✓ Issue is closed.

[b] **Document Locations**:
- # Numerous instances, not specifically identified.
- — Document generic, not tied to specific locations.

[c] GSC: G Shults Consulting, ISO/IEC conversion contractor

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InputConfig:1 Service

For UPnP Version 1.0

Status: Standardized DCP (SDCP)

Date: March 22, 2011

Document Version: 1.0

Service Template Version: 2.00

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1 ~~Overview and~~ Scope

This document defines a service type named *InputConfig* that complies with [1].

~~This service definition is compliant with the UPnP Device Architecture version 1.0. It defines a service type referred to herein as *InputConfig* service.~~

This service type enables an in-band configuration mechanism between input devices which have embedded *InputConfig* service.

~~1.1 Introduction~~

The *InputConfig* service enables modeling of input data transferring capabilities of Input devices, and binding of those capabilities between devices. Each device should have an instance of the *InputConfig* service in order to send or receive input data, according to the architecture defined in this service.

A role is assigned to each Input device to define whether the device is the source or the sink of the input data transport. A data type is associated with an input connection between the

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source and the sink. . For example, if the “sender” role and the “text” type are assigned to an Input device, the device will be ready to send input data of text format to the sink device.

The *InputConfig* service is generic enough to properly abstract different kinds of input data format and transport mechanism, such as USB HID compliant input data over TCP/IP based transport protocol or IrDA based transport.

This service provides Control Points with the following functionality:

- Perform capability matching between input devices.
- Setup and teardown connections between devices.
- Change assigned roles and input type between devices.
- Notify changes of the input type that the receiver requests.

This service does not address:

- Data format used to encode the input data.
- Transport protocol used to input data session.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.~~This section lists the normative references used in this specification and includes the tag inside square brackets that is used for each such reference:~~

[1] – *UPnP Device Architecture*, version 1.0, UPnP Forum, June 13, 2000.
Available at: http://www.upnp.org/specs/architecture/UPnP-DeviceArchitecture-v1.0-20000613.htm.
Latest version available at: http://www.upnp.org/specs/arch/UPnP-arch-DeviceArchitecture-v1.0.pdf.

[2] – *Data elements and interchange formats – Information interchange -- Representation of dates and times*, International Standards Organization, December 21, 2000.
Available at: ISO 8601:2000.

[3] – IETF RFC 2119, *Key words for use in RFCs to Indicate Requirement Levels*, S. Bradner, 1997.
Available at: http://www.faqs.org/rfcs/rfc2119.html.

[4] – IETF RFC 3339, *Date and Time on the Internet: Timestamps*, G. Klyne, Clearswift Corporation, C. Newman, Sun Microsystems, July 2002.
Available at: http://www.ietf.org/rfc/rfc3339.txt.

[5] – *Extensible Markup Language (XML) 1.0 (Third Edition)*, François Yergeau, Tim Bray, Jean Paoli, C. M. Sperberg-McQueen, Eve Maler, eds., W3C Recommendation, February 4, 2004.
Available at: http://www.w3.org/TR/2004/REC-xml-20040204.

[6] – *XML Schema Part 2: Data Types, Second Edition*, Paul V. Biron, Ashok Malhotra, W3C Recommendation, 28 October 2004.
Available at: http://www.w3.org/TR/2004/REC-xmlschema-2-20041028.

3 Terms, definitions, symbols and abbreviated terms

For the purposes of this document, the terms and definitions given in [1] and the following apply.

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