



The Printer Working Group

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IPP Registration

IPP Envelope Media Extensions v1.0 (ENVELOPE)

Status: IPP Workgroup Approved

Abstract: This registration extends the definition of envelope media sizes to include flap location and orientation.

This registration is available electronically at:

<https://ftp.pwg.org/pub/pwg/ipp/registrations/reg-ippenvelope10-20250703.docx>
<https://ftp.pwg.org/pub/pwg/ipp/registrations/reg-ippenvelope10-20250703.pdf>

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Title: *IPP Envelope Media Extensions v1.0 (ENVELOPE)*

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1. Introduction

Envelope media has historically been ambiguously defined, particularly with respect to the orientation and location of the envelope flap. This registration extends the definition of envelope media sizes to include flap location and orientation.

2. Terminology

2.1 Conformance Terminology

Capitalized terms, such as MUST, MUST NOT, RECOMMENDED, REQUIRED, SHOULD, SHOULD NOT, MAY, and OPTIONAL, have special meaning relating to conformance as defined in Key words for use in RFCs to Indicate Requirement Levels [BCP14].

2.2 Printing Terminology

The following printing terms are used in this document:

Media Sheet: A Media Sheet is a single instance of a medium, whether printing on one or both sides of the medium. Media Sheets also include sections of roll media [STD92].

2.3 Protocol Role Terminology

The following protocol roles are defined to specify unambiguous conformance requirements:

Client: Initiator of outgoing connections and sender of outgoing operation requests (Hypertext Transfer Protocol -- HTTP/1.1 [STD99] User Agent) [STD92].

Printer: Listener for incoming connections and receiver of incoming operation requests (Hypertext Transfer Protocol -- HTTP/1.1 [STD99] Server) that represents one or more Physical Devices or a Logical Device [STD92].

2.4 Acronyms and Organizations

This specification defines the following acronyms and organizations:

IANA: Internet Assigned Numbers Authority, <https://www.iana.org/>

IETF: Internet Engineering Task Force, <https://www.ietf.org/>

ISO: International Organization for Standardization, <https://www.iso.org/>

PWG: Printer Working Group, <https://www.pwg.org/>

3. Requirements

3.1 Rationale

Given the following existing specifications:

1. Internet Printing Protocol/1.1 [STD92]
2. Internet Printing Protocol/2.0: Fourth Edition [PWG5100.12]
3. IPP Job Extensions v2.1 (JOBEXT) [PWG5100.7]
4. PWG Media Standardized Names v2.1 (MSN) [PWG5101.1]

And given the need for supporting envelopes with specific flap locations, the IPP Envelope Media Extensions v1.0 registration should:

1. Define media size names for specific envelope flap locations,
2. Define "media-col" conventions for specific envelope flap locations,
3. Register new values with IANA.

3.2 Use Cases

3.2.1 Print a You 2 Envelope

Akiko wants to print a You 2 envelope, which has the same dimensions as an ISO C6 envelope but has the flap on the short edge. She selects the You 2 envelope size from the print user interface and initiates a print action.

3.3 Exceptions

This registration has no exceptions beyond those defined in the Internet Printing Protocol/1.1 [STD92].

3.4 Out of Scope

The following are considered out of scope for this registration:

1. Definition of new file formats; and
2. Definition of new protocol bindings.

3.5 Design Requirements

The design requirements for this registration are:

1. Define values and a naming convention for envelope flap locations;
2. Define "media-col" guidance for envelope sizes with specific flap locations;
3. Define sections to register all values with IANA.

4. Model

Envelope media has historically been ambiguously defined, particularly with respect to the orientation and location of the envelope flap. This registration extends the definition of envelope media sizes to include flap location and orientation.

4.1 "media" Self-Describing Size Names

The PWG Media Standardized Names v2.1 (MSN) [PWG5101.1] specification defines standard envelope size names with portrait dimensions (width < length). Since common IPP Clients combine names with the same dimensions, this registration defines new size names using landscape (width > length) dimensions and either the prefix "you" (Japanese) or suffix "-long-edge" (North American and ISO) added to portrait envelope size names.

This strategy is similar to how roll-fed media and labels are handled in [PWG5101.1] - the dimensions and orientation are a key aspect of the size definition.

4.2 "media-col" Member Attributes

As for self-describing media size names, envelopes with the flap on the long edge are described with landscape dimensions in the "media-size" member attribute ("x-dimension" > "y-dimension"). In addition, the "media-source-properties.media-source-feed-orientation" member attribute specifies the orientation of the envelope in the input tray with the flap at the top of the rotated envelope. Figure 1 shows the location of the envelope flap for each of the defined "media-source-feed-direction" and "media-source-feed-orientation" values.

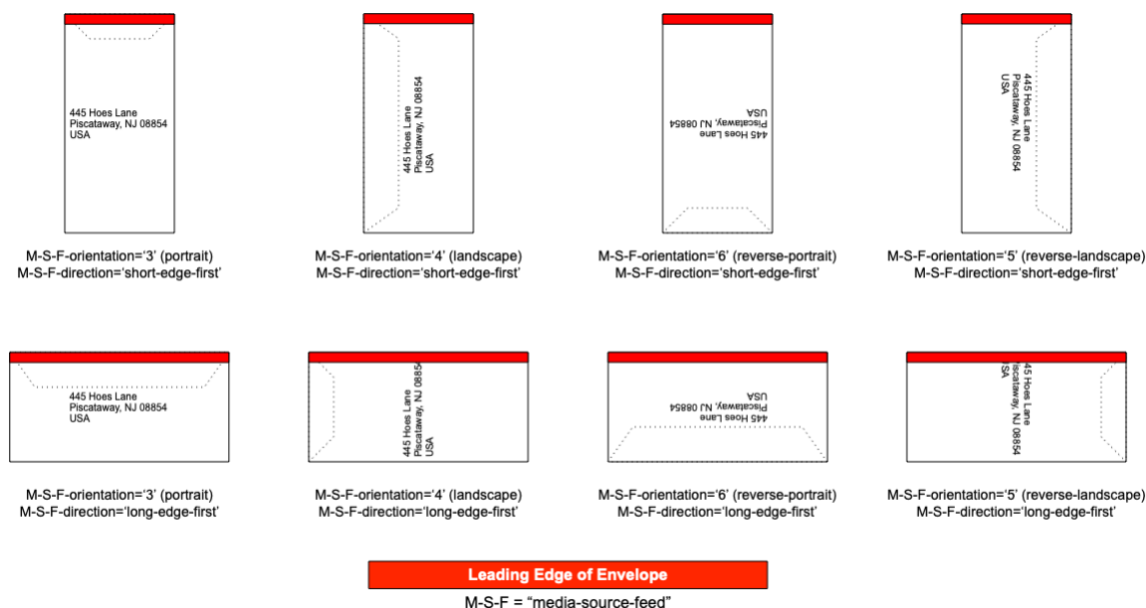


Figure 1 - Flap Locations for Various "media-source-feed-xxx" Values

4.3 Document Data

A Client typically uses the "media-source-properties" values for the desired envelope media to prepare the Document data for an envelope print Job. The Client always applies any orientation transformations to PWG Raster Documents. The Client can either apply any orientation transformations to PDF Documents or supply the "orientation-requested" Document/Job Template attribute [STD92] in the Job Creation Request.

4.4 Print Preview

A Client can use the "media-source-properties" values to generate a suitable preview image in the print UI. Figure 2 shows the difference between ISO C6 and You 2 envelopes, with orientation controls hidden since the envelopes have a fixed orientation.

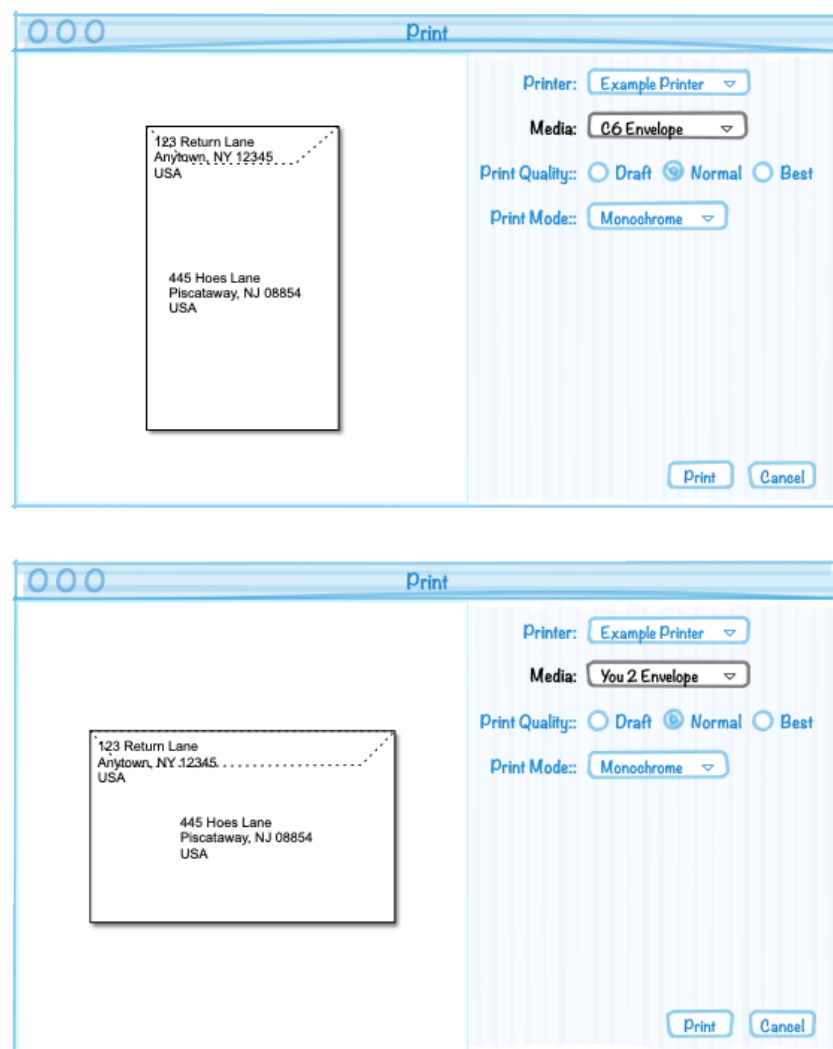


Figure 2 - Envelope Preview User Interface Mockups

5. New Values for Existing Attributes

5.1 media (type2 keyword | name(MAX))

Table 1 lists new envelope media size names that explicitly specify that the flap is on the long edge.

Table 2 lists additional localized names for existing envelope sizes defined in [PWG5101.1],

Table 1 - "media" Long Edge Flap Envelope Size Names

Self-Describing Name	Localized Name(s)
iso_c1-long-flap_917x648mm	C1 Envelope (Long Flap)
iso_c2-long-flap_648x458mm	C2 Envelope (Long Flap)
iso_c3-long-flap_458x324mm	C3 Envelope (Long Flap)
iso_c4-long-flap_324x229mm	C4 Envelope (Long Flap)
iso_c5-long-flap_229x162mm	C5 Envelope (Long Flap)
iso_c6-long-flap_162x114mm	C6 Envelope (Long Flap), You2 Envelope
iso_c7-long-flap_114x81mm	C7 Envelope (Long Flap)
iso_c8-long-flap_81x57mm	C8 Envelope (Long Flap)
iso_c9-long-flap_57x40mm	C9 Envelope (Long Flap)
iso_c10-long-flap_40x28mm	C10 Envelope (Long Flap)
iso_dl-long-flap_220x110mm	DL Envelope (Long Flap)
jpn_you1_120x176mm	You1 Tate Envelope
jpn_you1-long-flap_176x120mm	You1 Envelope
jpn_you3_98x148mm	You3 Tate Envelope
jpn_you3-long-flap_148x98mm	You3 Envelope
jpn_you4_105x235mm	You4 Tate Envelope
jpn_you4-long-flap_235x105mm	You4 Envelope
jpn_you5_95x217mm	You5 Tate Envelope
jpn_you5-long-flap_217x95mm	You5 Envelope
jpn_you6_98x190mm	You6 Tate Envelope
jpn_you6-long-flap_190x98mm	You6 Envelope
jpn_you7_92x165mm	You7 Tate Envelope
jpn_you7-long-flap_165x92mm	You7 Envelope
jpn_youchou2-long-flap_146x111.1mm	You Chou2 Envelope
jpn_youchou3-long-flap_235x120mm	You Chou3 Envelope
jpn_youchou4-long-flap_205x90mm	You Chou4 Envelope
na_personal-long-flap_6.5x3.625in	Personal Envelope (Long Flap)
na_monarch-long-flap_7.5x3.875in	Monarch Envelope (Long Flap)
na_number-9-long-flap_8.875x3.875in	#9 Envelope (Long Flap)
na_number-10-long-flap_9.5x4.125in	#10 Envelope (Long Flap)
na_number-11-long-flap_10.375x4.5in	#11 Envelope (Long Flap)
na_number-12-long-flap_11x4.75in	#12 Envelope (Long Flap)
na_number-14-long-flap_11.5x5in	#14 Envelope (Long Flap)

Table 2 - Additional Localized Names for Envelope Sizes

Self-Describing Name	Localized Name(s)
iso_c4_229x324mm	Kaku20 Envelope
iso_c5_162x229mm	Kaku6 Envelope
iso_c6_114x162mm	You2 Tate Envelope

6. Conformance Requirements

6.1 Printer Conformance Requirements

In order for a Printer to claim conformance to this document, a Printer **MUST** support:

1. The additional values defined in section 5.1;
2. The internationalization considerations defined in section 7; and
3. The security considerations defined in section 8.

6.2 Client Conformance Requirements

In order for a Client to claim conformance to this document, a Client **MUST** support:

1. The additional values defined in section 5.1;
2. The internationalization considerations defined in section 7; and
3. The security considerations defined in section 8.

7. Internationalization Considerations

For interoperability and basic support for multiple languages, conforming implementations **MUST** support:

1. The Universal Character Set (UCS) Transformation Format -- 8 bit (UTF-8) [STD63] encoding of Unicode [UNICODE] [ISO10646]; and
2. The Unicode Format for Network Interchange [RFC5198] which requires transmission of well-formed UTF-8 strings and recommends transmission of normalized UTF-8 strings in Normalization Form C (NFC) [UAX15].

Unicode NFC is defined as the result of performing Canonical Decomposition (into base characters and combining marks) followed by Canonical Composition (into canonical composed characters wherever Unicode has assigned them).

WARNING – Performing normalization on UTF-8 strings received from Clients and subsequently storing the results (e.g., in Job objects) could cause false negatives in Client searches and failed access (e.g., to Printers with percent-encoded UTF-8 URIs now 'hidden').

Implementations of this specification SHOULD conform to the following standards on processing of human-readable Unicode text strings, see:

Unicode Bidirectional Algorithm [UAX9] – left-to-right, right-to-left, and vertical

Unicode Line Breaking Algorithm [UAX14] – character classes and wrapping

Unicode Normalization Forms [UAX15] – especially NFC for [RFC5198]

Unicode Text Segmentation [UAX29] – grapheme clusters, words, sentences

Unicode Identifier and Pattern Syntax [UAX31] – identifier use and normalization

Unicode Collation Algorithm [UTS10] – sorting

Unicode Locale Data Markup Language [UTS35] – locale databases

Implementations of this specification are advised to also review the following informational documents on processing of human-readable Unicode text strings:

Unicode Character Encoding Model [UTR17] – multi-layer character model

Unicode Character Property Model [UTR23] – character properties

Unicode Conformance Model [UTR33] – Unicode conformance basis

8. Security and Privacy Considerations

The IPP extensions defined in this document require the same security and privacy considerations as defined in the Internet Printing Protocol/1.1 [STD92].

Implementations of this specification SHOULD conform to the following standard on processing of human-readable Unicode text strings, see:

Unicode Security Mechanisms [UTS39] – detecting and avoiding security attacks

Implementations of this specification are advised to also review the following informational document on processing of human-readable Unicode text strings:

Unicode Security FAQ [UNISECFAQ] – common Unicode security issues

9. IANA Considerations

9.1 Type2 keyword Registrations

The attributes defined in this registration will be published by IANA according to the procedures in the Internet Printing Protocol/1.1 [STD92] in the following file:

<https://www.iana.org/assignments/ipp-registrations>

The registry entries will contain the following information:

Attributes (attribute syntax) Keyword Attribute Value -----	Reference -----
media (type2 keyword name (MAX))	[RFC8011]
iso_c1-long-flap_917x648mm	[ENVELOPE]
iso_c2-long-flap_648x458mm	[ENVELOPE]
iso_c3-long-flap_458x324mm	[ENVELOPE]
iso_c4-long-flap_324x229mm	[ENVELOPE]
iso_c5-long-flap_229x162mm	[ENVELOPE]
iso_c6-long-flap_162x114mm	[ENVELOPE]
iso_c7-long-flap_114x81mm	[ENVELOPE]
iso_c8-long-flap_81x57mm	[ENVELOPE]
iso_c9-long-flap_57x40mm	[ENVELOPE]
iso_c10-long-flap_40x28mm	[ENVELOPE]
iso_d1-long-flap_220x110mm	[ENVELOPE]
jpn_you1_120x176mm	[ENVELOPE]
jpn_you1-long-flap_176x120mm	[ENVELOPE]
jpn_you3_98x148mm	[ENVELOPE]
jpn_you3-long-flap_148x98mm	[ENVELOPE]
jpn_you4_105x235mm	[ENVELOPE]
jpn_you4-long-flap_235x105mm	[ENVELOPE]
jpn_you5_95x217mm	[ENVELOPE]
jpn_you5-long-flap_217x95mm	[ENVELOPE]
jpn_you6_98x190mm	[ENVELOPE]
jpn_you6-long-flap_190x98mm	[ENVELOPE]
jpn_you7_92x165mm	[ENVELOPE]
jpn_you7-long-flap_165x92mm	[ENVELOPE]
jpn_youchou2-long-flap_146x111.1mm	[ENVELOPE]
jpn_youchou3-long-flap_235x120mm	[ENVELOPE]
jpn_youchou4-long-flap_205x90mm	[ENVELOPE]
na_personal-long-flap_6.5x3.625in	[ENVELOPE]
na_monarch-long-flap_7.5x3.875in	[ENVELOPE]
na_number-9-long-flap_8.875x3.875in	[ENVELOPE]
na_number-10-long-flap_9.5x4.125in	[ENVELOPE]
na_number-11-long-flap_10.375x4.5in	[ENVELOPE]
na_number-12-long-flap_11x4.75in	[ENVELOPE]
na_number-14-long-flap_11.5x5in	[ENVELOPE]

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