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Internet Printing Protocol/1.1: "media" Engineering attribute values extension

Status of this Memo

Abstract

This document specifies additional type3 keyword values for the IPP/1.1 "media" Job Template attribute for use with the Internet Printing Protocol/1.1 (IPP). These~~is~~ additional attribute values permit~~s~~ the client to specify additional media options, including values of media common to engineering drawings. For completeness, all of the existing "media" keyword values are included as well.

The full set of IPP documents includes:

- Design Goals for an Internet Printing Protocol [RFC2567]
- Rationale for the Structure and Model and Protocol for the Internet Printing Protocol [RFC2568]
- Internet Printing Protocol/1.1: Model and Semantics [ipp-mod]
- Internet Printing Protocol/1.1: Encoding and Transport [ipp-pro]
- Internet Printing Protocol/1.1: Implementer's Guide [ipp-iig]
- Mapping between LPD and IPP Protocols [RFC2569]

The "Design Goals for an Internet Printing Protocol" document takes a broad look at distributed printing functionality, and it enumerates real-life scenarios that help to clarify the features that need to be included in a printing protocol for the Internet. It identifies requirements for three types of users: end users, operators, and administrators. It calls out a subset of end user requirements that are satisfied in IPP/1.0. A few OPTIONAL operator operations have been added to IPP/1.1.

The "Rationale for the Structure and Model and Protocol for the Internet Printing Protocol" document describes IPP from a high level view, defines a roadmap for the various documents that form the suite of IPP specification documents, and gives background and rationale for the IETF working group's major decisions.

The "Internet Printing Protocol/1.1: Encoding and Transport" document is a formal mapping of the abstract operations and attributes defined in the model document onto HTTP/1.1 [RFC2616]. It defines the encoding rules for a new Internet MIME media type called "application/ipp". This document also defines the rules for transporting over HTTP a message body whose Content-Type is "application/ipp". This document defines a new scheme named 'ipp' for identifying IPP printers and jobs.

The "Internet Printing Protocol/1.1: Implementer's Guide" document gives insight and advice to implementers of IPP clients and IPP objects. It is intended to help them understand IPP/1.1 and some of the considerations that may assist them in the design of their client and/or IPP object implementations. For example, a typical order of processing requests is given, including error checking. Motivation for some of the specification decisions is also included.

The "Mapping between LPD and IPP Protocols" document gives some advice to implementers of gateways between IPP and LPD (Line Printer Daemon) implementations.

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1 Additional values for the "media" Job Template attribute

1.1 Problem

Need additional type3 keyword values for media to support the additional sizes and types of media common to engineering drawings.

1.2 Suggested solution

This solution is a new solution to address the unique requirements for the engineering market. The suggestion is to add additional type3 keyword values to the "media" Job Template attributes (also applies to "media-default", "media-supported" and "media-ready" attributes).

1.3 Proposed Text

Add the following paragraphs indicated with revision marks to the description of the "media" Job Template attribute (section 4.2.11), References (section 9), and Appendix C: "media" keyword values (section 14), so that the entire sections would be:

4.2.11 media (type3 keyword | name(MAX))

This attribute identifies the medium that the Printer uses for all impressions of the Job.

The values for "media" include medium-names, medium-sizes, input-trays and electronic forms so that one attribute specifies the media. If a Printer object supports a medium name as a value of this attribute, such a medium name implicitly selects an input-tray that contains the specified medium. If a Printer object supports a medium size as a value of this attribute, such a medium size implicitly selects a medium name that in turn implicitly selects an input-tray that contains the medium with the specified size. If a Printer object supports an input-tray as the value of this attribute, such an input-tray implicitly selects the medium that is in that input-tray at the time the job prints. This case includes manual-feed input-trays. If a Printer object supports an electronic form as the value of this attribute, such an electronic form implicitly selects a medium-name that in turn implicitly selects an input-tray that contains the medium specified by the electronic form. The electronic form also implicitly selects an image that the Printer MUST merge with the document data as its prints each page.

Standard keyword values are ~~(~~taken from ISO DPA~~,~~ ~~and~~ the Printer MIB and ASME-Y14.1M~~)~~ and are listed in section 14. An administrator MAY define additional values using the 'name' or 'keyword' attribute syntax, depending on implementation.

There is also an additional Printer attribute named "media-ready" which differs from "media-supported" in that legal values only include the subset of "media-supported" values that are physically loaded and ready

for printing with no operator intervention required. If an IPP object supports "media-supported", it NEED NOT support "media-ready".

The relationship of this attribute and the other attributes that control document processing is described in section 15.3.

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The following text includes all of the current Appendix C in [ipp-mod] plus additional values:

14. APPENDIX C: "media" keyword values

Standard keyword values are taken from several sources.

Standard values are defined (taken from DPA[ISO10175] and the Printer MIB[RFC1759]):

'default': The default medium for the output device
'iso-a4-white': Specifies the ISO A4 white medium: 210 mm x 297 mm
'iso-a4-colored': Specifies the ISO A4 colored medium: 210 mm x 297 mm
'iso-a4-transparent' Specifies the ISO A4 transparent medium: 210 mm x 297 mm
'iso-a3-white': Specifies the ISO A3 white medium: 297 mm x 420 mm
'iso-a3-colored': Specifies the ISO A3 colored medium: 297 mm x 420 mm
'iso-a5-white': Specifies the ISO A5 white medium: 148 mm x 210 mm
'iso-a5-colored': Specifies the ISO A5 colored medium: 148 mm x 210 mm
'iso-b4-white': Specifies the ISO B4 white medium: 250 mm x 353 mm
'iso-b4-colored': Specifies the ISO B4 colored medium: 250 mm x 353 mm
'iso-b5-white': Specifies the ISO B5 white medium: 176 mm x 250 mm
'iso-b5-colored': Specifies the ISO B5 colored medium: 176 mm x 250 mm
'jis-b4-white': Specifies the JIS B4 white medium: 257 mm x 364 mm
'jis-b4-colored': Specifies the JIS B4 colored medium: 257 mm x 364 mm
'jis-b5-white': Specifies the JIS B5 white medium: 182 mm x 257 mm
'jis-b5-colored': Specifies the JIS B5 colored medium: 182 mm x 257 mm

The following standard values are defined for North American media:

'na-letter-white': Specifies the North American letter white medium
'na-letter-colored': Specifies the North American letter colored medium
'na-letter-transparent': Specifies the North American letter transparent medium
'na-legal-white': Specifies the North American legal white medium
'na-legal-colored': Specifies the North American legal colored medium

The following standard values are defined for envelopes:

'iso-b4-envelope': Specifies the ISO B4 envelope medium
'iso-b5-envelope': Specifies the ISO B5 envelope medium
'iso-c3-envelope': Specifies the ISO C3 envelope medium
'iso-c4-envelope': Specifies the ISO C4 envelope medium
'iso-c5-envelope': Specifies the ISO C5 envelope medium
'iso-c6-envelope': Specifies the ISO C6 envelope medium
'iso-designated-long-envelope': Specifies the ISO Designated Long envelope medium
'na-10x13-envelope': Specifies the North American 10x13 envelope medium
'na-9x12-envelope': Specifies the North American 9x12 envelope medium
'monarch-envelope': Specifies the Monarch envelope
'na-number-10-envelope': Specifies the North American number 10 business envelope medium
'na-7x9-envelope': Specifies the North American 7x9 inch envelope
'na-9x11-envelope': Specifies the North American 9x11 inch envelope
'na-10x14-envelope': Specifies the North American 10x14 inch envelope
'na-number-9-envelope': Specifies the North American number 9 business envelope
'na-6x9-envelope': Specifies the North American 6x9 inch envelope
'na-10x15-envelope': Specifies the North American 10x15 inch envelope

The following standard values are defined for the less commonly used media ~~(white-only)~~:

'executive-white': Specifies the white executive medium
'folio-white': Specifies the folio white medium
'invoice-white': Specifies the white invoice medium
'ledger-white': Specifies the white ledger medium
'quarto-white': Specified the white quarto medium
'iso-a0-white': Specifies the ISO A0 white medium: 841 mm x 1189 mm
'iso-a0-transparent': Specifies the ISO A0 transparent medium: 841 mm x 1189 mm
'iso-a0-translucent': Specifies the ISO A0 translucent medium: 841 mm x 1189 mm
'iso-a1-white': Specifies the ISO A1 white medium: 594 mm x 841 mm
'iso-a1-transparent': Specifies the ISO A1 transparent medium: 594 mm x 841 mm
'iso-a1-translucent': Specifies the ISO A1 translucent medium: 594 mm x 841 mm
'iso-a2-white': Specifies the ISO A2 white medium: 420 mm x 594 mm
'iso-a2-transparent': Specifies the ISO A2 transparent medium: 420 mm x 594 mm
'iso-a2-translucent': Specifies the ISO A2 translucent medium: 420 mm x 594 mm
'iso-a3-transparent': Specifies the ISO A3 transparent medium: 297 mm x 420 mm
'iso-a3-translucent': Specifies the ISO A3 translucent medium: 297 mm x 420 mm
'iso-a4-translucent': Specifies the ISO A4 translucent medium: 210 mm x 297 mm
'iso-a5-transparent': Specifies the ISO A5 transparent medium: 148 mm x 210 mm
'iso-a5-translucent': Specifies the ISO A5 translucent medium: 148 mm x 210 mm
'iso-a6-white': Specifies the ISO A6 white medium: 105 mm x 148 mm
'iso-a7-white': Specifies the ISO A7 white medium: 74 mm x 105 mm
'iso-a8-white': Specifies the ISO A8 white medium: 52 mm x 74 mm
'iso-a9-white': Specifies the ISO A9 white medium: 37 mm x 52 mm

'iso-10-white': Specifies the ISO A10 white medium: 26 mm x 37 mm
'iso-b0-white': Specifies the ISO B0 white medium: 1000 mm x 1414 mm
'iso-b1-white': Specifies the ISO B1 white medium: 707 mm x 1000 mm
'iso-b2-white': Specifies the ISO B2 white medium: 500 mm x 707 mm
'iso-b3-white': Specifies the ISO B3 white medium: 353 mm x 500 mm
'iso-b6-white': Specifies the ISO B6 white medium: 125 mm x 176 mm
'iso-b7-white': Specifies the ISO B7 white medium: 88 mm x 125 mm
'iso-b8-white': Specifies the ISO B8 white medium: 62 mm x 88 mm
'iso-b9-white': Specifies the ISO B9 white medium: 44 mm x 62 mm
'iso-b10-white': Specifies the ISO B10 white medium: 31 mm x 44 mm
'jis-b0-white': Specifies the JIS B0 white medium: 1030 mm x 1456 mm
'jis-b0-transparent': Specifies the JIS B0 transparent medium: 1030 mm x 1456 mm
'jis-b0-translucent': Specifies the JIS B0 translucent medium: 1030 mm x 1456 mm
'jis-b1-white': Specifies the JIS B1 white medium: 728 mm x 1030 mm
'jis-b1-transparent': Specifies the JIS B1 transparent medium: 728 mm x 1030 mm
'jis-b1-translucent': Specifies the JIS B1 translucent medium: 728 mm x 1030 mm
'jis-b2-white': Specifies the JIS B2 white medium: 515 mm x 728 mm
'jis-b2-transparent': Specifies the JIS B2 transparent medium: 515 mm x 728 mm
'jis-b2-translucent': Specifies the JIS B2 translucent medium: 515 mm x 728 mm
'jis-b3-white': Specifies the JIS B3 white medium: 364 mm x 515 mm
'jis-b3-transparent': Specifies the JIS B3 transparent medium: 364 mm x 515 mm
'jis-b3-translucent': Specifies the JIS B3 translucent medium: 364 mm x 515 mm
'jis-b4-transparent': Specifies the JIS B4 transparent medium: 257 mm x 364 mm
'jis-b4-translucent': Specifies the JIS B4 translucent medium: 257 mm x 364 mm
'jis-b5-transparent': Specifies the JIS B5 transparent medium: 182 mm x 257 mm
'jis-b5-translucent': Specifies the JIS B5 translucent medium: 182 mm x 257 mm
'jis-b6-white': Specifies the JIS B6 white medium: 128 mm x 182 mm
'jis-b7-white': Specifies the JIS B7 white medium: 91 mm x 128 mm
'jis-b8-white': Specifies the JIS B8 white medium: 64 mm x 91 mm
'jis-b9-white': Specifies the JIS B9 white medium: 45 mm x 64 mm
'jis-b10-white': Specifies the JIS B10 white medium: 32 mm x 45 mm

The following standard values are defined for American Standard (i.e. ANSI) engineering media ~~(white only)~~:

'a-white': Specifies the engineering ANSI A size white medium: 8.5 inches x 11 inches
'a-transparent': Specifies the engineering ANSI A size transparent medium: 8.5 inches x 11 inches
'a-translucent': Specifies the engineering ANSI A size translucent medium: 8.5 inches x 11 inches
'b-white': Specifies the engineering ANSI B size white medium: 11 inches x 17 inches
'b-transparent': Specifies the engineering ANSI B size transparent medium: 11 inches x 17 inches)
'b-translucent': Specifies the engineering ANSI B size translucent medium: 11 inches x 17 inches
'c-white': Specifies the engineering ANSI C size white medium: 17 inches x 22 inches
'c-transparent': Specifies the engineering ANSI C size transparent medium: 17 inches x 22 inches
'c-translucent': Specifies the engineering ANSI C size translucent medium: 17 inches x 22 inches
'd-white': Specifies the engineering ANSI D size white medium: 22 inches x 34 inches

'd-transparent': Specifies the engineering ANSI D size transparent medium: 22 inches x 34 inches
'd-translucent': Specifies the engineering ANSI D size translucent medium: 22 inches x 34 inches
'e-white': Specifies the engineering ANSI E size white medium: 34 inches x 44 inches
'e-transparent': Specifies the engineering ANSI E size transparent medium: 34 inches x 44 inches
'e-translucent': Specifies the engineering ANSI E size translucent medium: 34 inches x 44 inches

The following standard values are defined for American Standard (i.e. ANSI) engineering media for devices that provide the "synchro-cut" feature (see section 14.1):

'axsynchro-white': Specifies the roll paper having the width of the longer edge (11 inches) of the engineering ANSI A size white medium and cuts synchronizing with data.
'axsynchro-transparent': Specifies the roll paper having the width of the longer edge (11 inches) of the engineering ANSI A size transparent medium and cuts synchronizing with data.
'axsynchro-translucent': Specifies the roll paper having the width of the longer edge (11 inches) of the engineering ANSI A size translucent medium and cuts synchronizing with data.
'bxsynchro-white': Specifies the roll paper having the width of the longer edge (17 inches) of the engineering ANSI B size white medium and cuts synchronizing with data.
'bxsynchro-transparent': Specifies the roll paper having the width of the longer edge (17 inches) of the engineering ANSI B size transparent medium and cuts synchronizing with data.
'bxsynchro-translucent': Specifies the roll paper having the width of the longer edge (17 inches) of the engineering ANSI B size translucent medium and cuts synchronizing with data.
'cxsynchro-white': Specifies the roll paper having the width of the longer edge (22 inches) of the engineering ANSI C size white medium and cuts synchronizing with data.
'cxsynchro-transparent': Specifies the roll paper having the width of the longer edge (22 inches) of the engineering ANSI C size transparent medium and cuts synchronizing with data.
'cxsynchro-translucent': Specifies the roll paper having the width of the longer edge (22 inches) of the engineering ANSI C size translucent medium and cuts synchronizing with data.
'dxsynchro-white': Specifies the roll paper having the width of the longer edge (34 inches) of the engineering ANSI D size white medium and cuts synchronizing with data.
'dxsynchro-transparent': Specifies the roll paper having the width of the longer edge (34 inches) of the engineering ANSI D size transparent medium and cuts synchronizing with data.
'dxsynchro-translucent': Specifies the roll paper having the width of the longer edge (34 inches) of the engineering ANSI D size translucent medium and cuts synchronizing with data.
'exsynchro-white': Specifies the roll paper having the width of the longer edge (44 inches) of the engineering ANSI E size white medium and cuts synchronizing with data.
'exsynchro-transparent': Specifies the roll paper having the width of the longer edge (44 inches) of the engineering ANSI E size transparent medium and cuts synchronizing with data.
'exsynchro-translucent': Specifies the roll paper having the width of the longer edge (44 inches) of the engineering ANSI E size translucent medium and cuts synchronizing with data.

The following standard values are defined for American Architectural engineering media:

'arch-a-white': Specifies the Architectural A size white medium: 9 inches x 12 inches
'arch-a-transparent': Specifies the Architectural A size transparent medium: 9 inches x 12 inches
'arch-a-translucent': Specifies the Architectural A size translucent medium: 9 inches x 12 inches

'arch-b-white': Specifies the Architectural B size white medium: 12 inches x 18 inches
'arch-b-transparent': Specifies the Architectural B size transparent medium: 12 inches x 18 inches
'arch-b-translucent': Specifies the Architectural B size translucent medium: 12 inches x 18 inches
'arch-c-white': Specifies the Architectural C size white medium: 18 inches x 24 inches
'arch-c-transparent': Specifies the Architectural C size transparent medium: 18 inches x 24 inches
'arch-c-translucent': Specifies the Architectural C size translucent medium: 18 inches x 24 inches
'arch-d-white': Specifies the Architectural D size white medium: 24 inches x 36 inches
'arch-d-transparent': Specifies the Architectural D size transparent medium: 24 inches x 36 inches
'arch-d-translucent': Specifies the Architectural D size translucent medium: 24 inches x 36 inches
'arch-e-white': Specifies the Architectural E size white medium: 36 inches x 48 inches
'arch-e-transparent': Specifies the Architectural E size transparent medium: 36 inches x 48 inches
'arch-e-translucent': Specifies the Architectural E size translucent medium: 36 inches x 48 inches

The following standard values are defined for American Architectural engineering media for devices that provide the "synchro-cut" feature (see section 14.1):

'arch-axsynchro-white': Specifies the roll paper having the width of the longer edge (12 inches) of the Architectural A size white medium and cuts synchronizing with data.
'arch-axsynchro-transparent': Specifies Specifies the roll paper having the width of the longer edge (12 inches) of the Architectural A size transparent medium and cuts synchronizing with data.
'arch-axsynchro-translucent': Specifies Specifies the roll paper having the width of the longer edge (12 inches) of the Architectural A size translucent medium and cuts synchronizing with data.
'arch-bxsynchro-white': Specifies the roll paper having the width of the longer edge (18 inches) of the Architectural B size white medium and cuts synchronizing with data.
'arch-bxsynchro-transparent': Specifies the roll paper having the width of the longer edge (18 inches) of the Architectural B size transparent medium and cuts synchronizing with data.
'arch-bxsynchro-translucent': Specifies the roll paper having the width of the longer edge (18 inches) of the Architectural B size translucent medium and cuts synchronizing with data.
'arch-cxsynchro-white': Specifies the roll paper having the width of the longer edge (24 inches) of the Architectural C size white medium and cuts synchronizing with data.
'arch-cxsynchro-transparent': Specifies the roll paper having the width of the longer edge (24 inches) of the Architectural C size transparent medium and cuts synchronizing with data.
'arch-cxsynchro-translucent': Specifies the roll paper having the width of the longer edge (24 inches) of the Architectural C size translucent medium and cuts synchronizing with data.
'arch-dxsynchro-white': Specifies the roll paper having the width of the longer edge (36 inches) of the Architectural D size white medium and cuts synchronizing with data.
'arch-dxsynchro-transparent': Specifies the roll paper having the width of the longer edge (36 inches) of the Architectural D size transparent medium and cuts synchronizing with data.
'arch-dxsynchro-translucent': Specifies the roll paper having the width of the longer edge (36 inches) of the Architectural D size translucent medium and cuts synchronizing with data.
'arch-exsynchro-white': Specifies the roll paper having the width of the longer edge (48 inches) of the Architectural E size white medium and cuts synchronizing with data.
'arch-exsynchro-transparent': Specifies the roll paper having the width of the longer edge (48 inches) of the Architectural E size transparent medium and cuts synchronizing with data.

'arch-exsynchro-translucent': Specifies the roll paper having the width of the longer edge (48 inches) of the Architectural E size translucent medium and cuts synchronizing with data.

The following standard values are defined for Japanese and European Standard (i.e. ISO) engineering media, which are of a long fixed size [ASME-Y14.1M]:

'iso-a1x3-white': Specifies the ISO A1X3 white medium having the width of the longer edge (841 mm) of the ISO A1 medium
'iso-a1x3-transparent': Specifies the ISO A1X3 transparent medium having the width of the longer edge (841 mm) of the ISO A1 medium
'iso-a1x3-translucent': Specifies the ISO A1X3 translucent medium having the width of the longer edge (841 mm) of the ISO A1 medium
'iso-a1x4-white': Specifies the ISO A1X4 white medium having the width of the longer edge (841 mm) of the ISO A1 medium
'iso-a1x4-transparent': Specifies the ISO A1X4 transparent medium having the width of the longer edge (841 mm) of the ISO A1 medium
'iso-a1x4- translucent': Specifies the ISO A1X4 translucent medium having the width of the longer edge (841 mm) of the ISO A1 medium
'iso-a2x3-white': Specifies the ISO A2X3 white medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a2x3-transparent': Specifies the ISO A2X3 transparent medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a2x3-translucent': Specifies the ISO A2X3 translucent medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a2x4-white': Specifies the ISO A2X4 white medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a2x4-transparent': Specifies the ISO A2X4 transparent medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a2x4-translucent': Specifies the ISO A2X4 translucent medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a2x5-white': Specifies the ISO A2X5 white medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a2x5-transparent': Specifies the ISO A2X5 transparent medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a2x5-translucent': Specifies the ISO A2X5 translucent medium having the width of the longer edge (594 mm) of the ISO A2 medium
'iso-a3x3-white': Specifies the ISO A3X3 white medium having the width of the longer edge (420 mm) of the ISO A3 medium
'iso-a3x3-transparent': Specifies the ISO A3X3 transparent medium having the width of the longer edge (420 mm) of the ISO A3 medium
'iso-a3x3-translucent': Specifies the ISO A3X3 translucent medium having the width of the longer edge (420 mm) of the ISO A3 medium
'iso-a3x4-white': Specifies the ISO A3X4 white medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x4-transparent’: Specifies the ISO A3X4 transparent medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x4-translucent’: Specifies the ISO A3X4 translucent medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x5-white’: Specifies the ISO A3X5 white medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x5-transparent’: Specifies the ISO A3X5 transparent medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x5-translucent’: Specifies the ISO A3X5 translucent medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x6-white’: Specifies the ISO A3X6 white medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x6-transparent’: Specifies the ISO A3X6 transparent medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x6-translucent’: Specifies the ISO A3X6 translucent medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x7-white’: Specifies the ISO A3X7 white medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x7-transparent’: Specifies the ISO A3X7 transparent medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a3x7-translucent’’: Specifies the ISO A3X7 translucent’ medium having the width of the longer edge (420 mm) of the ISO A3 medium

‘iso-a4x3-white’: Specifies the ISO A4X3 white medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x3-transparent’: Specifies the ISO A4X3 transparent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x3-translucent’’: Specifies the ISO A4X3 translucent’ medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x4-white’: Specifies the ISO A4X4 white medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x4-transparent’: Specifies the ISO A4X4 transparent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x4-translucent’: Specifies the ISO A4X4 translucent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x5-white’: Specifies the ISO A4X5 white medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x5-transparent’: Specifies the ISO A4X5 transparent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x5-translucent’: Specifies the ISO A4X5 translucent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x6-white’: Specifies the ISO A4X6 white medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x6-transparent’: Specifies the ISO A4X6 transparent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x6-translucent’: Specifies the ISO A4X6 translucent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x7-white’: Specifies the ISO A4X7 white medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x7-transparent’: Specifies the ISO A4X7 transparent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x7-translucent’: Specifies the ISO A4X7 translucent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x8-white’: Specifies the ISO A4X8 white medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x8-transparent’: Specifies the ISO A4X8 transparent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x8-translucent’: Specifies the ISO A4X8 translucent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x9-white’: Specifies the ISO A4X9 white medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x9-transparent’: Specifies the ISO A4X9 transparent medium having the width of the longer edge (297 mm) of the ISO A4 medium

‘iso-a4x9-translucent’: Specifies the ISO A4X9 translucent medium having the width of the longer edge (297 mm) of the ISO A4 medium

The following standard values are defined for Japanese and European Standard (i.e. ISO) engineering media, which are either a long fixed size [ASME-Y14.1M] or roll feed, for devices that provide the "synchro-cut" feature (see section 14.1):

‘iso-a0xsynchro-white’: Specifies the paper having the width of the longer edge (1189 mm) of the ISO A0 white medium and cuts synchronizing with data.

‘iso-a0xsynchro-transparent’: Specifies the paper having the width of the longer edge (1189 mm) of the ISO A0 transparent medium and cuts synchronizing with data.

‘iso-a0xsynchro-translucent’: Specifies the paper having the width of the longer edge (1189 mm) of the ISO A0 translucent medium and cuts synchronizing with data.

‘iso-a1xsynchro-white’: Specifies the paper having the width of the longer edge (841 mm) of the ISO A1 white medium and cuts synchronizing with data.

‘iso-a1xsynchro-transparent’: Specifies the paper having the width of the longer edge (841 mm) of the ISO A1 transparent medium and cuts synchronizing with data.

‘iso-a1xsynchro-translucent’: Specifies the paper having the width of the longer edge (841 mm) of the ISO A1 translucent medium and cuts synchronizing with data.

‘iso-a2xsynchro-white’: Specifies the paper having the width of the longer edge (594 mm) of the ISO A2 white medium and cuts synchronizing with data.

‘iso-a2xsynchro-transparent’: Specifies the paper having the width of the longer edge (594 mm) of the ISO A2 transparent medium and cuts synchronizing with data.

‘iso-a2xsynchro-translucent’: Specifies the paper having the width of the longer edge (594 mm) of the ISO A2 translucent medium and cuts synchronizing with data.

‘iso-a3xsynchro-white’: Specifies the paper having the width of the longer edge (420 mm) of the ISO A3 white medium and cuts synchronizing with data.

‘iso-a3xsynchro-transparent’: Specifies the paper having the width of the longer edge (420 mm) of the ISO A3 transparent medium and cuts synchronizing with data.

‘iso-a3xsynchro-translucent’: Specifies the paper having the width of the longer edge (420 mm) of the ISO A3 translucent medium and cuts synchronizing with data.
‘iso-a4xsynchro-white’: Specifies the paper having the width of the longer edge (297 mm) of the ISO A4 white medium and cuts synchronizing with data.
‘iso-a4xsynchro-transparent’: Specifies the paper having the width of the longer edge (297 mm) of the ISO A4 transparent medium and cuts synchronizing with data.
‘iso-a4xsynchro-translucent’: Specifies the paper having the width of the longer edge (297 mm) of the ISO A4 transparent medium and cuts synchronizing with data.

The following standard values are defined for American Standard (i.e. ANSI) engineering media, American Architectural engineering media, and Japanese and European Standard (i.e. ISO) engineering media, which are either a long fixed size [ASME-Y14.1M] or roll feed, for devices that provide the "synchro-cut" feature and/or the "auto-select" feature (see section 14.1):

‘auto-white’: Specifies that the printer selects the white medium with the appropriate fixed size (e.g. a1, a2, etc.) or data-synchro size, and the selection is implementation-defined.
‘auto-transparent’: Specifies that the printer selects the transparent medium with the appropriate fixed size (e.g. a1, a2, etc.) or data-synchro size, and the selection is implementation-defined.
‘auto-translucent’: Specifies that the printer selects the translucent medium with the appropriate fixed size (e.g. a1, a2, etc.) or data-synchro size, and the selection is implementation-defined.
‘auto-fixed-size-white’: Specifies that the printer selects the white medium with the appropriate fixed size (e.g. a1, a2, etc.) or the appropriate long fixed size listed above.
‘auto-fixed-size-transparent’: Specifies that the printer selects the transparent medium with the appropriate fixed size (e.g. a1, a2, etc.) or the appropriate long fixed size listed above.
‘auto-fixed-size-translucent’: Specifies that the printer selects the translucent medium with the appropriate fixed size (e.g. a1, a2, etc.) or the appropriate long fixed size listed above.
‘auto-synchro-white’: Specifies that the printer selects the white paper with the appropriate width and cuts it synchronizing with data.
‘auto-synchro-transparent’: Specifies that the printer selects the transparent paper with the appropriate width and cuts it synchronizing with data.
‘auto-synchro-translucent’: Specifies that the printer selects the translucent paper with the appropriate width and cuts it synchronizing with data.

The following standard values are defined for input-trays (from ISO DPA and the Printer MIB):

'top': The top input tray in the printer.
'middle': The middle input tray in the printer.
'bottom': The bottom input tray in the printer.
'envelope': The envelope input tray in the printer.
'manual': The manual feed input tray in the printer.
'large-capacity': The large capacity input tray in the printer.
'main': The main input tray
'side': The side input tray

The following standard values are defined for media sizes (from ISO DPA):

'iso-a0': Specifies the ISO A0 size: 841 mm by 1189 mm as defined in ISO 216
'iso-a1': Specifies the ISO A1 size: 594 mm by 841 mm as defined in ISO 216
'iso-a2': Specifies the ISO A2 size: 420 mm by 594 mm as defined in ISO 216
'iso-a3': Specifies the ISO A3 size: 297 mm by 420 mm as defined in ISO 216
'iso-a4': Specifies the ISO A4 size: 210 mm by 297 mm as defined in ISO 216
'iso-a5': Specifies the ISO A5 size: 148 mm by 210 mm as defined in ISO 216
'iso-a6': Specifies the ISO A6 size: 105 mm by 148 mm as defined in ISO 216
'iso-a7': Specifies the ISO A7 size: 74 mm by 105 mm as defined in ISO 216
'iso-a8': Specifies the ISO A8 size: 52 mm by 74 mm as defined in ISO 216
'iso-a9': Specifies the ISO A9 size: 37 mm by 52 mm as defined in ISO 216
'iso-a10': Specifies the ISO A10 size: 26 mm by 37 mm as defined in ISO 216
'iso-b0': Specifies the ISO B0 size: 1000 mm by 1414 mm as defined in ISO 216
'iso-b1': Specifies the ISO B1 size: 707 mm by 1000 mm as defined in ISO 216
'iso-b2': Specifies the ISO B2 size: 500 mm by 707 mm as defined in ISO 216
'iso-b3': Specifies the ISO B3 size: 353 mm by 500 mm as defined in ISO 216
'iso-b4': Specifies the ISO B4 size: 250 mm by 353 mm as defined in ISO 216
'iso-b5': Specifies the ISO B5 size: 176 mm by 250 mm as defined in ISO 216
'iso-b6': Specifies the ISO B6 size: 125 mm by 176 mm as defined in ISO 216
'iso-b7': Specifies the ISO B7 size: 88 mm by 125 mm as defined in ISO 216
'iso-b8': Specifies the ISO B8 size: 62 mm by 88 mm as defined in ISO 216
'iso-b9': Specifies the ISO B9 size: 44 mm by 62 mm as defined in ISO 216
'iso-b10': Specifies the ISO B10 size: 31 mm by 44 mm as defined in ISO 216
'na-letter': Specifies the North American letter size: 8.5 inches by 11 inches
'na-legal': Specifies the North American legal size: 8.5 inches by 14 inches
'executive': Specifies the executive size (7.25 X 10.5 in)
'folio': Specifies the folio size (8.5 X 13 in)
'invoice': Specifies the invoice size (5.5 X 8.5 in)
'ledger': Specifies the ledger size (11 X 17 in)
'quarto': Specifies the quarto size (8.5 X 10.83 in)
'iso-c3': Specifies the ISO C3 size: 324 mm by 458 mm as defined in ISO 269
'iso-c4': Specifies the ISO C4 size: 229 mm by 324 mm as defined in ISO 269
'iso-c5': Specifies the ISO C5 size: 162 mm by 229 mm as defined in ISO 269
'iso-c6': Specifies the ISO C6 size: 114 mm by 162 mm as defined in ISO 269
'iso-designated-long': Specifies the ISO Designated Long size: 110 mm by 220 mm as defined in ISO 269
'na-10x13-envelope': Specifies the North American 10x13 size: 10 inches by 13 inches
'na-9x12-envelope': Specifies the North American 9x12 size: 9 inches by 12 inches
'na-number-10-envelope': Specifies the North American number 10 business envelope size: 4.125 inches by 9.5 inches
'na-7x9-envelope': Specifies the North American 7x9 inch envelope size
'na-9x11-envelope': Specifies the North American 9x11 inch envelope size
'na-10x14-envelope': Specifies the North American 10x14 inch envelope size
'na-number-9-envelope': Specifies the North American number 9 business envelope size
'na-6x9-envelope': Specifies the North American 6x9 envelope size

'na-10x15-envelope': Specifies the North American 10x15 envelope size
'monarch-envelope': Specifies the Monarch envelope size (3.87 x 7.5 in)
'jis-b0': Specifies the JIS B0 size: 1030mm x 1456mm
'jis-b1': Specifies the JIS B1 size: 728mm x 1030mm
'jis-b2': Specifies the JIS B2 size: 515mm x 728mm
'jis-b3': Specifies the JIS B3 size: 364mm x 515mm
'jis-b4': Specifies the JIS B4 size: 257mm x 364mm
'jis-b5': Specifies the JIS B5 size: 182mm x 257mm
'jis-b6': Specifies the JIS B6 size: 128mm x 182mm
'jis-b7': Specifies the JIS B7 size: 91mm x 128mm
'jis-b8': Specifies the JIS B8 size: 64mm x 91mm
'jis-b9': Specifies the JIS B9 size: 45mm x 64mm
'jis-b10': Specifies the JIS B10 size: 32mm x 45mm

The following standard values are defined for American Standard (i.e. ANSI) engineering media sizes:

'a': Specifies the engineering ANSI A size medium: 8.5 inches x 11 inches
'b': Specifies the engineering ANSI B size medium: 11 inches x 17 inches
'c': Specifies the engineering ANSI C size medium: 17 inches x 22 inches
'd': Specifies the engineering ANSI D size medium: 22 inches x 34 inches
'e': Specifies the engineering ANSI E size medium: 34 inches x 44 inches

The following standard values are defined for American Architectural engineering media sizes:

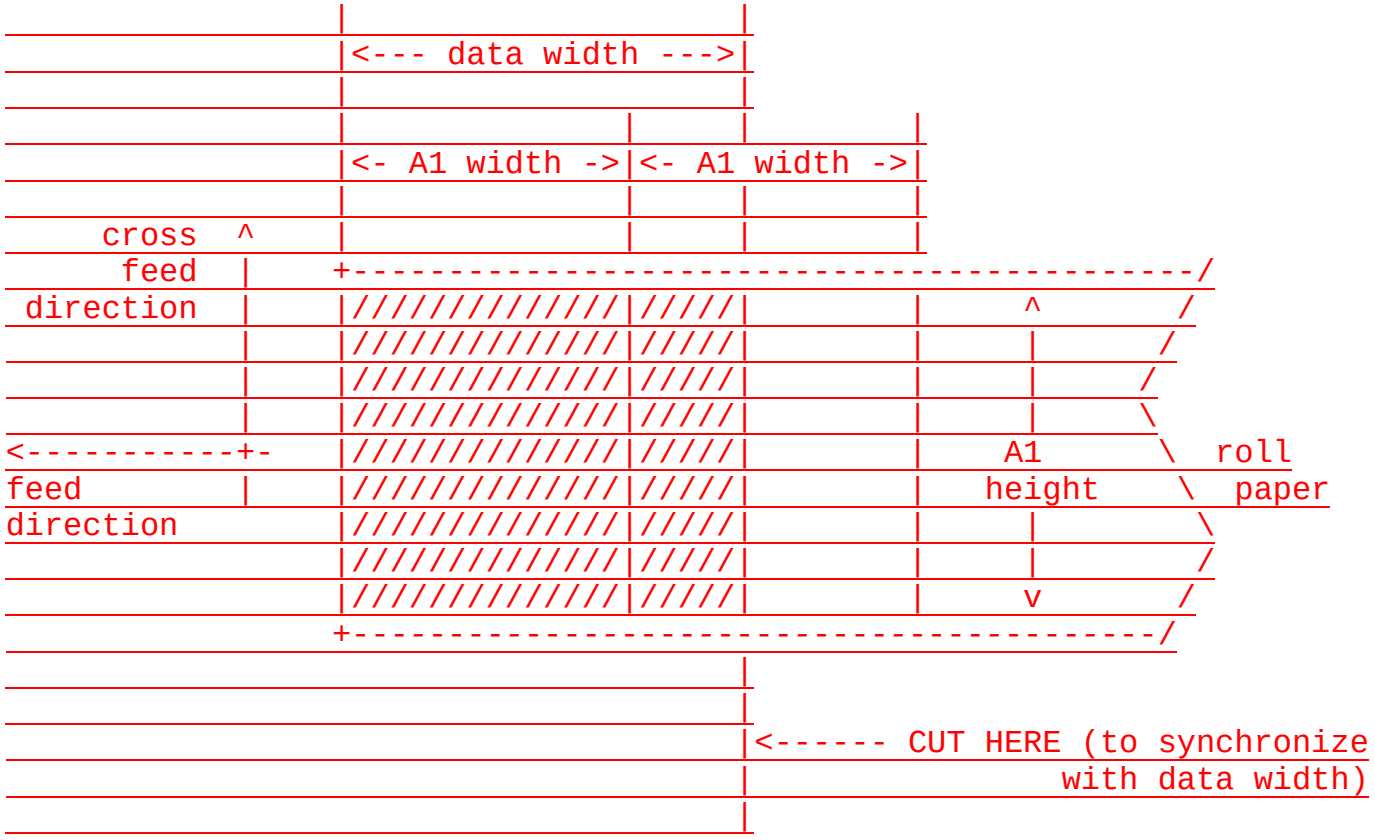
'arch-a': Specifies the Architectural A size medium: 9 inches x 12 inches
'arch-b': Specifies the Architectural B size medium: 12 inches x 18 inches
'arch-c': Specifies the Architectural C size medium: 18 inches x 24 inches
'arch-d': Specifies the Architectural D size medium: 24 inches x 36 inches
'arch-e': Specifies the Architectural E size medium: 36 inches x 48 inches

14.1. Examples

Below are examples to supplement the engineering media value definitions.

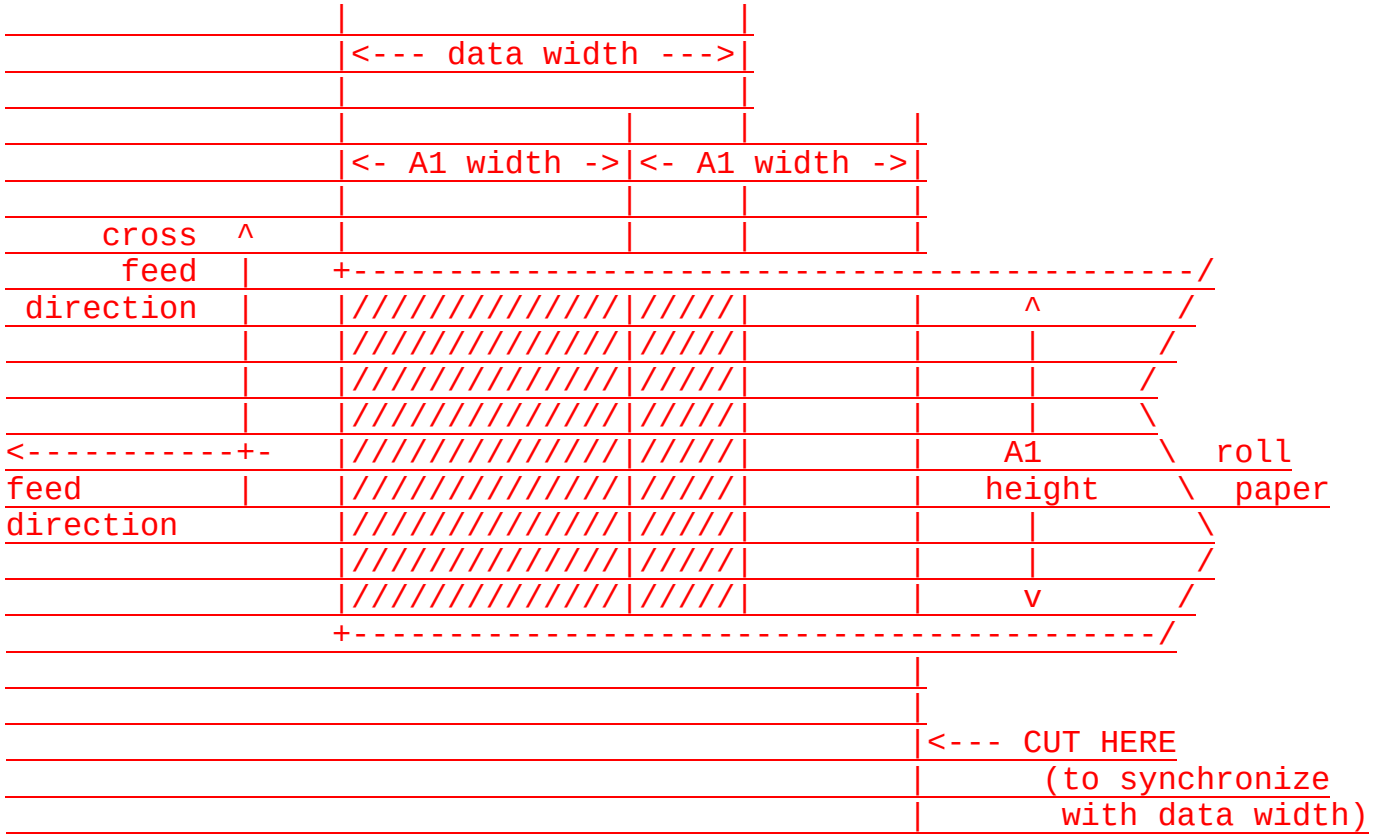
Example 1: "Synchro-Cut", a device cutting the roll paper in synchronization with the data

```
    data height:           A1 height
    data width (shaded):   A1 width < data width < (A1 width) x 2
    specified value:       'iso-a1xsynchro-white'
```



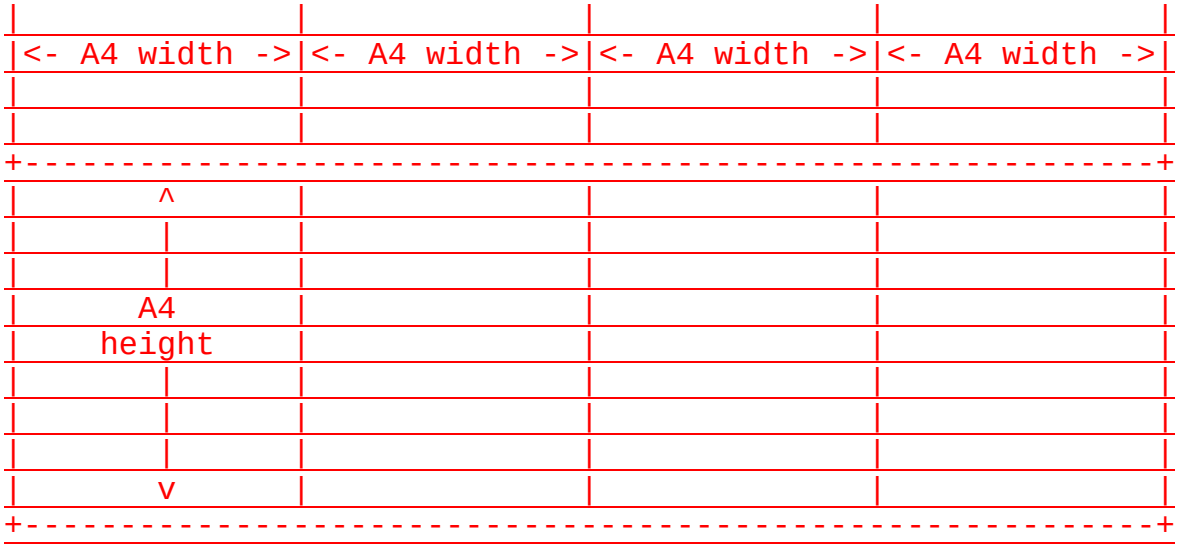
Example 2: "Auto-Cut", a device cutting the roll paper at multiples of fixed-size media width

```
    data height:           A1 height
    data width (shaded):   A1 width < data width < (A1 width) x 2
    specified value:       'auto-fixed-size-white'
```



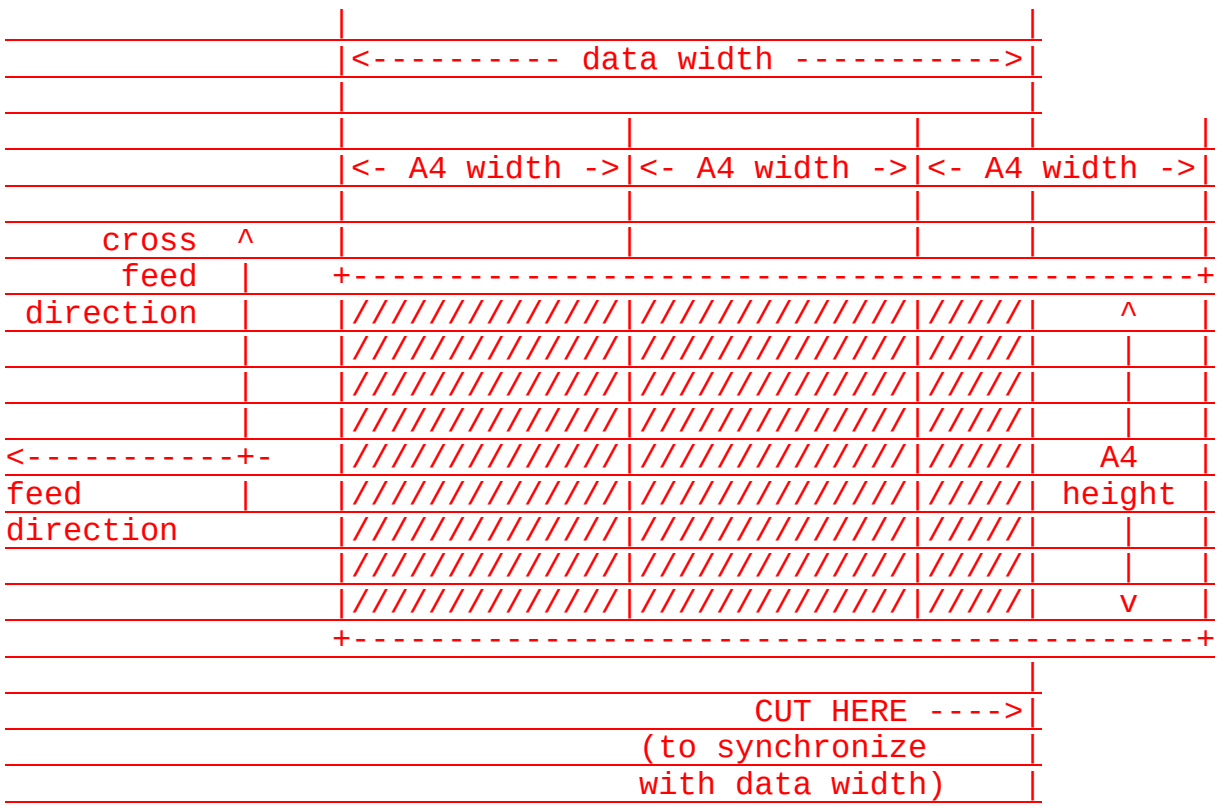
Example 3: the 'iso-a4x4-white' fixed size paper

```
    paper height:          A4 height
    paper width:           (A4 width) x 4
    specified value:       'iso-a4x4-white'
```



Example 4: "Synchro-Cut", a device cutting the fixed size paper in synchronization with the data

```
    data height:           A4 height
    data width (shaded):  (A4 width) x 2 < data width < (A4 width) x 3
    specified value:       'iso-a4xsynchro-white'
```



2 IANA Considerations

These "media" type3 keyword attribute values will be published by IANA according to the procedures in RFC 2566 [rfc2566] section 6.1 with the following URL:

ftp.isi.edu/iana/assignments/ipp/attribute-values/media/engineering.txt

3 Internationalization Considerations

Normally a client will provide localization of the keywords values of this attribute to the language of the user. On the other hand, the client will not localize any name values for the "media" attribute defined by the system administrator of the IPP Printer (see [ipp-mod] section 4.1.2 and 4.1.3).

4 Security Considerations

This extension poses no additional security threats or burdens than those in IPP/1.0 [RFC2566, RFC2565] and IPP/1.1 [ipp-mod, ipp-pro]. However, implementations MAY support different access control to various media, depending on the identity of the job submitting user.

5 References

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