February 26, 2002

Candidate Standard 5101.1-2002

The Printer Working Group

Standard for Media Standardized Names

Status: Approved

Abstract: This document specifies standard names to be used to indicate media types, media colors, and media sizes in other standards. These lists of names are a superset of the names that are currently presented in the Printer MIB [PRT-MIB] and the IPP Model and Semantics [IPP-MOD] documents. It is intended to supplement the currently defined lists as well as to provide a normative reference for all subsequent standards.

This document is a PWG Candidate Standard. For a definition of a "PWG Candidate Standard", see:
ftp://ftp.pwg.org/pub/pwg/general/pwg-process20.pdf
This document is available electronically at:

ftp://ftp.pwg.org/pub/pwg/candidates/cs-pwgmsn10-20020226-5101.1.pdf, .doc, .rtf

About the IEEE-ISTO

The IEEE-ISTO is a not-for-profit corporation offering industry groups an innovative and flexible operational forum and support services. The IEEE Industry Standards and Technology Organization member organizations include printer manufacturers, print server developers, operating system providers, network operating systems providers, network connectivity vendors, and print management application developers. The IEEE-ISTO provides a forum not only to develop standards, but also to facilitate activities that support the implementation and acceptance of standards in the marketplace. The organization is affiliated with the IEEE (http://www.ieee.org/) and the IEEE Standards Association (http://standards.ieee.org/).

For additional information regarding the IEEE-ISTO and its industry programs visit: http://www.ieee-isto.org.

About the Printer Working Group

The Printer Working Group (or PWG) is a Program of the IEEE-ISTO. All references to the PWG in this document implicitly mean "The Printer Working Group, a Program of the IEEE ISTO." The PWG is chartered to make printers and the applications and operating systems supporting them work together better. In order to meet this objective, the PWG will document the results of their work as open standards that define print related protocols, interfaces, data models, procedures and conventions. Printer manufacturers and vendors of printer related software would benefit from the interoperability provided by voluntary conformance to these standards.

In general, a PWG standard is a specification that is stable, well understood, and is technically competent, has multiple, independent and interoperable implementations with substantial operational experience, and enjoys significant public support.

Contact information:

The Printer Working Group
c/o The IEEE Industry Standards and Technology Organization
445 Hoes Lane
Piscataway, NJ 08854
USA

PWG Web Page: http://www.pwg.org/ PWG Mailing List: pwg@pwg.org

Instructions for subscribing to the PWG mailing lists can be found at the following link: http://www.pwg.org/mailhelp.html

Members of the PWG and interested parties are encouraged to join the PWG mailing lists in order to participate in discussions, clarifications and review of the WG product.

Contents

Tables

1 Introduction

Media types, media colors, and media sizes have been defined in many previously published standards related to printing. Examples are the ISO Document Printing Application [DPA], the IEEE Transport Independent Printer/System Interface [TIP/SI], the IETF Printer MIB [PRT-MIB], and the IETF Internet Printing Protocol [IPP-MOD]. Although there is a high degree of commonality in the set of media types, colors, and sizes presented in these documents, they do not represent a uniform set. Several other standard developments, in process prior to the creation of this standard, also have a need for media type, color, and size definitions. Also there is a large body of existing computer printing system practice based upon PPD and GPD files to describe a Printer's capabilities that include media type, color, and size. Thus this standard is a response to an urgent need to define a complete set of media types, colors, and sizes, in an independent document, that can be used as a normative reference by other standards.

This standard is the result of extensive research to obtain an exhaustive list. It provides a superset of the media types, colors, and sizes currently defined in the previously listed specifications. This standard is intended to update the list that is currently presented in the Printer MIB and the IPP Model and Semantics [IPP-MOD] specification and it also can be referenced by future standards. This document will be periodically updated to include any additional types, colors, and sizes, as required.

1.1 Scope

This document defines media types, media colors, and media sizes only. Other media attributes such as name, weight, or opacity are not included at this time, though they may be added in the future, if the need arises.

No provisions are included to specify roll paper sizes. All media sizes defined represent a cut sheet. Media that is printed and then cut by the printing device can use this standard only to define the final size.

The color attribute that is included in a portion of the Media Name entries in both the Printer MIB and IPP are included as a separate independent set of Color Names in this specification.

The media size dimensions that are defined in this document are independent of the media feed direction (i.e. short edge feed or long edge feed) or printing orientation (i.e. portrait or landscape). Both of these parameters are best handled by unique attributes rather than overloading the media size attribute.

The intent of the names defined in this standard is for program to program communication, not for internal use within a program or for program to human display. Examples include: (1) from a Printer to client software, (2) from client software to a Printer, and (3) from a printer data description file to client software. Typically a client will localize these names to the human language and units of the user before displaying them to the user. However, when a client encounters a name that it does not recognize, these names have been defined so that they can be displayed to the user as a Fallback presentation. Some clients may omit localization in order to simplify implementation of displaying names to users.

The Media Size Self-Describing Name deserves special mention. It contains both a media size name and the dimensions, in case the receiver does not recognize the media size name. Such a receiver can then parse the Media Size Self-Describing Name and discover the intended dimensions of such an unrecognized media. These names have also been defined to facilitate parsing and/or Fallback presentation of either the media size name part and/or the dimensions part.

2 Terminology

This glossary defines certain terms used in this specification which may not be generally familiar or which may be used with very specific meaning. These definitions are not intended to be absolute but do reflect the use of the terms within this specification.

ABNF (Augmented Backus-Naur Form) [ABNF] A formal meta-syntax used to express content-free grammars. ABNF is commonly used in internet protocol specifications.

Alias An alternative name that is commonly used to mean the same as a name standardized in this document, but which is not defined for a use that conforms to this standard.

ASCII American Standards Code for Information Exchange as defined in ANSI X3.4-1986, "Coded Character Set - 7-bit American Standard Code for Information Interchange (ASCII)." Defines a character set encoding with printable characters defined in the range 0x21 to 0x7E and the SPACE character (0x20). Other encoded values must not be used.

IETF Internet Engineering Task Force**.** A volunteer group that develops and approves standards that are relative to the Internet.

ISO International Organization for Standardization.

Legacy Name A name used in the same contexts as the names defined in this standard, but which is deprecated from use when conforming to this standard. This name is provided for historical context.

media The consumable upon which the marking engine marks so as to form a text and/or pictorial image, typically paper.

Media Color Name The human readable name used to identify the color of the media. Examples: 'white', 'red', 'ivory'.

Media Dimensions The short and long dimensions of the media.

media finish An adjective that describes the surface texture of the medium. In most cases the texture is obtained by the application of a coating. Examples: 'glossy', 'matte'.

Media Name The human readable name used to identify media that possess the same characteristics and to distinguishes the media from others with different characteristics for the context in which the Media Name is used. Examples: 'iso-a4-white', na-letter-transparency', 'monarch-envelope'. This standard does not define Media Names.

Media Size Name The human readable name that identifies a particular media size. Examples: 'iso_a4', 'na_letter', 'monarch'.

Media Size Self-Describing Name (or **Media Size** for short) An ASCII string that contains a Media Size Name and the Media Dimensions that correspond to the Media Size Name. Examples: 'iso_a4_210x297mm', 'na_letter_8.500-x11in', 'na_monarch_3.875x7.5in'.

Media Type Name The human readable name that identifies a particular medium type, i.e., the predominate characteristic of the media. Examples: 'stationery', 'transparency', 'envelope'.

3 Media Type Names

The standardized Media Type Names are defined in Table 1. The base set of these names is derived from the Printer MIB [PRT-MIB] and "Media Features for Display, Print, and Fax" [FEATURES] documents. Additional values MAY be registered according to both [TAG-REG] and [IPP-MOD].

For Media Types that produced using a coating or special process, the coating or process may only be applied to one side. The Media Type Names defined in this standard do not define either one sided or two sided conditions. For situations where this information needs to be presented, an implementation specific method must be used.

The *Ref* column indicates the source document(s) for the name.

1 = The Printer MIB [PRT-MIB].
3 = Media Features for Display, Print, and Fax [FEATURES].
5 = IPP Production Printing Attributes [IPP-PROD] The name in this document is derived from the "media-front-coating" and "media-back-coating" member attributes by adding the 'photographic-' prefix to the IPP keyword values.
6 = IPP Production Printing Attributes [IPP-PROD] The name in this document is derived from the "media-pre-printed" member attributes by adding the 'stationery-' prefix to the IPP keyword values.

Table 1 - Standardized Media Type Names (part 1)

Keyword	Description	Ref.
stationery	Separately cut sheets of an opaque material	1, 3
stationery-coated	Separately cut sheets of an opaque material with a coating of unspecified type	
stationery-inkjet	Separately cut sheets of an opaque material designed to minimize the spread of liquid inks. May be accomplished using a coating	
stationery-preprinted	Separately cut sheets of an opaque material with a preprinted image.	6
stationery-letterhead	Separately cut sheets of an opaque material with a preprinted letterhead.	6
stationery-prepunched	Separately cut sheets of an opaque material that are punched with an unspecified hole pattern.	
stationery-fine	Separately cut sheets of vellum or other high quality opaque material.	
stationery-heavyweight	Separately cut sheets of a heavy stock opaque material.	
stationery-lightweight	Separately cut sheets of a light stock opaque material.	
transparency	Separately cut sheets of a transparent material	1, 3
envelope	Envelopes that can be used for conventional mailing purposes	1, 3
envelope-plain	Envelopes that are not preprinted and have no windows	1, 3
envelope-window	Envelopes that have windows for addressing purposes	1
continuous	Continuously connected sheets of an opaque material - which edge is connected is not specified	3
continuous-long	Continuously connected sheets of an opaque material connected along the long edge	1
continuous-short	Continuously connected sheets of an opaque material connected along the short edge	1
tab-stock	Media with tabs (either pre-cut or full-cut)	1

Table 1 - Standardized Media Type Names (part 2)

Keyword	Description	Ref.
pre-cut-tabs	Media with tabs that are cut so that more than one tab is visible extending out beyond the edge of non-tabbed media in an Output-Document.	
full-cut-tabs	Media with a tab that runs the full length of the sheet so that only one tab is visible extending out beyond the edge of non-tabbed media in an Output-Document.	
multi-part-form	Form medium composed of multiple layers not pre-attached to one another; each sheet may be drawn separately from an input source	1
labels	Label stock (For example, a sheet of peel-off labels).	1
multi-layer	Form medium composed of multiple layers which are pre-attached to one another; e.g., for use with impact printers.	1
screen	A refreshable display	3
screen-paged	A refreshable display which cannot scroll	3
photographic	Separately cut sheets of an opaque material to produce photographic quality images. The coating is unspecified.	
photographic-glossy	Separately cut sheets of an opaque material that has a "glossy" coating to produce photographic quality images.	5
photographic-high-gloss	Separately cut sheets of an opaque material that has a "high-gloss" coating to produce photographic quality images.	5
photographic-semi-gloss	Separately cut sheets of an opaque material that has a "semi-gloss" coating to produce photographic quality images.	5
photographic-satin	Separately cut sheets of an opaque material that has a "satin" coating to produce photographic quality images.	5
photographic-matte	Separately cut sheets of an opaque material that has a "matte" coating to produce photographic quality images.	5
photographic-film	Separately cut sheets of film used to produce photographic quality images.	
back-print-film	Separately cut sheet of a translucent film that the user can view with or without backlighting.	
cardstock	Separately cut sheets of a heavier or stiffer opaque material than stationery	
roll	A continuous roll of media with no predefined page separation points.	

3.1 Custom Media Type Names

Media Type Names may be locally extended using a Custom Media Type Name, without an update to this specification. The format is defined by the following ABNF:

```
custom-media-type-name = "custom-media-type-" type-name

type-name = lowalpha *( lowalpha | digit | "-" )

lowalpha = "a" | "b" | "c" | "d" | "e" | "f" | "g" | "h" | "i" |
           "j" | "k" | "l" | "m" | "n" | "o" | "p" | "q" | "r" |
           "s" | "t" | "u" | "v" | "w" | "x" | "y" | "z"

digit    = "0" | "1" | "2" | "3" | "4" | "5" | "6" | "7" | "8" | "9"
```

Example, preprinted stationery for company XYZ: **custom-media-type-xyz-letterhead**

4 Media Color Names

Table defines the standardized Media Color Names. These names are derived primarily from the Printer MIB [PRT-MIB], prtInputMediaColor standard values. One major difference from the Printer MIB, the name 'transparent' has been replaced by 'no-color'. This allows use of a color attribute with the media type ‘transparency’ as defined in Table .

The *Ref* column indicates in which document(s) the identical name appears.

1 = The Printer MIB [PRT-MIB].
5 = IPP Production Printing [IPP-PROD], “media-color” member attribute keywords.

Table 2 - Media Color Names

Color Name	Ref.	Description
no-color	5	The specified media has no color. (example, a clear transparency media type)
white	1, 5	The specified media is white.
pink	1, 5	The specified media is pink.
yellow	1,5	The specified media is yellow.
blue	5	The specified media is blue.
green	1, 5	The specified media is green.
buff	1, 5	The specified media is buff.
goldenrod	1, 5	The specified media is goldenrod.
red	5	The specified media is red.
gray	5	The specified media is gray.
ivory	5	The specified media is ivory.
orange	5	The specified media is orange.

4.1 Custom Media Color Names

Media Color Names may be locally extended using a Custom Media Color Name, without an update to this specification. The format is defined by the following ABNF:

```
custom-media-color-name = "custom-media-color-" color-name

color-name = lowalpha *( lowalpha | digit | "-" )

lowalpha = "a" | "b" | "c" | "d" | "e" | "f" | "g" | "h" | "i" |
           "j" | "k" | "l" | "m" | "n" | "o" | "p" | "q" | "r" |
           "s" | "t" | "u" | "v" | "w" | "x" | "y" | "z"

digit    = "0" | "1" | "2" | "3" | "4" | "5" | "6" | "7" | "8" | "9"
```

Example, media of the color mauve: **`custom-media-color-mauve`**

5 Media Size Self-Describing Names

The media size specifications defined in this document, labeled as Media Size Self-Describing Names, are cross indexed to Legacy Names and Alias (common) names. The Legacy Names define the names currently used in the ISO DPA, Printer MIB, or IPP documents. A reference column is included in the tables to indicate which of these three documents contain the Legacy Name.

Ref column entry definitions:

1 = Printer MIB [PRT-MIB] and ISO DPA [DPA]. (Both documents contain an identical set.)
2 = IPP [IPP-MOD].
4 = ASME Y14 [ASME-IN]

5 = ASME Y14.M [ASME-M]

5.1 Media Size Self-Describing Name Format

This specification defines a new Media Size Self-Describing Name format that is recommended to be used by all new implementations. This new format has the Media Size Name and the Media Dimensions embedded within the string and allows a device to operate without a Media Size Name to Media Dimensions table. The Media Size Self-Describing Name format is structured as follows using ABNF:

```
media-size-self-describing-name =
        ( class-in "_" size-name "_" short-dim "x" long-dim "in" ) |
         ( class-mm "_" size-name "_" short-dim "x" long-dim "mm" )
class-in = "custom" | "na" | "asme" | "roc" | "oe"
class-mm = "custom" | "iso" | "jis" | "jpn" | "prc" | "om"
size-name = ( lowalpha | digit ) *( lowalpha | digit | "-" )
short-dim = dim
long-dim = dim
dim = integer-part [fraction-part] | "0" fraction-part
integer-part = non-zero-digit *digit
fraction-part = "." *digit non-zero-digit
lowalpha = "a" | "b" | "c" | "d" | "e" | "f" | "g" | "h" | "i" |
           "j" | "k" | "l" | "m" | "n" | "o" | "p" | "q" | "r" |
           "s" | "t" | "u" | "v" | "w" | "x" | "y" | "z"
non-zero-digit = "1" | "2" | "3" | "4" | "5" | "6" | "7" | "8" | "9"
digit    = "0" | "1" | "2" | "3" | "4" | "5" | "6" | "7" | "8" | "9"
```

The above ABNF is current as of the date of publication this document. Implementers should be aware that the currently defined class names may be expanded in the future to cover new groups of media sizes. Thus client parser implementations that are developed using this ABNF should accept class names that are not currently represented in this list. The latest ABNF, which shall always be the proper reference for use within this standard, may be obtained at:

ftp://ftp.pwg.org/pub/pwg/informational/pwg5101.1-media-name-abnf.txt

5.1.1 ***class-xx*** This string part is present to indicate the name space or jurisdiction for the size name in order to prevent name clashes. Currently defined values are "na" for North America, "asme" for American Society of Mechanical Engineers, "iso" for the International Standards Organization, "jis" for Japanese Information Standard, "jpn" for Japan, "prc" for People's Republic of China, "roc" for Republic of China (Taiwan), "oe" for other English, and "om" for other metric. "custom" defines a unique class name that allows site and vendor unique size definitions, see paragraph 5.1.7. New class names must conform to the following ABNF:

```
class-name = ( lowalpha | digit ) *( lowalpha | digit | "." )
```

5.1.2 ***size-name*** This string provides a textual description of the media size. It is normally derived from the Legacy or Alias name associated with the media size. The size-name can consist of multiple parts, with each part separated by a hyphen (0x2D).

5.1.3 ***short-dim*** and ***long-dim*** These values define the media size. The ***short-dim*** is always the smaller of the two dimensions. The dimensions are presented in decimal format to as many places as necessary to define the size. Trailing zeros must never be used if a decimal portion is present.

5.1.4 For interchange between programs, the dimensions presented in this standard must never be converted to the another system of units, but must remain as defined in this standard. Furthermore, an identical size shall never appear in this standard with different units. Programs may convert the dimensions to other units when displaying these names to human users and for internal use, both of which are outside the scope of this standard.

The common usage of some names may represent several physical sizes (e.g. folio, quarto, foolscap, and executive). To avoid naming conflicts, a hyphenated identifier must be used to link the names to a specific size. Only one of the possible sizes may use the name without a hyphenated identifier.

5.1.5 General

The Media Size Self-Describing Name shall not contain any space characters (0x20).

Wherever possible, the Media Size Self-Describing Name has been derived from the Legacy Name. In many cases the 'class_size-name' portion is identical to the Legacy Name. In the remaining cases, the 'class' portion must be ignored to match the Legacy Name.

5.1.6 Examples:

The letter size (8.5 inches by 11 inches) used in North America: **na_letter_8.5x11in**
The iso A4 size (210 mm by 297 mm) used in metric countries: **iso_a4_210x297mm**

5.1.7 Custom Media Size Self-Describing Names

The "class-custom" allows extensibility of the media size set without an update to this specification. This feature is primarily intended for special media sizes that are used at a minimum number of locations. Size names that use the "custom" prefix are never registered or published within this standard.

5.2 Reserved Size Names

The ***size-name*** "max" shall be reserved to indicate an upper size limit of either a device or application. Also, the ***size-name*** "min" shall be reserved to indicate a lower size limit. Example: For a device that can process forms as small as 2 x 3 inches to 18 x 36 inches:

custom_max_18x36in and **custom_min_2x3in**

5.3 Conventions for the Tables

The rest of this section contains the tables of Media Size Self-Describing Names. Within a table entries from different sources are grouped together. The entries in these groups are arranged in order of increasing size of the smaller dimension.

The presence of “(envelope)” in the Alias column indicates this size is also commonly used for envelopes. It does not imply that this size is only available as an envelope media type.

Table 3 - North American Standard Sheet Media Sizes (part 1)

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (inches)
		index-3x5	na_index-3x5_3x5in
		personal (envelope)	na_personal_3.625x6.5in
monarch-envelope	2		na_monarch_3.875x7.5in
na-number-9-envelope	1, 2		na_number-9_3.875x8.875in
		index-4x6 (postcard)	na_index-4x6_4x6in
na-number-10-envelope	1, 2	comm-10 (envelope)	na_number-10_4.125x9.5in
		a2 (envelope)	na_a2_4.375x5.75in
		number-11 (envelope)	na_number-11_4.5x10.375in
		number-12 (envelope)	na_number-12_4.75x11in
		5x7	na_5x7_5x7in
		index-5x8	na_index-5x8_5x8in
		number-14 (envelope)	na_number-14_5x11.5in
invoice	2	statement, mini, half-letter	na_invoice_5.5x8.5in
		index-4x6-ext	na_index-4x6-ext_6x8in
na-6x9-envelope	1, 2	6x9 (envelope)	na_6x9_6x9in
		c5 (envelope)	na_c5_6.5x9.5in
na-7x9-envelope	1, 2	7x9 (envelope)	na_7x9_7x9in
executive	2		na_executive_7.25x10.5in
na-8x10	2	government-letter	na_govt-letter_8x10in
		government-legal	na_govt-legal_8x13in
quarto	2		na_quarto_8.5x10.83in
na-letter	1, 2	letter, a, engineering-a	na_letter_8.5x11in
		fanfold-European	na_fanfold-eur_8.5x12in
		letter-plus	na_letter-plus_8.5x12.69in
		foolscap, german-legal-fanfold	na_foolscap_8.5x13in
na-legal	1, 2	legal	na_legal_8.5x14in
		super-a	na_super-a_8.94x14in
na-9x11-envelope	1, 2	9x11 (envelope), letter-tab	na_9x11_9x11in
arch-a	2	architecture-a (envelope)	na_arch-a_9x12in
		letter-extra	na_letter-extra_9.5x12in
		legal-extra	na_legal-extra_9.5x15in
		10x11	na_10x11_10x11in
na-10x13-envelope	1, 2	10x13 (envelope)	na_10x13_10x13in
na-10x14-envelope	1, 2	10x14 (envelope)	na_10x14_10x14in
na-10x15-envelope	1, 2	10x15 (envelope)	na_10x15_10x15in
na-10x15-envelope	1, 2	10x15 (envelope)	na_10x15_10x15in
		11x12	na_11x12_11x12in
		edp	na_edp_11x14in

Table 3 - North American Standard Sheet Media Sizes (part 2)

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (inches)
		fanfold-us	na_fanfold-us_11x14.875in
		11x15	na_11x15_11x15in
tabloid	2	ledger, b, engineering-b	na_ledger_11x17in
		european-edp	na_eur-edp_12x14in
arch-b	2	architecture-b, tabloid-extra	na_arch-b_12x18in
		12x19	na_12x19_12x19in
		b-plus	na_b-plus_12x19.17in
		super-b	na_super-b_13x19in
c	2	engineering-c	na_c_17x22in
arch-c	2	architecture-c	na_arch-c_18x24in
d	2	engineering-d	na_d_22x34in
arch-d	2	architecture-d	na_arch-d_24x36in
f	5	e1	asme_f_28x40in
		wide-format	na_wide-format_30x42in
e	2	engineering-e	na_e_34x44in
arch-e	2	architecture-e	na_arch-e_36x48in
		f, engineering-f	na_f_44x68in

Table 4 - Chinese Standard Sheet Media Inch Sizes

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (inches)
		roc-16k	roc_16k_7.75x10.75in
		roc-8k	roc_8k_10.75x15.5in

Table 5 - ISO Standard Sheet Media Sizes (part 1)

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (mm)
iso-a10	1, 2	a10	iso_a10_26x37mm
iso-a9	1, 2	a9	iso_a9_37x52mm
iso-a8	1, 2	a8	iso_a8_52x74mm
iso-a7	1, 2	a7	iso_a7_74x105mm
iso-a6	1, 2	a6	iso_a6_105x148mm
iso-a5	1, 2	a5	iso_a5_148x210mm
		a5-extra	iso_a5-extra_174x235mm
iso-a4	1, 2	a4	iso_a4_210x297mm
		a4-tab	iso_a4-tab_225x297mm
		a4-extra	iso_a4-extra_235.5x322.3mm
iso-a3	1, 2	a3	iso_a3_297x420mm
iso-a4x3, a4x3	2, 4		iso_a4x3_297x630mm

Table 5 - ISO Standard Sheet Media Sizes (part 2)

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (mm)
iso-a4x4, a4x4	2, 4		iso_a4x4_297x841mm
iso-a4x5, a4x5	2, 4		iso_a4x5_297x1051mm
iso-a4x6, a4x6	2, 4		iso_a4x6_297x1261mm
iso-a4x7, a4x7	2, 4		iso_a4x7_297x1471mm
iso-a4x8, a4x8	2, 4		iso_a4x8_297x1682mm
iso-a4x9, a4x9	2, 4		iso_a4x9_297x1892mm
iso-a3-extra			iso_a3-extra_322x445mm
iso-a2	1, 2	a2	iso_a2_420x594mm
iso-a3x3, a3x3	2, 4		iso_a3x3_420x891mm
iso-a3x4, a3x4	2, 4		iso_a3x4_420x1189mm
iso-a3x5, a3x5	2, 4		iso_a3x5_420x1486mm
iso-a3x6, a3x6	2, 4		iso_a3x6_420x1783mm
iso-a3x7, a3x7	2, 4		iso_a3x7_420x2080mm
iso-a1	1, 2	a1	iso_a1_594x841mm
iso-a2x3, a2x3	2, 4		iso_a2x3_594x1261mm
iso-a2x4, a2x4	2, 4		iso_a2x4_594x1682mm
iso-a2x5, a2x5	2, 4		iso_a2x5_594x2102mm
iso-a0	1, 2	a0	iso_a0_841x1189mm
iso-a1x3, a1x3	2, 4		iso_a1x3_841x1783mm
iso-a1x4, a1x4	2, 4		iso_a1x4_841x2378mm
a0x2	4	2a0	iso_2a0_1189x1682mm
a0x3	4		iso_a0x3_1189x2523mm
iso-b10	1, 2	b10	iso_b10_31x44mm
iso-b9	1, 2	b9	iso_b9_44x62mm
iso-b8	1, 2	b8	iso_b8_62x88mm
iso-b7	1, 2	b7	iso_b7_88x125mm
iso-b6	1, 2	b6 (envelope)	iso_b6_125x176mm
		b6/c4 (envelope)	iso_b6c4_125x324mm
iso-b5	1, 2	b5 (envelope)	iso_b5_176x250mm
		b5-extra	iso_b5-extra_201x276mm
iso-b4	1, 2	b4 (envelope)	iso_b4_250x353mm
iso-b3	1, 2	b3	iso_b3_353x500mm
iso-b2	1, 2	b2	iso_b2_500x707mm
iso-b1	1, 2	b1	iso_b1_707x1000mm
iso-b0	1, 2	b0	iso_b0_1000x1414mm
		c10 (envelope)	iso_c10_28x40mm
		c9 (envelope)	iso_c9_40x57mm
iso-c8	1	c8 (envelope)	iso_c8_57x81mm
iso-c7	1	c7 (envelope)	iso_c7_81x114mm
		c7/c6 (envelope)	iso_c7c6_81x162mm
iso-c6	1, 2	c6 (envelope)	iso_c6_114x162mm

Table 5 - ISO Standard Sheet Media Sizes (part 3)

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (mm)
		c6/c5 (envelope)	iso_c6c5_114x229mm
iso-c5	1, 2	c5 (envelope)	iso_c5_162x229mm
iso-c4	1, 2	c4 (envelope)	iso_c4_229x324mm
iso-c3	1, 2	c3 (envelope)	iso_c3_324x458mm
iso-c2	1	c2 (envelope)	iso_c2_458x648mm
iso-c1	1	c1 (envelope)	iso_c1_648x917mm
iso-c0	1	c0 (envelope)	iso_c0_917x1297mm
iso-designated	1, 2	designated-long, dl (envelope)	iso_dl_110x220mm
iso-ra2			iso_ra2_430x610mm
iso-sra2			iso_sra2_450x640mm
iso-ra1			iso_ra1_610x860mm
iso-sra1			iso_sra1_640x900mm
iso-ra0			iso_ra0_860x1220mm
iso-sra0			iso_sra0_900x1280mm

Table 6 - Japanese Standard Sheet Media Sizes

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (mm)
jis-b10	1, 2		jis_b10_32x45mm
jis-b9	1, 2		jis_b9_45x64mm
jis-b8	1, 2		jis_b8_64x91mm
jis-b7	1, 2		jis_b7_91x128mm
jis-b6	1, 2		jis_b6_128x182mm
jis-b5	1, 2		jis_b5_182x257mm
jis-b4	1, 2		jis_b4_257x364mm
jis-b3	1, 2		jis_b3_364x515mm
jis-b2	1, 2		jis_b2_515x728mm
jis-b1	1, 2		jis_b1_728x1030mm
jis-b0	1, 2		jis_b0_1030x1456mm
		exec	jis_exec_216x330mm
		chou4 (envelope)	jpn_chou4_90x205mm
		hagaki (postcard)	jpn_hagaki_100x148mm
		you4 (envelope)	jpn_you4_105x235mm
		chou2 (envelope)	jpn_chou2_111.1x146mm
		chou3 (envelope)	jpn_chou3_120x235mm
		oufuku (reply postcard)	jpn_oufuku_148x200mm
		kahu (envelope)	jpn_kahu_240x322.1mm
		kaku2 (envelope)	jpn_kaku2_240x332mm

Table 7 - Chinese Standard Sheet Media Sizes

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (mm)
		prc-32k	prc_32k_97x151mm
		prc1 (envelope)	prc_1_102x165mm
		prc2 (envelope)	prc_2_102x176mm
		prc4 (envelope)	prc_4_110x208mm
		prc5 (envelope)	prc_5_110x220mm
		prc8 (envelope)	prc_8_120x309mm
		prc6 (envelope)	prc_6_120x320mm
		prc3 (envelope)	prc_3_125x176mm
		prc-16k	prc_16k_146x215mm
		prc7 (envelope)	prc_7_160x230mm
		juuro-ku-kai	om_juuro-ku-kai_198x275mm
		pa-kai	om_pa-kai_267x389mm
		dai-pa-kai	om_dai-pa-kai_275x395mm
		prc10 (envelope)	prc_10_324x458mm

Table 8 - Other Metric Standard Sheet Media Sizes

Legacy Name	Ref.	Alias (common name)	Self-Describing Name (mm)
		small-photo	om_small-photo_100x150mm
		Italian (envelope)	om_italian_110x230mm
		Postfix (envelope)	om_postfix_114x229mm
		large-photo	om_large-photo_200x300
folio	2		om_folio_210x330mm
		folio-sp	om_folio-sp_215x315mm
		Invite (envelope)	om_invite_220x220mm

6 Conformance Requirements

The Media Type Names, Media Color Names, and Media Size Self-Describing Names defined in this document are recommended for any future specifications that have a need for media type, media color, or media size definitions respectively. The proper procedure for including these names is to simply reference this specification as the definition and source of the media types, colors, or sizes with the clause "or subsequent revisions". In this manner, any updates to this document are automatically included in the referencing specification.

Media Names defined in this specification are presented using lower case characters. Other referencing standards may impose case sensitive rules if necessary. For interoperability and implementation efficiency, this standard strongly recommends these names be used in the lower case form defined in this document.

The Media Size Self-Describing Names defined in this document contains significantly more information than is found in many current standards. Conformance to this standard does not require that all parts of the Media Size Name be represented. It is conformant to only use the "size-name" or the "class_size-name" portion. It is also acceptable to replace the underscore separator between the "class" and "size-name" with a hyphen.

7 Registration Procedures for Additional Names

This standard will be republished as needed, but not more often than once a year. In the interim, new Media Type Names, Media Color Names, and Media Size Self-Describing Names can be registered and have the same status as the standardized names in this document.

Requests are to be submitted by email to the pwg@pwg.org mailing list. The proposed name must include a description and must follow the same patterns as the standardized names currently included in the standard. Any name submitted without a description will be rejected. The review and approval process for new standardized media names is defined in the Maintenance section (Registration of keywords, attributes, and values) of the PWG process document. (See: ftp://ftp.pwg.org/pub/pwg/general/pwg-process20.pdf)

After approval, the name and description will be made available in the Media Standardized Names extensions directory on the PWG FTP site at: ftp://ftp.pwg.org/pub/pwg/media-sizes/approved-addenda/.

Approved extensions will have the same status as names in the published standard. All names that are registered in this manner will be included future revisions of the standard and will be removed from the directory.

8 Internationalization Considerations

All standardized textual strings must be represented as US-ASCII character codes and local translations must never be performed. Custom sizes, if limited to local use, may be represented using any desired character set.

9 Security Considerations

This specification will have no impact on the security burden of or potential threats to the importing system.

10 References

[ABNF]
RFC 2234, Augmented BNF for Syntax Specifications: ABNF, D. Crocker, P. Overell; November 1997

[ASME-IN]
ASME Y14-1995, Decimal Inch Drawing Sheet Size and Format, The American Society of Mechanical Engineers.

[ASME-M]
ASME Y14.M-1995, Metric Drawing Sheet Size and Format, The American Society of Mechanical Engineers.

[DPA]
ISO/IEC 10175, Document Printing Application, June 1996.

[FEATURES]
Masinter, L., et al, “Media Features for Display, Print, and Fax”, RFC 2534, March 1999.

[IPP-MOD]
Hastings, T., Herriot, R., deBry, R., Isaacson, S., and P. Powell, “Internet Printing Protocol/1.1: Model and Semantics”, RFC 2911, September 2000.

[IPP-PROD]
PWG Candidate Standard 5100.3-2001, IPP Production Printing Attributes – Set 1, February 2001. Available at: ftp://ftp.pwg.org/pub/pwg/candidates/cs-ippprodprint10-20010212-5100.3.pdf, .doc, .rtf

[PRT-MIB]
Smith, R., Wright, F., Hastings, T., Zilles, S., Gyllenskog, J., “Printer MIB”, RFC 1759, March 1995.

[TAG-REG]
Holtman, K., Mutz, A. and T. Hardie, "Feature Tag Registration Procedures", BCP 31, RFC 2506, March 1999.

[TIP/SI]
IEEE Std 1284.1-1997, IEEE Standard for Information Technology, Transport Independent Printer/System Interface.

11 Author’s Address

Ron Bergman
Ricoh Printing Systems America
2635 Park Center Drive
Simi Valley, CA 93065-6209

Phone: 805 578 4421
Fax: 805 578 4005
e-mail: ron.bergman@rpsa.ricoh.com

Tom Hastings
Xerox Corporation
737 Hawaii St.
El Segundo, CA 90245

Phone: 310 333-6413
Fax: 310 333-5514
e-mail: hastings@cp10.es.xerox.com

Additional contributors:

Harry Lewis - IBM Corporation
Jim Lo - Sun Microsystems
Roelof Hamberg - Oce

12 Appendix A: Media Names Usage in Existing Standards (informative)

This appendix provides a cross reference between the usage of media names in existing standards and the appropriate group in this document. Future revisions of these standards should reference this document as the source of this information. No attempt will be made to update this appendix when additional standards reference this document; the existing references will suffice.

The Printer MIB [PRT-MIB]

Standard Media Name	Printer MIB usage
Media Type Name	prtInputMediaType
Media Color Name	prtInputMediaColor
Media Size Name	Appendix B “Media Sizes Names” (see note 1)

The Internet Printing Protocol, Model and Semantics [IPP-MOD]

Standard Media Name	IPP Model Usage
Media Type Name	Keyword values of the “media” Job Template attribute, including the “media-default”, “media-ready”, and “media-supported” Printer attributes
Media Size Self-Describing Name	Keyword values of the “media” Job Template attribute, including the “media-default”, “media-ready”, and “media-supported” Printer attributes

The Internet Printing Protocol, Production Printing Attributes [IPP-PROD]

Standard Media Name	IPP Production Printing Usage (see notes 2 and 3)
Media Type Name	Keyword values of the “media-type”
Media Color Name	Keyword values of the “media-color”

Notes:

1. Printer MIB size names do not include the dimensions part. The dimension are represented by the objects prtInputMediaDimFeedDirDeclared, prtInputMediaDimXFeedDirDeclared, prtInputMediaDimFeedDirChosen, and prtInputMediaDimXFeedDirChosen.
2. The Production Printing Attributes referenced are all member attributes of the "media-col" Job Template attribute.
3. The media sizes are included in the “media-size” member attribute of the “media-col” Job Template attribute as a pair of numeric values (mm/100).

13 Appendix B: Parser Considerations for the Media Size Name (informative)

Special consideration needs to be made during the development of a parser for the Media Size Name. Since additional "class" names and "size-names" may be defined in the future, in many cases the parser must not be strictly conformant to the ABNF. The following is intended to provide guidelines for the development of client parsers and device parsers:

Client Parsers: There are several degrees of client which display something to the user for selection and MAY format documents (where it would need to know the dimensions):

a. non-formatting client: In this case, the parser treats the string as a unit and might simply display it to the user as is, no parsing is required. If the parser localizes and finds a string that it doesn't recognize, then it can just display the entire string as received, or perhaps breaks it up into separate pieces separated by a space. Such a client most likely doesn't format documents, so it will not even care about the dimensions, only the user and Printer do.

b. client does formatting: Now the client will separate the class field, the name field, and the dimension field. The class and name fields may be displayed as is or localized, and the dimensions are converted to the units preferred by the user. If a class or name field isn't recognized, it will be displayed as is, perhaps with underlines replaced by spaces. The dimensions will also be converted to the internal units for formatting documents.

Device Parsers: On the Printer side, there are two cases to consider, the one that doesn't support client's inventing custom sizes and the one that does. If the Printer displays media sizes to an operator or on an op panel, then that parser code has the same problems as the client (see above).

a. device doesn't support client-defined custom sizes: In this situation the parser doesn't even need to parse the string. It simply compares the entire string with a list of supported strings, including system administrator defined custom sizes. If there isn't a match, the Printer doesn't support that requested size and takes the appropriate action.

b. device supports client-invented custom sizes: Here the Printer parser must look at the class field for "custom", then parse the dimensions and check for a valid range and then possibly convert to the Printer's internal units.

