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Printer Working Group
IPP Fax Project
IPP Fax Requirements

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Abstract: This document captures the requirements for IPP Fax, both the transport and the document format. This document assumes that the reader is familiar with IPP 1.1.

This document is available electronically at:

[wd-iffreq10-20030806.doc](#)

A version showing the changes from the previous version is available at:

The latest version of this specification is available at:

<ftp://pwg.org/pub/pwg/QUALDOCS/iffreq10-latest.doc>

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Title: The Printer Working Group Definition of the Standards Development Process

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The Printer Working Group (or PWG) is a Program of the IEEE Industry Standards and Technology Organization (ISTO) with member organizations including printer manufacturers, print server developers, operating system providers, network operating systems providers, network connectivity vendors, and print management application developers. The group is chartered to make printers and the applications and operating systems supporting them work together better. All references to the PWG in this document implicitly mean "The Printer Working Group, a Program of the IEEE ISTO." In order to meet this objective, the PWG will document the results of their work as open standards that define print related protocols, interfaces, procedures and conventions. Printer manufacturers and vendors of printer related software will 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.

For additional information regarding the Printer Working Group visit: <http://www.pwg.org>

Contact information:

IPP Fax Web Page: <http://www.pwg.org/qualdocs/>

IPP Fax Mailing List: ifx@pwg.org

To subscribe to the IPP Fax mailing list, send the following email:

- 1) send it to majordomo@pwg.org
- 2) leave the subject line blank
- 3) put the following two lines in the message body:
subscribe ifx
end

Members of the PWG and interested parties are encouraged to join the PWG IPP Fax Mailing List in order to participate in any discussions of clarifications or review of IPP Fax.

IPP Fax Requirements V1.0

Glossary	5
Protocol Requirements	5
Public access	5
Basic requirements	5
Basic rules	5
IPP extensions	5
Identity exchange	6
IPP restrictions	6
Notifications	6
Logging	6
Document format	6
Data Format Requirements	6
Image format	6
Color	7
Resolution	7
Pages	7
Printable area	7
Meta-data	7
Persistence	8

Glossary

Sender – A piece of hardware and / or software that sends IPP fax documents to an IPP Fax receiver

Receiver – A piece of hardware and / or software that receives IPP Fax traffic.

Sending user – The human that initiates the transmission of an IPP Fax

Receiving user – The intended human recipient of an IPP Fax

Protocol Requirements

Public access

An administrator of an IPP Fax Receiver needs to be able to make it publicly available on the Internet (or an intranet) but also needs to be informed of the identity of the sending user and equipment.

Basic requirements

The spec must support:

- synchronous and timely delivery to the Receiver
- Using Internet protocols
- Encryption (privacy)
- Data integrity (reliability)
- Server authentication

Basic rules

The spec must support:

- Use of an ippfax: URL to identify a Receiver
- Use of Data privacy by the Sender.
- Mandatory server authentication to identify the Receiver.
- Client authentication of the sender.

IPP extensions

The spec must support:

- Identification of a job as an IPP Fax Job.
- Both Anonymous and authenticated access by the Sender

The spec should support:

- Job Progress and Completion Notifications.

Identity exchange

The spec must support:

- Exchange of unique 'identity' of Senders and Receivers (equipment)
- Structured descriptions of Sending Users and Receiving Users – their identity. (This data is machine-readable. It contains name, email, mail, phone, etc.)
- Exchange of unique 'identity' of Sending User and Receiving User

IPP restrictions

- An IPP Fax Receiver should not allow anonymous users to access job information
- An IPP Fax Receiver should not allow an anonymous user to cancel or modify jobs.
- An IPP Fax Receiver should only allow authenticated operator or administrator to cancel jobs.
- An IPP Fax Receiver should not allow any user to modify jobs.

Notifications

- An IPP Fax receiver must support notifications for authenticated senders.

Logging

- A sender must log its IPP fax transactions
- A receiver must log its IPP Fax transactions
- A receiver must mark the sender identity on at least the first page of an IPP Fax document

Document format

- A receiver must support at least one IPPFax required document format.

Data Format Requirements

I propose the name Portable Document Format – Image Streamable (PDF/is) for the resulting specification since this covers more than just the data format and the new name will allow manufacturers to indicate to customers support for this feature as a whole.

Image format

- PDF/is supports raster image data.
- All image formats, and compressions are mandatory for a receiver to support.

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IPP Fax Requirements V1.0

- PDF/Is supports JPEG, JBIG2, and CCITT Group 4 image compression types.
- The set of compressions supported is extensible in future versions of PDF/Is.
- Support for vector data may be added in a future version of PDF/Is.
- A PDF/Is document must be a valid subset of PDF 1.X (TBD) and be fully compatible with Adobe's Acrobat Reader version X (TBD).
- The format must be streamable on a page by page basis. That is, the receiver can begin rendering a page once the sender has sent all data for that page. In addition, the sender can begin sending a page's data before other pages in the document are available to the sender.
- The format must allow for digital signatures which will be optional for both the sender and the receiver.
- The format must allow for optional searchable/extractable text. The text must only be displayed as part of an image and not as a stand-alone text object.
- The format must allow for an optional identifiable "Originator-ID" image.
- The format should be suitable for archiving.
- The format should be compatible with PDF/A (www.aiim.org).

Color

- PDF/Is support color, grayscale, and monochrome images.
- All images must be in the sRGB colorspace.

Resolution

- Any image resolution at or above 300 dpi is supported.
- The horizontal and vertical resolutions must be the same (square aspect ratio).

Pages

- PDF/Is supports multi-page documents.
- The data is presented within a PDF/Is document in its 'natural' order. Normally, a receiver does not need to buffer more than one page of data to be able to process the page.
- An individual page is presented from top-left to bottom-right. A receiver therefore does not need to buffer a whole page.
- A page may be presented as one or more images (banding is permitted).
- Page orientation is determined by the sender
- Pages are independent with regards to color, resolution and image format.
- The format must support duplexed documents.
- The format must support recovery from damaged files.

Printable area

- Page positioning and scaling of images is explicitly specified in the format.
- The PDF/Is document specifies the original document media size for each page.

Meta-data

- PDF/Is is capable of carrying metadata as well as images.
- The set of metadata attributes is extensible.

Persistence

- A PDF/is document can be stored as a PDF file.

Revision	Date	Author	Notes
1	10/16/2000	Paul Moore, Peerless Systems Networking	Initial
3	7/15/2003	Gail Songer, Peerless	Clean-up. Modify "Public Access" and "Basic Requirements"
4	7/23/2003	Gail Songer, Peerless	Clean-up. Remove references to IPPGet and PDF/is and replaced with generic statements. Remove section on Gateways.
5	8/06/2003	Gail Songer, Peerless	Convert document to PWG standard. Merge the protocol requirements spec and the data format requirements spec.