IPP FAX - Meeting Minutes

October 26, 2000
Boston, Massachusetts

Attendees:

Ron Bergman	Hitachi Koki
Lee Farrell	Canon Info Systems
Rich Heckelmann	Panasonic USA
Koichi "Hurry" Izuhara	Minolta
Toru Maeda	Canon
Frank Martin	Brother
Carl-Uno Manros	Xerox
Paul Moore	Netreon
John Pulera	Minolta
Howard Sidorski	Netreon
Mark VanderWiele	IBM
Bill Wagner	NetSilicon
Don Wright	Lexmark

Minutes:

Charter Milestones review:

December 2000 Requirements final
January 2001 Draft specifications available *** This is a new milestone ***
June 2001 Specifications complete
September 2001 Bakeoff
January 2002 Revised specifications and possible implementors guide

Paul will revise the charter to reflect the addition of the new milestone.

Data format / transport split:

There are two unique set of requirements being proposed. A transport protocol for use with IPP Fax and a required image format. Having two separate documents will emphasize the differences and make it very clear that they can be used independently. Paul has sent a proposal to the mail list and has not received any objections. There was no opposition expressed, and we will proceed with this approach.

Data format requirements:

The data format with pure IPP and the data format with another transport may possibly have very different requirements. IPP fax will provide the capability to support data formats not currently defined in IPP.

Image Format:

 - UIF (Universal Image Format) covers format and negotiation. UIF will support raster image data formats and will be extensible to allow popular PDLs and vector data in the future.

- IPP Fax will define the extensions to IPP.

The TIFF-FX image formats as defined in RFC 2301 will be supported. Profile S is required to be supported by all TIFF-FX devices. Anything beyond profile S is dependent upon the capabilities of the device.

It is proposed that UIF support JPEG, JBIG, MH, MR, and MMR data compression formats. MRC is an optionally supported format. The set of compression methods supported should be extensible.

Color:

Support must be provided for color, grayscale, and mono images.

The proposed color space is CIELAB. Don Wright indicated that Lexmark's color experts preferred to have sRGB. There was a concern regarding the ability of a printer to faithfully reproduce a color document and therefore the color space specified is not as critical. It was also recommended that requirements not preclude the ability to provide color matching.

Resolutions:

Many resolutions will be supported and all will be square (i.e. horizontal and vertical will be identical). Some high resolution printers cannot support square resolutions and it was proposed that non-square resolutions must also be accommodated. The requirements will be revised per this proposal.

The resolutions will only be specified in dpi. TIFF-FX allows dots per millimeter. No objections were expressed to this proposal.

A well known set of resolutions will be defined that includes 300, 600, and 1200 dpi. Since Epson (others?) provide the resolutions of 720 and 1440, it was proposed that these be included, as well as 2400, 2880, and 4800 dpi.

300 dpi has been proposed as the required minimum resolution. For compatibility with legacy fax printers 200 dpi would be a better value. It was questioned whether this should be a gateway requirement and not applicable to the output device. It was also proposed that we set the bar higher to 600 dpi. It was agreed that the best comprise was to require both 300 and 600 dpi.

Pages:

UIF must support multi-page documents and must present the document in its "natural" order. (TIFF-FX does not require "natural" order in all profiles.)

A page must be presented as a single image so there is no requirements for the printer to perform layout operations. The parameters can be presented on a page basis.

Printable Area:

The receiver is not expected to scale the image to fit the page. An image that is larger than the page will be clipped. It was argued that we should allow the printer to scale the image. Strong arguments were presented for both sides. It was finally agreed that scaling will be allowed.

The sender cannot control the image placement on the page.

Meta-data:

UIF will be optionally capable of processing meta-data. Further work is required to define the meta-data specifics. This can include information defining when the document was created and /or when it was sent. There was no agreement on this subject and it will be discussed in more depth at a later time.

Dynamics of discovery:

Constraints: The presence of a synchronous communication allows a dynamic discovery procedure to be used to allow a client to discover what features are available in combination with other specified features. The Conneg specification allows this information to be presented and transmitted as a single exchange. However, the Conneg format can be come very complex for a large number of features. A dynamic method of obtaining this same information may be easier for a client and a printer to process.

IPP extensions:

A sender can discover if the receiver supports IPP fax and is allowed anonymous access if the sender identifies the job as an IPP Fax. The security aspects of this feature were briefly discussed. This is in reality no different than the current fax situation, but could be significantly improved.

Identity exchange:

The identity of the sender and the receiver should be derived from the hardware of the device, such as the MAC address, the UPN + serial number, etc.

VCard is proposed to be used as the format of the senders identity. This would require a new IPP attribute.

IPP restrictions:

An anonymous user cannot obtain any job information and modify or cancel a job. This is identical to the current fax model.

Logging:

"A receiver must mark the sender identity on, at least, the first page of an IPP fax document." Should the receiver be required to generate a cover page? If the sender also sends a cover page, there will be two cover pages printed. After a long discussion it agreed to keep this requirement, but it must be reworded.

Notifications:

The ippget notification method has been proposed as the required notification method. A long discussion ensued regarding various scenarios where this method has problems. The receiver may not be a printer and then the sender is misinformed regarding the disposition of the document. On a device that spools the job for printing at a later time the notification only implies that the job was received. Both scenarios are identical to the current fax experience but it is desirable to be better than fax and to indicate when the job is actually printed or indicate that the receiver is not a printer. Adding the requirement that a notification must be provided when printing is complete would be difficult with ippget due to the possibility of a long delay. This would require the IPP connection to remain open for this entire time, until the job has completed.

VCard:

Harry Lewis volunteered to do some research as to the current status or plans for an XML version of VCard. Harry was unable to attend the meeting, so there was no further discussion on this topic.

CONNEG:

Bob Herriot was assigned to determine the current status of conneg (content negotiation) and if there is an effort in process to create an XML version. Bob was also unable to attend the meeting, and this subject was postponed.

FAX Time Stamp:

Richard Shockey agreed to define the date and time stamp requirements for fax. Richard was also unable to attend and this information will be provided at a later date.

Next Meeting:

The next meeting will be during the week of December 4, at the San Diego Marriott Hotel and Marina (San Diego, California). The exact date and hotel information will be announced shortly.