UPDF Meeting Minutes

Tucson, Arizona

November 13, 1998

Attendees

Sandra Matts	Hewlett-Packard
Lee Farrell	Canon
Harry Lewis	IBM
Brian Batchelder	Hewlett-Packard
Toru Niki	Canon
Ben Brezinsky	Hewlett-Packard
Michael Wu	Eastman Kodak Co.
Hugo Parra	Novell
Michael Yeung	Canon
Chuck Adams	Tektronix
Ben Chun	Samsung
Guenther Kapp	Xionics
Rick Yardumian	Xerox
Pierre Landau	Ikon
Robert Herriot	Sun
Ron Bergman	Dataproducts
Don Wright	Lexmark
Laurie Lasslo	Hewlett-Packard

Agenda

Charter

The Charter for UPDF was approved in Wednesday PWG General meeting. There were no negative votes.

Requirements

Requirements need to be filled out. It is the feeling of the group that the requirements (section 3.2) are a little thin, and that they should probably need to go down a few more levels.

Don asked for explanation of section 3.2
FR = functional requirement, numbering system from IEEE.

SRS = Software requirement specification

These are requirements of the spec, and not the implementation.

Put extensibility in it's own section

Add Font support to extensibility.
Add finishing, this is a big area for extensibility.
Add paper handling.
Number of marking agents put in the rendering bucket

Chuck – here are all the device issues, color, Bidi, etc. OS issues, where these things come in the pipeline.
Break into groups to make it easier to specify – Sandra
Keep fonts as a separate subject. This issue can get very complex.
Fonts will need to remain under device characteristics, and deserves a whole new category.

Categories:

Printers (all must)
- PDL independence
- Hardware independent
- Color management system
- Localized UI
- Localized feature set
- Rendering
- UI
- Paper handling,
  - Finishing
  - Input/Output devices

OS/Host
- Color management system
- Rendering

Resources

Fonts
- Device fonts
- OS Fonts
- Font substitution
- Character set support

Overlays (part of resources, some people lump fonts in here). (WANT)

Forms (WANT)

Communications
- How do you make this independent of protocol?
- Bididirectional
  - Protocol independence
  - Simple mapping to SNMP or IPP
  - TBD – notifications (this may be out of the UPDF scope).
- Unidirectional
  - If there is not bidi, then UPDF in conjunction with a printer driver must still be able to function..

Version
- Spec will have versions
- PDL data sent to printer will have version

Global requirements
- Localized UI
- Localized feature set
- Extensible – where applicable
  - Rendering
    - Fonts
    - Imaging
    - Color…
- UI
- Paper handling
- Finishing
- OS/Hardware/Host/platform independence – imbedded system, JetSend, digital camera OK

Question?? What about printer services?

Should extensibility and localizability be tests applied to each area of the spec.
Harry – instead of extensible, put where applicable apply extensible and localizable.

Laurie L – what about Fax devices as printer emulators, or copy output.
If it emulates a printer then it should be able to be described using a printer language. – Chuck

TBD – MFP support, the feature is input independent and does not necessarily have to come from a PC.
Ben B moves that we allow non-PC hosts to remain under consideration.
Harry – consider both host and embedded OS's.
Laurie – imply the embedded operating systems can be in non-PC non-workstation devices.
Can we make protocol independence a want? Could we tie it with IPP if we had to?
Harry - The printer MIB already solves most of the device discovery and query issues.

Put a requirement in the implementers' guide that state that the communication protocol should have some mechanism to notify the host when the UPDF has changed.

Items out of scope.

- This is a description format, and not a printer driver.
- Job Monitor
- Security
- IPPs definition of Job Tickets

Strike section 2.1.3, bearing in mind that if binary data is in the UPDF that it be expressed in a processor independent fashion.

Section 2.1.6 Memory constraints.
Embedded OS up to a mainframe. Works on printers from "$99" printer up to large devices. UPDF specification can not be heavy or thick.

Section 3.3 Are their things that we can do in the file format that will optimize or enhance performance.
Handling changes in the UPDF can be a performance hit if not handled correctly. Due consideration to this must be give in the specification and implementers guide.
Consideration must be given as to how to efficiently transmit file deltas.

Ben has been given the action item to craft this wording.

Software limitations 3.4.3 – Not hard limitations, but express the design constraints and what the design centers were. UNIX, Mac, PC on one side, embedded on the other end. We will pick some OS's that we will try and map this to, and the paragraph will express to the reader what OS's were used in the decisions and use cases.

Software limitations 3.4.3

This specification is intended to be Operating System independent, and as such has no explicit Software limitations. There are, however, certain software design centers that were used in making decisions and creating use cases. The host software design centers were:
Sophisticated operating system such as UNIX, MAC, Windows 9x, Windows NT and Netware.
Low end embedded operating systems.
The device software design centers were:
High end printers sophisticated down to extremely cost sensitive printers ("$99").
The reader should be aware that configurations that lie outside these design centers have not been considered and this specification may not be applicable to them.

Chuck is given the action item to post the link to the latest PPD specification.

It was proposed that we invite an Adobe person to present their Job ticket information to the working group. To come to the December meeting and present on the job ticket and PPD's.

With the increased popularity of XML, do we need to consider that specification too. We need to put a pointer to the XML spec. This is a W3C recommended spec. Microsoft has an XML page, http:\\www.microsoft.com\xml

Sandra Matts drew a diagram to describe the UPDF printing system.
The diagram shows possible combination of print system and possible sources of the UPDF including printer, web, print server, CD.
The diagram indicates that the only guaranteed source of the UPDF is either the CD or shipped with the OS.
Do we ever expect the printer server to look at the UPDF, or only the host driver? Sandra - the print server could look at the file. Chuck – especially if the print server does the rendering.

If there is a possibility that Java might be used to write printer drivers, then Netware needs to be included in the list of design center platforms.

Extensions
1) Extensions that embrace things we could not foresee. The spec will allow for the future with the intent that the extensions will be folded into the main spec in future versions. These are generic extensions
2) Extensions that allow printer vendors to add value and differentiate themselves in the marketplace. This is within the scope of the charter as long as the base UPDF provides good printing on all operating systems. These are vendor specific. They will probably will get folded back into the specification at a later time.
3) OS specific extensions. These extensions are expressly forbidden by the charter.

Chuck – We need to do some use cases in the future.

Next Meeting

Review Requirements document and O.K.
Use Case document.
Try to have Adobe present on job tickets and PPD or Chuck has volunteered to present.
Try to have MS present on GPD architecture or Sandra will present something.
XML – Try to have someone from Sun to present.

Links and info

Mail list is upd@pwg.org
FTP archive is ftp://ftp.pwg.org/pub/pwg
PWG web site is www.pwg.org