

# **PRINTER WORKING GROUP MEETING - JUNE 25, 2008**

## **IPPV2 Meeting Agenda**

**1. Introductions**

**2. Current Status**

**3. Review of “Required Operations”**

**a. Rules**

**b. Mike Sweet’s comments**

**c. Reprocess-Job**

**d. Other comments?**

**4. Review of Draft Specification**

**5. Action Items**

**6. Closing Summary**

# **Rules for consensus:**

- 1. All A's and B's will automatically be required (R)**
- 2. All B's and C's will automatically be optional (O)**
- 3. 5 or more A's will be required (R) if no objections**
- 4. 5 or more C's will be optional (O) if no objections**
- 5. All not meeting the above will become optional (O)**
- 6. A proposal and vote by the group can override any of the above.**

**FROM: Mike Sweet June 16, 2008**  
**SUBJECT: Re: IPP> IPPv2 Consensus Results**

Since I won't be at next week's face-to-face, here are my comments for the items needing further discussion:

v2.1

In general, I'd like to avoid making operations that need a tight integration with the print device REQUIRED. My vision of the Enterprise Printer Environment is a loosely-managed print-on-demand network environment which provides basic spooling and output control.

- For Pause-Printer-After-Current-Job, Hold-New-Jobs, and Release-Held-New-Jobs, there seem to be enough B's to justify making them REQUIRED operations, and they are both easy to implement and useful for the "Enterprise Printer" scenario.
- For Deactivate-Printer, Activate-Printer, Restart-Printer, Shutdown-Printer, and Startup-Printer, there are slightly fewer B's and these require a higher level of integration with the device than may be available, so I'd argue these should be left OPTIONAL.
- For Cancel-Current-Job, there is only one C and a couple A's. It is also a relatively simple operation to implement, so I'd vote for making it REQUIRED.
- For Suspend-Current-Job, Resume-Job, Promote-Job, and Schedule-Job-After, there seems to be consensus around "B", so I'd vote for leaving them OPTIONAL. In particular, Suspend-Current-Job and Resume-Job can be tricky when you are not tightly integrated with the device, and Promote-Job and Schedule-Job-After can require fairly large resources and may need access controls to avoid abuse in this environment.

v2.2

- For Print-URI and Send-URI, I have my standard objection because of the known access control, authentication, and error reporting issues. However, I \*can\* see them being useful in implementing "stored forms" and other template documents in a production printing environment. If we make these operations required in any of the three profiles, this would be the place to do so. In short, I'm OK with changing these to REQUIRED.

One final note: on page 1 "Cancel-Document" is lumped in with notifications and subscriptions instead of document object...

**FROM: Mike Sweet June 16, 2008**

**SUBJECT: Re: IPP> Restart-Job (bad) and Reprocess-Job (OK, but costly)**

Ira McDonald wrote:

>  
> Per our discussion at yesterday's IPP WG telecon,  
> I looked up these two operations, just now:  
>  
> Restart-Job - section 3.3.7 in RFC 2911  
> - MUST not change job-id - eek!  
> - moves job from completed state to pending  
> or pending-held - violates state diagram  
> - BAD idea for accounting and security

Not really - accounting can keep track of the job being printed multiple times and keep the counts/quotas/etc. in sync.

As for security, it is no more or less secure than any other IPP operation.

> Reprocess-Job - section 4.1 of RFC 3998  
> - MUST copy job attributes and create new Job  
> with new job-id (returned in response)  
> - fixes the awful Restart-Job bugs  
>  
> But, as we discussed yesterday, Reprocess-Job  
> means that the system (spooler or printer) must  
> keep all job attributes AND all job data for the  
> entire job history duration - costly and dubious.

Keep in mind that the environments we are looking to make it required already have large resources for this, so it is not unreasonable to store the data and attributes.

Also, this can be a configurable option - CUPS, for example, offers an option to determine whether job data is preserved and how many jobs are preserved. Future versions will offer this as a per-printer and per-job option as well.

> Conclusions:  
>  
> (1) We really should DEPRECATE Restart-Job  
> in IPP/2.x Profiles and explain the rationale.

Given that there is no other way to retry a failed print job, I would be against complete deprecation but OK with clarification or partial deprecation (i.e. OK to restart a canceled, stopped, or aborted job, not OK to restart a completed job...)

> (2) Reprocess-Job is technically OK, but costly.  
> Should remain OPTIONAL, even for IPP/2.2  
> (Production Printing).

I would argue that production printing already requires large resources to support things like document objects and the tight integration with the print device, so Reprocess-Job should be REQUIRED for IPP/2.2 and OPTIONAL for IPP/2.0 and IPP/2.1.

**FROM: Ira McDonald June 16, 2008**

**SUBJECT: Re: IPP> Restart-Job (bad) and Reprocess-Job (OK, but costly)**

On Tue, Jun 17, 2008 at 2:04 PM, Michael R Sweet <msweet@apple.com> wrote:  
Conclusions:

- (1) We really should DEPRECATE Restart-Job in IPP/2.x Profiles and explain the rationale.

Given that there is no other way to retry a failed print job, I would be against complete deprecation but OK with clarification or partial deprecation (i.e. OK to restart a canceled, stopped, or aborted job, not OK to restart a completed job...)

<ira> Good point - I like keeping this operation ONLY for use on unsuccessful jobs - but I think still OPTIONAL in 2.1 (Enterprise), because of your stored resources reasoning (below).  
</ira>

- (2) Reprocess-Job is technically OK, but costly. Should remain OPTIONAL, even for IPP/2.2 (Production Printing).

I would argue that production printing already requires large resources to support things like document objects and the tight integration with the print device, so Reprocess-Job should be REQUIRED for IPP/2.2 and OPTIONAL for IPP/2.0 and IPP/2.1.

<ira> I agree. </ira>

## SIMPLE WORKGROUP PRINTER ENVIRONMENT CANDIDATE REQUIRED IPP OPERATIONS for V2.0

Code	Operation Name	Source	Ver	Ron	Novell	Sharp	Lexmark	CUPS	Ira	InfoPrint	Xerox	Consensus
0x0003	Print-URI	RFC 2566	2.0	C	C	C	B	C	C	C	B	O
0x0005	Create-Job	RFC 2566	2.0	C	C	C	C	C	C	A	A	O
0x0006	Send-Document	RFC 2566	2.0	C	C	C	C	C	C	A	A	O
0x0007	Send-URI	RFC 2566	2.0	C	C	C	C	C	C	C	B	O
0x000C	Hold-Job	RFC 2911	2.0	C	C	C	B	C	C	C	A	O
0x000D	Release-Job	RFC 2911	2.0	C	C	C	B	C	C	C	A	O
0x000E	Restart-Job	RFC 2911	2.0	C	C	C	C	C	C	C	B	O
0x0010	Pause-Printer	RFC 2911	2.0	C	B	C	B	C	C	B	A	O
0x0011	Resume-Printer	RFC 2911	2.0	C	B	C	B	C	C	B	A	O
0x0012	Purge-Jobs	RFC 2911	2.0	C	B	C	A	C	C	B	B	O

Priority Codes: **A** = Essential; **B** = Useful, but not critical; **C** = Not necessary; **O** = Optional; **R** = Required.

# ENTERPRISE PRINTER ENVIRONMENT CANDIDATE REQUIRED IPP OPERATIONS for V2.1

Code	Operation Name	Source	Ver	Ron	Novell	Sharp	Lexmark	CUPS	Ira	InfoPrint	Xerox	Consensus
0x0003	Print-URI	RFC 2566	2.0	C	C	C	B	C	C	C	A	O
0x0005	Create-Job	RFC 2566	2.0	A	C	A	B	A	A	A	A	R
0x0006	Send-Document	RFC 2566	2.0	A	C	A	C	A	A	A	A	R
0x0007	Send-URI	RFC 2566	2.0	C	C	C	C	C	C	C	A	O
0x000C	Hold-Job	RFC 2911	2.0	B	B	A	B	A	A	A	A	R
0x000D	Release-Job	RFC 2911	2.0	B	B	A	B	A	A	A	A	R
0x000E	Restart-Job	RFC 2911	2.0	B	B	A	C	A	A	A	C	R
0x0010	Pause-Printer	RFC 2911	2.0	A	A	A	B	A	A	A	A	R
0x0011	Resume-Printer	RFC 2911	2.0	A	A	A	B	A	A	A	A	R
0x0012	Purge-Jobs	RFC 2911	2.0	A	A	A	A	A	A	A	A	R
0x0013	Set-Printer-Attributes	RFC 3380	2.1	B	A	A	A	A	A	A	A	R
0x0014	Set-Job-Attributes	RFC 3380	2.1	B	B	A	A	A	A	A	A	R
0x0015	Get-Printer-Supported-Values	RFC 3380	2.1	A	B	B	A	B	A	A	A	R
0x0022	Enable-Printer	RFC 3998	2.1	A	A	A	B	A	A	A	A	R
0x0023	Disable-Printer	RFC 3998	2.1	A	A	A	B	A	A	A	A	R
0x0024	Pause-Printer-After-Current-Job	RFC 3998	2.1	B	C	B	C	B	B	B	B	O*
0x0025	Hold-New-Jobs	RFC 3998	2.1	B	B	B	C	B	B	B	B	O*
0x0026	Release-Held-New-Jobs	RFC 3998	2.1	B	B	B	C	B	B	B	B	O*
0x0027	Deactivate-Printer	RFC 3998	2.1	B	C	B	C	B	B	B	B	O*
0x0028	Activate-Printer	RFC 3998	2.1	B	C	B	C	B	B	B	B	O*
0x0029	Restart-Printer	RFC 3998	2.1	B	C	B	C	B	B	B	B	O*
0x002A	Shutdown-Printer	RFC 3998	2.1	B	B	B	C	B	B	B	B	O*
0x002B	Startup-Printer	RFC 3998	2.1	B	B	B	C	B	B	B	B	O*
0x002C	Reprocess-Job	RFC 3998	2.1	B	C	B	C	B	B	B	C	O
0x002D	Cancel-Current-Job	RFC 3998	2.1	A	C	B	A	B	B	B	B	O*
0x002E	Suspend-Current-Job	RFC 3998	2.1	B	C	B	B	B	B	B	B	O*
0x002F	Resume-Job	RFC 3998	2.1	B	C	B	B	B	B	B	A	O*
0x0030	Promote-Job	RFC 3998	2.1	B	C	B	B	B	B	B	A	O*
0x0031	Schedule-Job-After	RFC 3998	2.1	B	C	B	B	B	B	B	A	O*

Priority Codes: **A** = Essential; **B** = Useful, but not critical; **C** = Not necessary; **O** = Optional; **R** = Required; \* = needs further discussion.

# PRODUCTION PRINTER ENVIRONMENT CANDIDATE REQUIRED IPP OPERATIONS for V2.2

Code	Operation Name	Source	Vers	Ron	Novell	Sharp	Lex	CUPS	Ira	InfoPrint	Xerox	Consensus
0x0003	Print-URI	RFC 2566	2.0	C	C	C	na	C	C	C	A	O*
0x0005	Create-Job	RFC 2566	2.0	A	B	A	na	A	A	A	A	R
0x0006	Send-Document	RFC 2566	2.0	A	B	A	na	A	A	A	A	R
0x0007	Send-URI	RFC 2566	2.0	C	B	C	na	C	C	C	A	O*
0x000C	Hold-Job	RFC 2911	2.0	B	A	A	na	A	A	A	A	R
0x000D	Release-Job	RFC 2911	2.0	B	A	A	na	A	A	A	A	R
0x000E	Restart-Job	RFC 2911	2.0	B	C	A	na	A	A	A	C	R
0x0010	Pause-Printer	RFC 2911	2.0	A	A	A	na	A	A	A	A	R
0x0011	Resume-Printer	RFC 2911	2.0	A	A	A	na	A	A	A	A	R
0x0012	Purge-Jobs	RFC 2911	2.0	A	A	A	na	A	A	A	A	R
0x0013	Set-Printer-Attributes	RFC 3380	2.1	B	A	A	na	A	A	A	A	R
0x0014	Set-Job-Attributes	RFC 3380	2.1	B	B	A	na	A	A	A	A	R
0x0015	Get-Printer-Supported-Values	RFC 3380	2.1	A	B	A	na	A	A	A	A	R
0x0022	Enable-Printer	RFC 3998	2.1	A	A	A	na	A	A	A	A	R
0x0023	Disable-Printer	RFC 3998	2.1	A	A	A	na	A	A	A	A	R
0x0024	Pause-Printer-After-Current-Job	RFC 3998	2.1	B	C	A	na	A	A	A	A	R
0x0025	Hold-New-Jobs	RFC 3998	2.1	B	B	A	na	A	A	A	A	R
0x0026	Release-Held-New-Jobs	RFC 3998	2.1	B	B	A	na	A	A	A	A	R
0x0027	Deactivate-Printer	RFC 3998	2.1	B	B	A	na	A	A	A	B	R
0x0028	Activate-Printer	RFC 3998	2.1	B	B	A	na	A	A	A	B	R
0x0029	Restart-Printer	RFC 3998	2.1	B	B	A	na	A	A	A	A	R
0x002A	Shutdown-Printer	RFC 3998	2.1	B	A	A	na	A	A	A	A	R
0x002B	Startup-Printer	RFC 3998	2.1	B	A	A	na	A	A	A	A	R
0x002C	Reprocess-Job	RFC 3998	2.1	B	C	A	na	A	A	A	C	*
0x002D	Cancel-Current-Job	RFC 3998	2.1	A	A	A	na	A	A	A	A	R
0x002E	Suspend-Current-Job	RFC 3998	2.1	B	A	A	na	A	A	A	A	R
0x002F	Resume-Job	RFC 3998	2.1	B	B	A	na	A	A	A	A	R
0x0030	Promote-Job	RFC 3998	2.1	B	B	A	na	A	A	A	A	R
0x0031	Schedule-Job-After	RFC 3998	2.1	B	B	A	na	A	A	A	A	R
0x0036	Delete-Document	PWG 5100.5	2.2	B	B	A	na	A	A	A	A	R
0x0037	Set-Document-Attributes	PWG 5100.5	2.2	B	B	A	na	A	A	A	A	R

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