



# The Printer Working Group

## Significant Recent Updates to IPP

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# IPP Workgroup Efforts 2020-2023



- Several core IPP extension specifications "reopened"
  - Resolve errata
  - Re-factor individual specifications to focus on particular domains
  - Support new use cases and better support existing use cases
- IPP Everywhere v2.0 development also underway; many of these new features are important to that effort



# Recent IPP Specification Updates

- PWG 5100.1-2022: IPP Finishings 3.0 (FIN)
- PWG 5100.3-2023: IPP Production Printing Extensions v2.0 (PPX)
- PWG 5100.7-2023: IPP Job Extensions v2.1 (JOBEXT)
- PWG 5100.11-2023: IPP: Enterprise Printing Extensions v2.0 (EPX)
- PWG 5100.13-2023: IPP Driver Replacement Extensions v2.0 (NODRIVER)
- PWG 5101.1-2023: PWG Media Standardized Names v2.1 (MSN)



# IPP Specifications - Overview

- IETF STD 92: IPP/1.1 (RFC 8010 and RFC 8011)
- IETF RFC 7472: IPP over HTTPS Transport Binding and the 'ipps' URI Scheme
- **PWG 5100.12-2015: IPP Version 2.0, 2.1, and 2.2**
- **PWG 5100.1-2022: IPP Finishings 3.0 (FIN)**
- **PWG 5100.3-2023: IPP Production Printing Extensions v2.0 (PPX)**
- **PWG 5100.7-2023: IPP Job Extensions v2.1 (JOBEXT)**
- **PWG 5100.11-2023: IPP Enterprise Printing Extensions v2.0 (EPX)**
- **PWG 5100.13-2023: IPP Driver Replacement Extensions v2.0 (NODRIVER)**
- **PWG 5100.14-2020: IPP Everywhere™ v1.1**
  - **PWG 5100.20-2020: IPP Everywhere™ Printer Self-Certification Manual v1.1 (SELCERT)**
- PWG 5100.15-2014: IPP FaxOut Service
- PWG 5100.16-2020: IPP Transaction-Based Printing Extensions v1.1
- PWG 5100.17-2014: IPP Scan Service
- PWG 5100.18-2015: IPP Shared Infrastructure Extensions (INFRA)
- PWG 5100.19-2015: IPP Implementor's Guide v2.0 (IG)
- PWG 5100.22-2019: IPP System Service v1.0 (SYSTEM)
- **PWG 5101.1-2023: PWG Media Standardized Names 2.1**
- PWG 5102.4-2012: PWG Raster Format

Lines in **RED** have updates pending; lines in **BLUE** were ratified in the last 2 years

# Updates to Many Core IPP Specifications



IPP Finishings v2.0



IPP Finishings v3.0

IPP Production Printing Attributes v1.0



IPP Production Printing Extensions v2.0

IPP Job Extensions v2.0



IPP Job Extensions v2.1

IPP Job and Printer Extensions – Set 2



IPP Enterprise Printing Extensions v2.0

IPP Job and Printer Extensions – Set 3



IPP Driver Replacement Extensions v2.0

# PWG 5100.1-2022: IPP Finishings 3.0



## Scope

Define IPP attributes to precisely describe finishing operations for both precise job settings and client preview, and to support monitoring the status of the Printer's finisher subsystems.

## New and Updated Use Cases

- Same use cases as IPP Finishings v2.1 / 2.0

## New and Updated Features

- Support for better client-side preview and constraints: "media-sheets-supported", "stitching-method", "punching-hole-diameter-configured", "stitching-angle"
- Finisher supplies status and information: "printer-finisher-supplies" and "printer-finisher-supplies-description"
- New multi-hole punching and engineering Z fold finishing types
- Naming convention defined for site- or vendor-unique finishing templates

# PWG 5100.3-2023: IPP Production Printing Extensions v2.0 (1/3)



## **Scope**

Define IPP attributes used for imposition, layout, and printing of covers, insert sheets, separator sheets, and different kinds of job sheets in high-volume "production" environments.

## **New and Updated Features**

- Support rotation as well as shifting of Finished Page Images
- Printer indication of estimated time to Job processing start and completion
- Client can now request when a Job needs to be completed
- Client can force specified Input Pages to be imposed on front side of a Media Sheet
- Client can specify how it wants the Impressions in a Job to be positioned, scaled, and rotated on one or more Media Sheets

# PWG 5100.7-2023

## IPP Job Extensions v2.1 (1/3)



### Scope

Defines the "media-col" Job Template attribute and extends the Job management, monitoring, and processing capabilities of IPP.

### New and Updated Features

- Printer can report the amount of time spent processing a Job
- Client can report information about itself as well as any "upstream" software packages contributing to a Job Creation Operation
  - New "client-info" replaces "document-format-details" (now deprecated / obsolete)
- Job information counters for the number of pages, pages completed, impressions, and media sheets used
- Granularly specify Job Template attributes a Printer must honor
  - Like "ipp-attribute-fidelity" but more detailed
- Ability to configure how the Printer manages a Job's Job Retention and Job History lifecycle phases
- Support 'auto' selection for "print-content-optimize" and a 'virtual' input tray for "media-source"



# PWG 5100.11-2023: IPP Enterprise Printing Extensions v2.0 (1/2)



## Scope

Defines new Job Release, Job Storage, Job Print Policy, Job Proof and Suspend, and Job Proof Print features to support printing workflows important to institutional IT environments such as corporate businesses, governments, and universities.

## New and Updated Features

- Job Print Policy feature
  - New Get-User-Printer-Attributes operation provides Get-Printer-Attributes filtered for authenticated user
- Job Proof and Suspend feature
  - Provides a simpler proof printing solution more congruent with vendor proof printing implementations already in the marketplace for many years; replaces the legacy Job ProofPrint feature, which is now DEPRECATED
- Job Release feature
  - Provides an updated system for authenticated Job release more comprehensive than the earlier Secure Print feature [PWG5100.11-2010] which was not interoperable with Job Proof and Suspend or Job Save and Reprint
- Job Storage feature
  - Defines a new system to create Stored Jobs for later reprinting, replacing the Job Save and Reprint feature [PWG5100.11-2010] which is now OBSOLETE
- All the above features are designed to interoperate with one another, resolving a major design shortcoming of the previous version [PWG5100.11-2010]

# PWG 5100.13-2023: IPP Driver Replacement Extensions v2.0



## Scope

Defines new attributes, values, and operations to support features, capabilities, localization, and status information that traditionally could only be provided by vendor- or model-specific drivers.

## New and Notable Features

- Job Presets – a way to group settings so they are applied as a set (adopted)
- Modern "print-quality" replacement, based on an extension to "job-presets"
- Message Catalog syntax extensions for "\_tooltip" and "\_helpurl" to enable localized tooltips and help content references to be provided by the Printer
- Print Color Modes extended to support Printer-performed Job color transformations, including enabling client-side color transformation preview
- A listing attribute naming site- or vendor-provided Job processing attributes to enable the Client to implement support for "expert controls" in a standard way
- Overprinting for borderless printing



Thank you for your time!