QualityLogic PCLm Functional Test Suite

QualityLogic's PCLm functional test suite offers printer manufacturers an easy way to ensure consistent print output across a wide range of mobile devices.

Key benefits

Configurable test scenarios

- PCLm FTS will query the target printer and dynamically configure the test cases on the fly to accommodate the capabilities of the printer including supported media sizes.

Small number of pages to compare

- This not only saves you labor and money, it's a "greener" way to test using less paper, consumables, and energy.

Quick, easy bug isolation

- Ability to run each test case separately and repeatedly will provide a quick and easy way of bug isolation and verification.

PCLm overview

PCLm is one of two raster formats defined in the WiFi-Direct peer-to-peer printing specification, which is part of the set of technologies that define WiFi Direct printing. The PCLm raster format is a strict subset of the PDF standard so that low-end consuming printers can process the PCLm based pages with minimal computing resources.

Printers supporting WiFi direct printing use technologies like mDNS to enable printer discovery and IPP to enable mobile clients to query the printer's capabilities (such as page sizes) as well as submit print jobs to the printer with specific printer configuration characteristics.
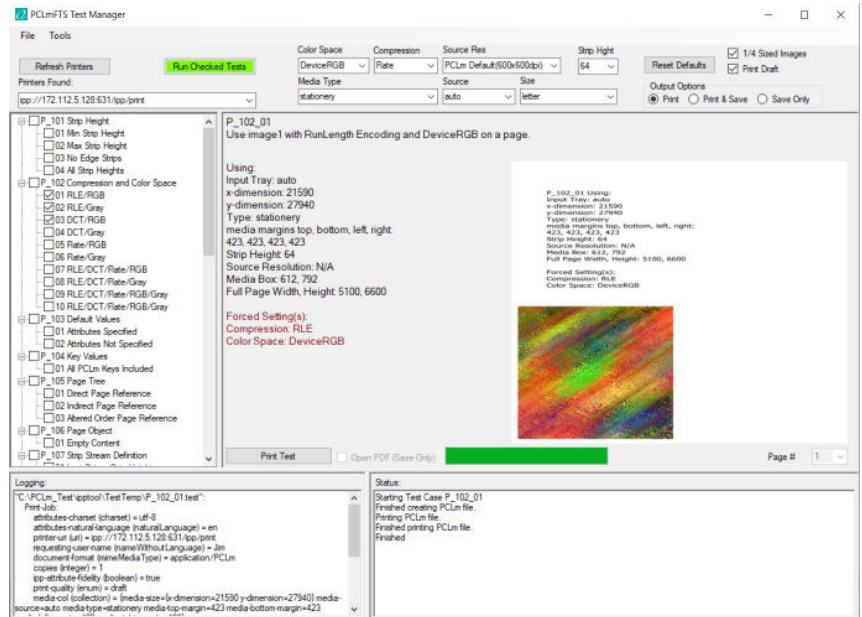
Solution at a glance

QualityLogic has developed a Functional Test Suite for the PCLm specification which covers the allowable subset of PDF used in PCLm for defining rasterized documents as well as the various media sizes and printer configuration characteristics that may impact the printer's ability to successfully render the PCLm document. The test suite contains both positive and negative test cases that iterate through a range of PCLm raster format characteristics including strip height, color spaces, compression filters, media sizes, and source resolutions.

Test cases overview

Each test case exercises a specific PCLm or IPP characteristic. Characteristics that are not part of the test case definition can be controlled via a set of drop down menus that are dynamically populated by using IPP to query the printer's capabilities. For instance, tests that exercise various strip heights can be run using different media sizes and source resolutions by selecting the desired settings from the drop down menus before running the test cases. General areas tested include:

- » Strip height
- » Compression and color space
- » Default values
- » Key values
- » Page tree variation
- » Page object and strip stream definition
- » Size limits
- » Non-abort conditions
- » Raster back side
- » Default printer description attributes
- » Resolutions supported
- » Media supported
- » Orientation
- » Color modes supported
- » Invalid PCLm content
- » Non-streamable content
- » Invalid versions

Key features and functions

Automatically discover target printers or use custom URLs	See detailed IPP log messages from the printer
Preview any test case and run in an ad hoc fashion	Preview PCLm documents in a PDF viewer
Tag sets of test cases and run in batch mode	Progress bar and print time status message keep user informed
Select a wide variety of default test case characteristics using drop down menus	Add your own images to test cases
Print PCLm test cases to file for debugging	View consolidated log messages from batch runs
Select ¼ sized images and draft printing over edge-to-edge images to save toner	Restrict sizes used for test cases that iterate through media sizes

About QualityLogic

QualityLogic is a highly respected provider of QA and engineering services, offering a flexible menu of services that scale to meet customers' needs. We are well known for our quality assurance and competitive analysis expertise in the printer and telecom industries.

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