

## From DFP to PMM

With the latest version of the RIP the format of calibration is changed from DFP (Desktop FingerPrint) to PMM (Printer Media Mode). This change will enable the products to facilitate a richer storage format that will support current and future demands. The new PMM format also removes the use of proprietary storage formats as much as possible, enabling other developers to easier participate in developing new technologies and retrieve information from it.

### Technical Differences

#### DFP

The DFP format is the ICC file format enriched with private tags. Any DFP can be viewed in a regular ICC profile viewer/inspector.

The private tags contain information about the ink-set, driver settings, linearization, spot color table and so on. Those tags can't be read by the regular ICC profile viewers and only be viewed and edited by the Calibrator.

#### PMM

The PMM format is a ZIP file containing at least the file PrinterCalibration.xml. The PrinterCalibration XML is a document that describes the content of the PMM and defines the media and mode description, ink-set, driver settings, linearization and it settings and references to all other files.

Other files that usually are part of the PMM are ICC profiles, measurements files (like CGATS files), spot color tables, etc. All of those are referenced from the PrinterCalibration.xml.

The PMM offers a new concept compared to DFP named Variations. A variation is a printer profile generated with specific settings. So it is possible to have multiple variations of the same Printer-Media-Mode, for example a printer profile will high black generation, one with low black generation and one with high saturated colors. Every Variation can optionally have its own normalization/standardization profile associated with it.

For detailed description of the tags and structure of the PrinterCalibration.xml please refer to the developer documentation in the Wiki.

### Upgrading DFP to PMM

During the launch of the RIP the RIP will check for the presence of \*.dfp files in the Calibration folder. When there are \*.dfp files present it will attempt to convert them to the PMM format.

The conversion process will move all files that have the same name as the DFP but with a different extension into the PMM file.

During a successful conversion the original DFP file will become part of the PMM if the DFP contained ICC LUTs. If there are no LUTs present, thus when the DFP only describes the mode and/or linearization then the DFP is moved into the folder “./Calibration/\_Linearization only DFPs”.

If the conversion of the DFP is not successful the DFP is moved into the folder “./Calibration/\_ Damaged DFPs” and a log message is written in the system log with the key “DFP Upgrade” in the log line.

### Known issues

Reasons for unsuccessful DFP conversion are most commonly:

- DFP format is not compatible with the fore last latest version of RIP. The solution is to put them into the Calibration folder of the fore last version of the RIP and start this RIP to initiate the conversion to the latest DFP format version.
- The RIP does not see that modifications are made in the Calibration folder and therefore no conversions are done at all. Delete the file(s) “Media\*.xml” from the Calibration folder to trigger a complete rebuild and start the RIP again.
- The DFP is actually corrupt, the previous versions of the RIP ignored these files so they didn’t show in the user interface but did not remove them.

### Diagnostic Logging

The DFP conversion routines log all problems and errors by default to the system log. In case that an unrecoverable error occurs during the conversion and the RIP therefore crashes during launch it can be hard to find the DFP that caused the problem. The DFP conversion routine also contains ‘Debug’ logging to help finding this problem. Start the RIP from the command line with the argument “-loglevel 5” as first argument to set the logging level to ‘Debug’. This will write a line in the system log for each DFP it will handle. The last entry will be the one on which the DFP conversion routine chocked.

### Viewing PMM content

The PMM is best administered using the Media Manager application. Do not edit the Calibration folder directly, this way of access is limited to support personal only. If there is the need for support personal to inspect of modify the internals a PMM then this can be done using the following methods:

#### Windows

On Windows merge the ‘PMM Viewing Registry’ file to the registry (double click on the file) and restart the computer after this has been done.

After the computer has been restarted the \*.pmm files can be double clicked from Windows Explorer and will open as if it are folders.

#### MacOS X

Change the extension of the file from “.pmm” to “.zip” after which a double click on the file will expand the complete archive.

To recompose a folder to a .pmm file type in Terminal (command line):

- cd <path to folder containing PrinterCalibration.xml>
- zip -r ../<(new) name of pmm>.pmm .

### Common content

The following items are quite common in PMM files:

PrinterCalibration.xml Mandatory: This contains all information about the Printer-Media-Mode and the references to all other files in the PMM.

*.icc	Printer profile associated with a profile-variation or a reference profile used for normalization of a profile-variation in ICC format.
*.mx4	Printer profile associated with a profile-variation in MX format.
<guid>.mx3	Printer instance specific calibration of the colors in MX format.
Measurements.txt	File containing the measurements of a characterization target used for the printer profile generation. Usually in CGATS format. Note: The linearization measurements are part of PrinterCalibration.xml.
Characterization.xml	File containing the measurements of a characterization target used for the printer profile generation in XML format.
Spot Colors.xml	Table containing the spot colors associated with this Printer-Media-Mode.

### Backward Compatibility

The PMM format is not backward compatible with the versions that support the DFP format. There is no tool available to convert a PMM file into DFP as the PMM files contain more information that can't be stored in the DFP format.