Page Rotation – Questions and Concerns

Background Details

- Thank you for the discussion - PWG Thread (Specifying landscape orientation for PWG-Raster)

- Canon seeks to clarify the method for reducing the size of media-source-properties within media-col-database without compromising the necessary information level to support possible use-cases.

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Use-Cases

- Use-Case 1
  - Printer could not rotate the page image by itself, and the printer requests the client to rotate the page image by sending information about the paper feed direction and image print rotation on the paper.
  - Printer sends a requests (capabilities) to the Client using media-source-properties in the media-col-database.

Rotation for Landscape	media-source-properties
CCW	• {size=A4, M-S-F-orientation=3(portrait), M-S-F-direction="short-edge-first"} • {size=A4, M-S-F-orientation=4(landscape), M-S-F-direction="short-edge-first"}
CW	• {size=A4, M-S-F-orientation=3(portrait), M-S-F-direction="short-edge-first"} and • {size=A4, M-S-F-orientation=4(reverse-landscape), M-S-F-direction="short-edge-first"}

Use-Cases

- Use-Case 2 – The print system supports two timings for setting papers
  - Set papers *before* submitting the print job.
    - The printer rotates the page image according to the media-source-properties in the media-col-ready.
    - The media used in the submitted job is limited to media-col-ready.
  - Set papers *after* submitting the print job
    - The print system allows the user to create a job with all media that is supported by the printer and set the paper after submitting the print job.
    - The media used in the job is based on the media-col-database instead of media-col-ready.
- Use-Case 3 – The client must set the image orientation information for each Orientation of the PWG-R page header
- To support the above three use-cases, Canon proposed 3.36 and 4.26 media-col-database requirements for the Client and Server in Mopria Print specification 2.3:
  - The printer must support media-col-database
  - If the printer supports PWG-R and the printer can not rotate the page image itself, the printer must support media-source-properties on media-col-database.
  - The client must support page rotation based on media-source-properties on the media-col-database. The client must add the page image "Orientation" information for each PWG-R page header.

Concern (1)

- PWG 5100.7-2023-IPP Job Extensions v2.1
- 6.3.1.18
- Clients SHOULD use "media-col-ready" instead of "media-col-database" since the latter includes all possible media combinations, including potentially multiple instances of the same media with different "media-source-properties" values.

- "media-col-ready" covers the Use-case1, but can not cover the Use-case2.
- For the Use-case2, there is a need for support of "media-feed-properties" on "media-col-database".
- Any thoughts?

Concern (2)

- PWG 5100.7-2023-IPP Job Extensions v2.1
- 6.9.36 media-col-database
- In order to limit the number and size of values of this attribute, Printers MAY exclude the "media-source" and/or "media-type" member attributes from collection values when all values of the corresponding member attribute are supported when combined with the other member attributes and value.

• In this description, in our understanding, media-size and media-type can be excluded when all values of the corresponding member attribute are supported.

• Can media-source-properties also be excluded from media-col-database collections under the same conditions that media-source and media-type can be?

Concern (3)

- PWG 5100.7-2023-IPP Job Extensions v2.1
- 6.9.36 media-col-database
- In order to limit the number and size of values of this attribute, Printers MAY exclude the "media-source" and/or "media-type" member attributes from collection values when all values of the corresponding member attribute are supported when combined with the other member attributes and value.

- When can media-source-properties be excluded?
  - Case 1: When the printer is capable of page rotation.
  - Case 2: When the printer cannot rotate pages itself, but it supports only one M-S-F properties (M-S-F-orientation=portrait and landscape, M-S-F-direction=short-edge-first) for all media-size.

Concern (4)

- PWG 5100.7-2023-IPP Job Extensions v2.1
- 6.9.36 media-col-database
- In order to limit the number and size of values of this attribute, Printers MAY exclude the "media-source" and/or "media-type" member attributes from collection values when all values of the corresponding member attribute are supported when combined with the other member attributes and value.

- There's no explicit way for a printer to tell the client if it can rotate a page image itself.
- While it's implied by the presence (or absence) of media-source-properties in media-col-ready and media-col-database, we need to clarify this method to ensure consistent understanding.
- We would like to clarify the method.

Concern (5)

> - PWG 5100.7-2023-IPP Job Extensions v2.1
> - 6.9.36 media-col-database
> - In order to limit the number and size of values of this attribute, Printers MAY exclude the "media-source" and/or "media-type" member attributes from collection values when all values of the corresponding member attribute are supported when combined with the other member attributes and value.

- In our understanding, if the Printer expects all landscape documents to be rotated clockwise on the Client side, all media-source-properties for all media sizes must be defined as (M-S-F-orientation=portrait and reverse-landscape, M-S-F-direction=short-edge-first).
- If the Printer expects to rotate counter-clockwise for all media, the Printer can exclude this information.
  - But in the clockwise case, there is no way to reduce the data size of the media-source-properties.
  - Because if the Printer excludes media-source-properties, in our understanding, the Client rotates all media counter-clockwise.
  - Is it right understanding?