

W1.1 Image Quality of Printers

W1.1 2001-015

Attribute: Macro-uniformity

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Referenced documents: W1.1 2000-003

Macro-uniformity ad hoc teleconference meeting minutes, 1/30/01

Attendees: Yee Ng (YN, NexPress), Rene Rasmussen (RR, Xerox), Dave Wolin (DW, ImageExpert)

Absent ad hoc members: Marguerite Doyle (Lexmark), Jodi Walsh (Lexmark), Steven Korol (Xerox), Ina Eckerleben (Océ)

Agenda

- Introductions
- Review/modify agenda
- Discussion of the proposed process (document W1.1 2000-003)
- Discussion of definition of the Macro-uniformity attribute
- Plan on-going teleconference schedule

Introductions

RR informed that Marguerite Doyle, from Lexmark, has joined the Macro-uniformity ad hoc.

Discussion of the “process guide”

The process guide (W1.1 2000-003) was discussed.

Subjective surveys

- DW raised a concern that the subjective survey should not be limited to committee members. The survey population must be defined.
- RR assured that the process guide does not state that only committee members act as observers in the surveys, rather, the teams are responsible for *conducting* the surveys, using appropriately defined subject groups, which may or may not include committee members.
- Agreement: We need to clarify, at the W1.1 level, how the subject groups are defined, such that consistent populations are used.

Test targets

- DW raised a concern that when a given test target is printed on different printers, they come out differently, making it difficult to perform comparable measurements.
- Agreement: The test targets must be defined such that they can be printed resulting in the correct content. An example of a process that does not work, is to use a test target that defines the input percentage, where different printer systems will render it with different L* values.

- YN proposed to use a feedback mechanism such that the print testing is calibrated before printing the actual print samples that will be measured.
- RR supported the idea of a pre-measurement-calibration, for those attributes (such as Macro uniformity) where it does not defeat the purpose.

Attribute definition (including Micro versus Macro uniformity)

The definition of the Macro uniformity attribute was discussed.

- DW stated that there is a significant difference between measurements of periodic and non-periodic color variations, and that he is concerned about the separation of overall uniformity into Micro- and Macro- uniformity. He proposed categorizing according to 1D versus 2D and/or periodic versus non-periodic color variations.
- RR stated that it is important for this standards work that we approach the problem from the point of view of appearance to human observers, not from the point of view of what will make measurements easy.
- YN raised a concern that a definition the separation between Micro and Macro using a 6mm aperture may be inconsistent with the ISO 13660 definition, and we should not deviate unless there is a good reason.
- DW listed arguments for and against definitions based on 1D/2D and periodic/non-periodic, and proposed that rather than attributes for Micro- and Macro-uniformity, W1.1 should use attributes for Periodic and Non-periodic color variations.
- Agreements: No team agreements were reached concerning the attribute definition. We will need to interact with the Micro uniformity team.

Next steps

YN and DW will be unavailable for teleconference for much of February, and communication will take place by email. RR will draft meeting minutes and send to YN and DW for comment before sending to wider distribution. RR will seek to organization teleconference where more team members can attend.

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