

COMMITTEE FOR GRAPHIC ARTS TECHNOLOGIES STANDARDS

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CGATS/SC3 N 1136
CGATS/SC4 N 1052
USTAG/TC130 N 3517

DRAFT MINUTES

JOINT MEETING

CGATS SC3 / SC4 / USTAG WG3 and WG4

X-Rite
4300 44th St. S.E.
Grand Rapids, MI 49512

July 29-30, 2009

1 Call to Order

The meeting was called to order at 9:00 a.m. by Ray Cheydleur, SC3 Chair. The following were in attendance and introduced themselves:

Ray Cheydleur, Chair SC3	X-Rite, Incorporated
Dave McDowell, Chair USTAG	NPES
Mary Abbott, Secretary	NPES
Debbie Orf, Secretary	NPES
Bill Birkett	Doppelganger, L.L.C.
Eric Dalton	JUST Normlicht, Inc.
John Daugherty	NAPIM
Joe Fazzi	IDEAlliance
Richard Goodman	RMGC LLC
John Iobst	NAA
Heath Luetkens	CGS Publishing Technologies
Dick Presley	Eastman Kodak
John Seymour	QuadTech
Hal Stratten	manroland
Steve Smiley	Vertis Communications
Chuck Spontelli	B.G.S.U.
Larry Warter	Fujifilm Graphic Systems USA
Walt Zawaki	Individual

2 Review and approve Agenda

The committee reviewed the draft agenda, which had been distributed by e-mail prior to the meeting. The following item was added:

- A presentation by Chuck Spontelli pertaining to ISO/TC130/WG3 N0797 on Practical Definition of Neutral Grey was added to the agenda as item number 7.

The agenda was approved as amended. The revised agenda will be kept on file by the Secretariat.

3 Review and approve Minutes of the April 2-3, 2009 meeting

The committee reviewed the minutes of the April 2-3, 2009 meeting which had been distributed by e-mail prior to the meeting. The minutes were approved as distributed.

4 Review status of action items from the April 2009 meeting

AI #	Action Item	Status
SC4-08-06	Kennedy will provide the Rodriguez white paper re CGATS/SWOP Technical Reports to Abbott for circulation to SC4 for review, prior to issuance as a White Paper.	Fazzi will follow up
SC4-08-10	Ornati will prepare measurement data for measurements taken using both self-backing and white backing, and provide it for the committee to review.	Ornati will address at a future meeting
TAG-08-17	Kennedy, Iobst, and Cheydleur to prepare an example of the use of name spaces to be circulated to CGATS and USTAG by the end of January.	Completed
SC3-09-01	Abbott will ballot the identical national adoption of ISO 28178:2009 to CGATS SC3 as the revision of CGATS.17, retaining dual designation.	Completed (SC3 N 1115)
SC4-09-02	McDowell will review the data provided by Seymour from measurements of 16 different substrates printed during the same print run (SC4 N 1027).	Completed (SC4 N 1038)
SC3-09-03	Cheydleur will prepare an initial draft of a document to address the characterization of printing devices for review at the July meeting.	Draft to be distributed at the July meeting
SC4-09-04	McDowell and Rich will prepare a draft of a proposed new annex that could be added to the existing TR 002 for review at the next meeting.	Closed. Rich reported that the SNAP team has indicated that they prefer not to publish the calculated Over/White data but are in the process of collecting more data, using a white backing and the newer 1617 patch IT8 target. Then they will come back to request a new TR for coldset printing.
SC3-09-05	Following confirmation from Cheydleur in late May that any changes made to ISO/DIS 13655 as the result of the review of DIS ballot comments, Abbott will circulate ballot recommending the identical national adoption of ISO 13655 to SC3 as the revision to CGATS.5-2003.	Open.
SC4-09-06	Abbott will contact Goodman, Pope and Suffoletto to determine if they are willing to actively participate in the development of a Technical Report addressing CtP platemaking and take the lead.	Completed. Goodman will help with document, if there are manufacturers who think this work should be done. Pope will participate and has enlisted the support of Franz Sigg of RIT.
SC4-09-07	Schroeder will talk to appropriate persons in Fuji to determine if they are willing to participate in this CtP work.	Open. Warter will follow up
TAG-09-08	Daugherty, Rodriguez, Presley and Iobst will review the IFRA document relating to a proposal for a new print process standard and provide comments to McDowell by April 10.	Completed (USTAG 3373)

AI #	Action Item	Status
TAG-09-09	McDowell will prepare a proposed inquiry relating to the IFRA proposal for a new print process standard to be sent to WG3 (with a copy to IFRA), relating to how this work is intended to be positioned relative to the ISO 12647 work.	Closed. At the May meeting of WG3, IFRA proposed a single newsprint aim. Somewhat modified, but will cover all cases. Thus, they are not suggesting a second standard, as was first anticipated. See WG3 N 811 for IFRA presentation.
TAG-09-10	McDowell will contact those at the meeting who expressed possible interest in this work, as well as others on the committee who may be interested but who were not at the meeting.	Closed as a result of information presented at the May WG3 meeting. See TAG-09-09

After review of the action items it was noted that there is no electronic repository for CGATS documents (similar to what is done in ISO) and some members did not have ready access to documents needed for the meeting. It was decided to devise a method of providing documents to the group before the meeting.

Action Item SC3/SC4-09-11: Orf will provide an area where documents that are needed for upcoming meetings can be made accessible to meeting participants, either as a protected area on the NPES website, as a zip file, or as a document repository online such as Google docs or Office Live.

5 Status of national adoption of ISO 28178 as revision to CGATS.17

This standard is currently in ANSI public review. Once the comment period is over (August 10) the BSR9 will be filed for finalization of the national adoption.

When preparing the final document the following text will be inserted addressing dual designation of the document with ISO 12878.

Users of this document (CGATS.17-2009, an identical national adoption of ISO 28178:2009) are reminded that the earlier version of CGATS.17 used "CGATS17" as the first entry in the ASCII version of the file and as the data value for the XML keyword <standard>. This edition uses "ISO28178" in those entries (see 4.2.2.1 and 4.2.2.2).

6 Status of national adoption of ISO 13655 as the revision of CGATS.5

McDowell reported ISO 13655 has been approved at the DIS level with many comments. He noted that Kraushaar, as editor, has circulated the revised text. The most recent draft (ISO-2nd DIS-13655-(E)_incl_ResofComDallas_f.doc) reflects the changes requested from the USTAG. The document is not ideal, but can reasonably replace CGATS.5 in its current form. It is recommended that the document be nationally adopted.

It was mentioned that there was some question that Japan did not feel their comments were sufficiently addressed. As a result, Abbott sent an email to DIN requesting the current status. When the document goes to publication, Cheydleur will look at it to determine if there are any technical changes that need to be addressed. There is a concern that additional technical changes may be made to the document prior to publication.

Action Item SC3-09-12: Abbott will request an extension for one year from ANSI on CGATS.5 to allow the US time to review any changes that may have been made prior to publication and ensure no technical changes have been made that would interfere with the US adoption.

7 Presentation by Chuck Spontelli regarding ISO/TC130/WG3 N0797 on practical Definition of Neutral Grey Using ICC Media-Relative Colorimetry

Chuck Spontelli provided a presentation (CGATS SC3 N 1126) prepared by he and Bill Birkett which reviewed the various definitions of grey used within the ISO standards, by the IDEAlliance G7 program and others. He suggested that these all conflict with the ICC approach which is to use media-relative colorimetry. Based on the use of media-relative colorimetry he suggested that there are definitions of grey that are more technically sound. However, he noted that because there is a knee in the computation of L^* at an L^* value of 8, plots of a^* and b^* vs. L^* that produce neutrals are not straight lines. This led to the introduction of a "practical" definition of grey that did have straight lines and was compatible with his technical definition.

His key final recommendations were:

- ISO print standards should define grey using the XYZ formulas presented here.
- ISO print standards should reference ISO 15076-1 for media-relative colorimetry.
- When $L^* > 8$, the practical grey definition may be used.

In summary, the proposal is that this method be adopted as an alternative to other methods that were suggested at the ISO meetings in Fort Worth in May 2009. Also, the larger question was raised of the need for media-relative colorimetry in producing the standard characterization data sets on an ongoing basis.

Related group discussions

Following Spontelli's presentation various methods for modifying data to accommodate a change in substrate were discussed.

It was generally agreed that there is not sufficient data to meaningfully evaluate the various options available. All of the test data to date confounds changes in substrate and changes in printing conditions associated with a substrate change.

It was suggested the data not change unless the average of the papers for a particular class changes more than 3 Delta-E. Then a new data set could be computed from the old data set. It was agreed that we should not change until we begin to see what the numbers are, as measured with an instrument that meets measurement condition M1.

It was agreed a series of data sets should be created using a variety of papers with identical image characteristics. There was general agreement that Kodak Approval images would satisfy this requirement. These should then be measured using an instrument that closely matched the requirements of M1 (i.e. D50). This will provide data that represents variations in only the printing substrate and will allow the evaluation of a variety of models. This resulted in 4 new action items:

Action Item TAG-09-13: Smiley and Fazzi will gather an assortment of substrates to be used.

Action Item TAG-09-14: Presley will create Approval images on these substrates.

Action Item TAG-09-15: Cheydleur will measure the printed samples using the available instrument that most closely matches M1.

Action Item TAG-09-16: McDowell will analyze the data resulting from these measurements.

Final Due Date: October 16

8 Status of CGATS/FTA TR 007 (Status of printing tests to develop a characterization data set)

Smiley provided a presentation (SC3N1127) describing the work of the FTA FQC committee to create a standard ISO characterization data set.

The result is an averaged data set that has been adjusted to near neutral calibration specifications, color corrected and smoothed. This will become a new aim point used for proofing and calibrating presses using the G7 methodology.

Action Item SC3-09-17: McDowell and Smiley will provide a letter requesting formal FTA endorsement of this data set to allow CGATS to proceed with the preparation of a Technical Report. **Due Date: August 17.**

9 Report from Pope on status of FTA work relating to measurement of the color of printed material on film substrate

Smiley reported that FTA has run tests on 11 different substrates, using the correction method of ISO 13655 Annex A, and are generally satisfied. However, they would like to suggest that requirements on the white backer be tightened to limit the upper L* value to 95 and change the C* value from "shall be less than 3 and should be less than 2.4" to "shall be less than 2.4".

10 Discussion of proposed experiment to determine correlation between backing correction methods, Report from McDowell (SC4 N 1038) on review of Seymour data (SC4 N 1027)

McDowell reported the data received from Seymour at the last meeting (SC4 N 1027) was supposed to represent different substrates printed one after another with near identical printing characteristics. However, a review of the data indicated that there was much more variation in the color of the solids than there was in the color of the paper. Therefore, this was not a useful set of data to use to evaluate computational techniques to correct for changes in the color of the substrate.

11 Discussion of new white paper on characterization of printing devices

Cheydleur presented a draft document entitled "Color characterization of a single printing device". It was suggested the title should be changed to "Color characterization of a printing system". It was noted the term "printing system" needs to be defined.

A question asked was: what is meant by color characterization is this strictly for ICC color profiles? 10128 describes 3 methods, including ICC profiles to achieve standardization all that require color characterization data. It was agreed that the document should be a how-to document for the steps to get characterization data that is for implementation of a single device or system. The document should be focused on the operator, not expert level.

Partial characterization data and characterization with the intent of making a profile are contained in the document. It was suggested we need to clearly define both terms and the difference between a characterization data set and an ICC profile. The terms were then defined as:

- Characterization data set: describes the performance of a press
- ICC Profile: builds on the characterization data of the press and includes decisions about black to color relationships, gamut compressions, etc.

A new introduction was written and minor changes were made to the scope. With these changes, the major headers were reviewed, and decisions on what other headers need to be included were made.

It was asked where in the document "printing device" should be defined. It was agreed to include it in the Process setup section as follows:

A printing system consists of a printing device and associated processes (e.g. RIP, plate production, etc). Each system has initial setup conditions that are unique to the device or process and we will not address those here. There are common conditions among all devices that must be met prior to printing sheets for characterization use, to ensure a stable, repeatable operating condition for the printing system. This is not intended to be in any way associated. These are summarized in 2.1 – 2.x.

The following additional areas were reviewed with changes noted:

- Put additional information into the Calibration section to define further the importance of educating operators on the requirement of getting the device into the repeatable state to ensure successful characterization data results.
- Combine Target Selection into a single section covering both full and partial characterization data sets.
- Sheet selection methods would not be included in detail but to describe different selections (e.g. random sampling, uniform or sequential sampling) with pointers to the analysis document where more information on those selections is available.
- Measuring and Data collection section would add a line that includes information on collecting both density and colorimetric data and information on composite data evaluation would be moved to an informative annex.

Cheydleur will continue to work on the content of the document.

12 Status of proposal to develop a CGATS TR to address CTP plates

A CTP work item was balloted to the group and several people have expressed an interest in the work. The question now is how to go forward. It was decided that a new work item proposal should be generated.

Action Item SC4-09-18: Abbott to find additional people interested in the CTP work using CGATS SC4N1032 as a rationale document.

Action Item SC4-09-19: Goodman will draft an initial document addressing the CTP work for use in a new work item proposal.

13 Review of TC 130 work that may impact CGATS SC3 and SC4

13a Status of ISO 5 Series

All 4 documents have been approved and are in Geneva for publication. All comments have been resolved, preliminary editorial work is done, and we are now waiting for the proof to be returned.

13b Status of ISO 13655

The status of ISO 13655 covered during other discussions documented earlier in this meeting (See Item 6)

13c Status of ISO 15076-1 Rev (ICC Spec)

McDowell reported that the ICC ballot will be out once the editorial work is completed. The ICC spec was

completely rewritten to bring the document up to ISO standards. Additionally, revisions (minor) to ICC spec, made in the last 4 years, have been incorporated.

13d Status of ISO/DIS 12640-4 (Adobe RGB SCID)

ISO/DIS 12640-4 has been approved. Changes in the manuscript have been made and the document is now out on a 2 week review. Once the review is complete the document will be ready to go to ISO for publication.

13e Status of ISO 12646 AMD1 (soft proofing)

The final text for ISO 12646 Amd1 is now with DIN. The manuscript should be out in final ballot soon.

13f ISO/NWI/CD 12647-8 (TC130 N 1471, TC130 N 1472)

The Ballot for ISO/NWI/CD 12647-8 was distributed on 6/11/09 and is due August 14.

Warter reported that in redrafting the document very few changes were made to the original draft of Part 7 (which included both contract proofs and validation prints) other than editorial changes, i.e. verbiage, terminology, reorganization of sections.

It was noted that these changes may bring objections from many as the changes between the two standards (12647-7 and 12647-8) made were very minimal. It was noted that there is a group of manufacturers who can only get in through a very narrow window. It was asked that the intent of the standard be explained as this called a validation proof yet it is meant to be a designer level proof. The draft of ISO 12647-7 that showed validation prints basically contains the same specs contained in this part.

The general position of the attendees at the meeting seemed to be that all of the tolerances should be loosened to create a clear differentiation between Part 7 and Part 8. It was pointed out that Japanese manufacturers would object to loosening the tolerances. Conversely, it could be pointed out that if the tolerances of Part 7 were loosened, those manufacturers could be pointed to 12647-7 to get the tighter tolerances they need. This solution would make the differences very obvious.

In a discussion of the learning curve in the certification process, it was noted that when the tolerances are tight that training can be very difficult. Another area identified as needing work is ways of determining the paper used. It is hard to get paper that fits these validation tolerances. It was noted that the main issue is consistency. Also discussed was whether paper labeling would encourage printers to use media that meets the validation tolerance for routine production of validation prints. It was agreed the paper tolerance appears to be too tight and too far in the yellow direction.

Following these discussions, it was agreed US comments should be:

- loosen up the tolerance to allow a wider range;
- the paper aim and tolerance should be more in the minus b* direction;
- table 1 should be deleted.

There was discussion on the difference between validation and designer print and the tolerance needed for both. The question was asked should this be a validation print that is open to a wider group of presses.

After a comparison the two standards (Part 7 and the draft of Part 8) it was agreed that the differences were very minimal in the areas of repeatability of the mid tones and the solids.

Action Item TAG-09-20: Warter will prepare a new set of specific numbers addressing the concerns addressed in the US comments for proposal in Beijing.

13g ISO/NWI on Management of Security Printing Processes (TC130 N 1473, TC 130 N 1474)

This NWI has been withdrawn.

13h Status of US proposal for NWI to address digital printing

It was reported that in the Print Properties Committee meeting the issue of allowed tolerances on printing was discussed. There is no official position on the part of the US to go forward with a proposed ISO standard at this time.

However, it was noted that there is great interest from manufacturers of digital printing devices to create a standard. It was proposed to create a US proposal for a standard on digital printing directly from electronic data. There was significant support for this and it was agreed it must be done as soon as possible. Warter agreed to act as editor for this document.

Steps needed:

- Justification for proposal (SC4 N 1032)
- draft document (provided by Warter for distribution to the group SC3 N 1129)
- submit new work item proposal to ANSI for submission to TC130

Action Item TAG-09-21: Warter will provide initial draft of a digital printing standard to be used as part of a NWI proposal.

Action Item TAG-09-22: McDowell will draw together justification for a NWI proposal for a digital printing document – possibly as a part of ISO 12647.

13i Status of NWI and CD for ISO 5776 (symbols for text correction)

After letters were sent to domestic media contacts asking for interest in this work several replies were received showing interest.

The US ballot was returned as not approved for CD. However, the NWI was approved with two pages of comments on the associated draft, and there was an indication of willingness to participate. The wording and many examples of the proposed symbology were incorrect; the typography relating to the symbols themselves must be also corrected.

A concern was raised that once the document is submitted to ISO it may be changed by the ISO editor inappropriately. It was agreed WG1 should be apprised of these concerns as relates to this particular document.

Action Item TAG-09-23: McDowell will provide a report detailing the responses received from outreach to the domestic media relating to ISO 5776.

13j Status report on ISO 17972, *Graphic technology — Colour data exchange using CxF*

Cheydleur reported that at the last ISO meeting a preliminary version of ISO 17972 was distributed, incorporating significant changes from part 2, and separating out core resources. ISO will now be able to create custom resources, defining elements needed for different types of exchange. It was noted that Smiley worked with TC130 WG2/TF2 defining spot colors. Three sets of data were produced from soft proofing, targeting, etc. defining common elements.

Action Item TAG-09-24: Cheydleur will go through the ISO 17972 data and create a mapping of existing elements and requirements.

The documentation for CxF v3 will be published on <http://www.colorexchangeformat.com/> in the first weeks of August.

13k Other reports from McDowell

- The draft document to accompany the NWI on soft proofing is being prepared by Heath Luetkens and is almost ready for submission.
- The CD ballot draft of the revision of ISO 12647-6 being prepared by Steve Smiley is ready go to the TC130 Secretariat.

14 Status of systematic review items

14a ISO 2846-1 Systematic Review, *Graphic technology — Colour and transparency of printing ink sets for four-colour printing – Part 1: Sheet-fed and heat-set web offset lithographic printing* (see TC130N1500)

Japan recommended a revision/amendment. This will be discussed by WG4 in Beijing and a recommendation made to the Plenary.

The comments from Japan were reviewed. It appears they are asking for separate test papers for each country rather than the single APCO paper for the ink test. It is assumed this is because the APCO paper is not readily available in Japan.

Also, they are asking for a change in the L* level of the black backing used for the transparency testing. They want to go to an L* of 10 or less instead of the current tolerance of 6 or less. Some US experts felt that this would create a problem. It was noted there are contrast cards available for this use that meet the current requirements.

Next they request that a criteria be defined that could be used to initiate a revision to the standard. Their suggestion is that when the average of the ink colours from the participating countries changes by a Delta E of 2 from the existing aim, a revision should be considered.

They also have suggested that the allowed ink film thickness within which the ink must achieve be reduced by lowering the upper limit by 0.1 mm (e.g. 0.7 to 1.0 vs. 0.7 to 1.1).

14b ISO 11084-2 Systematic Review, *Graphic technology — Register systems for photographic materials, foils and paper – Part 2: Register pin systems for plate making* (see TC130N1501)

Thailand wants to include CtP plates in the scope. This will be discussed by WG4 in Beijing and a recommendation made to the Plenary.

The comment from Thailand was reviewed. After discussion there was agreement that we are not opposed to this proposal.

14c ISO 12637-1 Systematic Review, *Graphic technology – Vocabulary – Fundamental terms* (see TC130N1486)

Japan, Thailand and UK recommended revision. This will be discussed by WG1 in Beijing and a recommendation made to the Plenary.

The comments were reviewed.

14d ISO 12642-1 Systematic Review, *Graphic technology – Input data for characterization of 4-colour process printing – Part 1: Initial data set (same as IT8.7/3)* (see TC130N1499)

Germany recommended a revision. This will be discussed by WG2 in Beijing and a recommendation made to the Plenary.

The comment from Germany, which was basically to remove the file data format annex and instead point to ISO 28178, was reviewed. It was agreed that we are not opposed to this comment.

14e ISO 12642-2 Systematic Review, *Graphic technology – Input data for characterization of 4-colour process printing – Part 2: Expanded data set (same as IT8.7/4)*

The result of the systematic review of ISO 12642-2 was to reconfirm.

14f ISO 12647-6 Systematic Review, *Graphic technology – Process control for the production of half-tone colour separations, proofs and production prints – Part 6: Flexographic printing*

We have not seen the results of voting on the systematic review of ISO 12647-5. The US voted to reconfirm. Independent of the systematic review, WG3 initiated a revision of ISO 12647-6 at the meeting in Fort Worth. From that meeting, there was an action item for Smiley, McDowell and Barros to develop a NWI draft by June 15.

14g ISO 2834-1 Systematic Review, *Graphic technology – Laboratory preparation of test prints – Part 1: Paste inks*

The result of the systematic review of ISO 2834-1 was to reconfirm.

15 Activity status reports

15a SWOP

Nothing to report

15b SNAP

Nothing to report

15c GRACoL

The team has launched an initiative to develop tolerances for printing that has gained a lot of attention. The approach currently being studied is process agnostic with multiple requirement levels. Ron Ellis gave a presentation with discussion following. It was reported that there has been a lot of interest ranging from wide format screen printers to digital press manufacturers and offset-printing manufacturers and printers.

15d FTA

Smiley reported FTA has published the FIRST book and stated that data sets are still welcome.

15e IDEAlliance Print Properties Committee

Fazzi reported that during the Print Properties Committee meeting there was discussion regarding the G7 certification program. Work is currently being done on a clear definition of what G7 is NOT; also work is being done on regulations called G7 compliance. He noted that the ISO guidelines are being followed as much as possible.

There was also discussion regarding tolerances (see item 15c).

Joe Fazzi indicated that IDEAlliance would like to be more aggressive in supporting the CGATS and USTAG/ISO work on standards. They would like to make documents in review and the associated ballots available to their membership on Print Properties for review and comment. McDowell stated it would be acceptable to distribute ballots to members of IDEAlliance, with comments back to Fazzi who will then consolidate the comments before submitting a consolidated input to the USTAG or CGATS. It was noted that the documents are drafts, subject to change, and copyrighted; therefore verbiage must be included to that effect. Warter will work with Fazzi to help facilitate this.

Fazzi also reported that digital print and screen print working groups have been formed within IDEAlliance, and that flexographic and gravure working groups are planned for the future.

16 Other business

No other business was identified.

17 Date and location of next joint meeting

The next joint meeting of CGATS SC3, SC4 and USTAG WG3 and WG4 (1 ½ days) will be held November 2-3 at ASU in Mesa, Arizona. The next IDEAlliance Print Properties Committee meeting (also 1 ½ days) will be held November 3-4 at the same facility.

18 Adjournment

There being no further business, the meeting was adjourned. The committee expressed their appreciation to X-Rite and Ray Cheydleur for providing meeting space.