

# COMMITTEE FOR GRAPHIC ARTS TECHNOLOGIES STANDARDS

## Secretariat:

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**CGATS/SC3 N 1093**  
**CGATS/SC3/TF1 N 170**  
**CGATS/SC4 N 1005**  
**USTAG/TC130 N 2961**

## DRAFT MINUTES

### JOINT MEETING CGATS SC3 – Metrology CGATS SC3 TF1 – Objective Color Matching CGATS SC4 – Process Control USTAG to ISO TC 130 WG 3 and WG 4

Arizona State University  
Mesa, Arizona  
March 5-7, 2008

#### 1 Call to order

The meeting was called to order at 8:30 a.m. by Ray Cheydleur, SC3 Chair. The following were in attendance and introduced themselves:

Ray Cheydleur, Chair, SC3	X-Rite
Ken Elsmann, Chair SC3/TF1	Global Graphics
Howard Nelson, Chair, SC4	Arizona State University
David McDowell, Chair, USTAG	NPES
Mary Abbott, Secretary	NPES
John Daugherty	NAPIM
Heath Luetkens	CGS Publishing Technologies International
Dick Presley	Kodak Graphic Communications
Larry Steele	RGB Metrology/Arizona State University

#### 2 Review agenda

The committee reviewed the draft agenda, which had been distributed by e-mail prior to the meeting. There being no changes, the agenda was approved as distributed.

#### 3 Review minutes of last meeting

The committee reviewed the minutes of the October 2007 meeting, which had been distributed by e-mail prior to the meeting. There being no corrections, the minutes were approved as distributed.

#### 4 Review status of action items

The committee reviewed the action items from the last meeting, noting the status of each as follows:

AI #	Action Item	Status
TF1-07-16	<b>Abbott</b> will investigate an NPES/SNAP joint press release announcing availability of TR 002.	Completed. Press release issued by NAA.
SC4-07-25	<b>Presley</b> will discuss with the IDEAlliance Print Properties Committee the CGATS request for them to develop a white paper discussing the process used to develop the data for TR 003, TR 005 and TR 006.	Completed. Discussed with Mike Rodriguez and accepted by him as an action item going forward. Completion date not discussed. As of 2/21, Rodriguez stated he had done some work on this and hoped to have a draft for the March meeting. He will be reviewing the limited press data that they had (both sheet and web) to support the methodology. <b>Action item SC4-08-01:</b> Abbott to follow up with Rodriguez.
SC4-07-26	<b>Smiley</b> and <b>McDowell</b> will begin work on the first draft of a TR for flexo characterization data.	Open
SC4-07-27	<b>Smiley</b> will document the process used to obtain the flexo data set, and will provide a description of the white poly substrate used.	Open
SC3/TF1-07-28	<b>Rich</b> will get more information on what has been done by SAE in the area of defining how to subjectively evaluate an image.	Open. Waiting to hear back from his contacts at SAE/DCC.
TAG-07-29	<b>Kennedy</b> will attempt to identify an appropriate group to review ISO documents relating to text proof-correction marks, and will provide that information to McDowell.	No group was identified. Item closed.
TAG-07-30	<b>McDowell</b> will submit the comments and proposed edits on the pre-DIS manuscript of ISO 13655 to the document editor.	Completed.
TAG-07-31	<b>Rich</b> will check the DeltaE value in note 2 of 4.4 of the pre-publication manuscript of ISO 12646.	Rich provided a scatter plot (USTAG N 2883) of the average and max CIELAB differences obtained by taking (u',v') differences of $\pm 0.01$ around the neutral point. He noted that a monitor that passes subclause 4.4 will fail subclause 4.10 where the tolerance is $DE^*$ (at constant lightness) shall be less than 3. The committee discussed this at length, and felt this needs to be investigated further within the U.S., including members of the IDEAlliance Print Properties Committee, to determine if there is a need to recommend an amendment to ISO 12646 point to DE2000, rather than DE76, if it has more consistency.  A conference call has been scheduled for Monday, March 31, to discuss this further.
TAG-07-32	<b>McDowell</b> will provide a list of identified concerns relating to the pre-publication draft of ISO 12646 to the document editor.	Completed. It was noted that the comments submitted were incorporated into the document before it was sent to ISOCS for publication. The standard has not yet been published.
SC3-07-33	<b>McDowell</b> and <b>Cheydleur</b> will attempt to set up a meeting among the appropriate people of ASTM E12, ISO TC 38, ISO TC 130 WG 2 and CGATS to determine whether there is a common interest in developing an ISO standard based on CxF 2.0.	Completed. TC 38 has agreed to setting up a liaison between TC 38 SC 1 and TC 130, with Cheydleur to be the TC 130 representative.

## **5 Report on status of request to Rodriguez for white paper re CGATS/SWOP Technical Reports**

See action item SC4-07-25 above.

## **6 Report on status of FTA work in support of request to develop technical reports for flexo**

Since Smiley was unable to attend this week's meeting, this discussion was deferred until the next meeting. Abbott will contact Smiley to determine the status of obtaining data that can form the basis of a CGATS Technical Report, in response to a formal request for such work from FTA.

**Action Item 04-08-02:** Abbott will contact Steve Smiley and Bill Pope to ascertain the status of the flexo work relating to a proposed CGATS Technical Report.

## **7 Status of SC3/TF1 work on objective color matching**

At the last meeting, the committee had suggested an experiment to insert a synthetic image that can be changed in size and color into a complex image. Using this image, make several proofs, one set in which the size differs and another in which the color differs. Then ask people to compare them. Cheydleur reported that he had done work to create such images containing either a large color checker chart or a small color checker chart, or both. Patches within each of the charts can be manipulated to help determine what the difference/effect would be if a patch on the small chart were made vs. the difference/effect if the same change were made on the same patch on the large chart. He has ensured that these images are essentially identical numerically. The committee felt that this may be a set of images that can be used for future experiments, but at this time we do not yet have a sampling test plan well enough defined to determine what we want to do.

Cheydleur also showed a new X-Rite tool called ColorMunki, which provides a way to palletize colors. One function of the tool is that it will automatically sub-select a color out of an image using the NBS color pallet.

Elsman will have material for the July meeting for committee review.

## **8 Proposed disposition of CGATS.5-2003**

It was noted that CGATS.5-2003 is due for periodic review. However, it was decided to defer a decision until work on the revision of ISO 13655 has been completed. At that point, the committee can decide whether to revise CGATS.5 or to nationally adopt ISO 13655 as a dual-designated standard. Abbott reported that ANSI has granted an extension on the periodic review until the fall of 2009.

The committee continued their discussion of ISO/DIS 13655 (see notes relating to this discussion under Item 10 below).

## **9 CGATS.17 and CxF**

CGATS.17-2005, *Graphic technology – Exchange format for color and process control data using XML or ASCII text*, was developed that took the file format CGATS had earlier defined for data exchange and put it into a separate standard, and included a XML format. CGATS then presented this to ISO, and ISO 28178 was developed. This standard has been approved, but not published, because questions were raised during DIS ballot that have not yet been resolved.

During the same time that CGATS.17 was being developed, Gretag in Switzerland was exploring the possibility of developing their XML format (CxF) into an ISO standard, instead of the format defined by CGATS.17. This

work did not progress due to both technical and patent issues. That work (ISO 17972) eventually was abandoned.

Since that time, X-Rite has acquired Gretag, and is again looking at CxF and if it might be able to be the subject of a standard.

Cheydleur reported that they have done further work on the original CxF project and have found areas in which it needed to be improved.

Goals included the ability not only to be able to map a CxF1 file into CxF2 format, but also to find a way to map a CGATS.17 ASCII or XML file to a CxF2 file (excluding any "special" definitions that were added to the CGATS.17 file that were not previously defined).

Cheydleur noted that when they were investigating the ability to translate a CGATS.17 file into a CxF2 file, they used a test CGATS.17 file. In the process, they identified several problems with the example files that are in the annex of CGATS.17 and in the test suite pointed to by the standard and available online. The committee discussed if we want to revise CGATS.17 to "fix" these examples, or make the necessary correction to the ISO standard so it can be published, or both simultaneously. It was felt that proposed changes to ISO 28178 should be presented to WG2, which would allow that standard to go to publication. Then TC130/WG2 could decide whether or not to initiate a NWI to reactivate the CxF work in ISO. CGATS can also decide at that point whether to revise CGATS.17 independent of the ISO work, or to revise CGATS.17 as a national adoption of ISO 28178.

Cheydleur provided a number of documents, including a proposed draft of a Standard Colour Exchange Format 2.0 (CGATS/SC3 N 1089), which would provide the basis for a standard based on CxF 2.0. He noted there is an existing CXF 2.0 schema that has been finalized and is available from the X-Rite website.

As a result of discussion, it was felt that Cheydleur should make a presentation at the April meeting of TC 130/WG 2, with the intended result of a proposal to issue a new work item ballot to reactivate the CxF work in ISO, along with a concurrent ballot to approve a draft document (supplied with the NWI ballot) as a CD for DIS.

## **10 Review TC 130 activities that may impact CGATS SC3 and SC4.**

### **— Review proposed US response on ISO/DIS 2834-3**

The U.S. submitted a vote to approve ISO/DIS 2834-3, *Graphic technology — Laboratory preparation of test prints — Part 3: Screen printing*, with comments. The committee briefly reviewed the comments submitted by the U.S. and had no disagreement with the comments submitted. However, since the ISO ballot does not close until April 22, comments from other national bodies are not yet available.

### **— Review proposed US response on ISO/DIS 12635**

It was noted that the U.S. TAG ballot on ISO/DIS 12635, *Graphic technology — Plates for offset printing — Dimensions*, closed on February 29. The committee reviewed the proposed comments, and made one minor edit to the proposed definition of unprocessed plates (2.7).

The ISO ballot closes April 22. Following this week's meeting, the U.S. vote and comments will be submitted to ISO through ANSI.

— **Review proposed US response on ISO/DIS 13655**

It was noted that the U.S. TAG ballot on ISO/DIS 13655, *Graphic technology — Spectral measurement and colorimetric computation for graphic arts images*, closed on February 29. The committee reviewed the proposed set of U.S. comments on ISO/DIS 13655 (USTAG N 2933). As a result of discussion, editorial changes were made to the proposed set of comments in the following areas:

- Minor changes to the proposed new wording for the Introduction
- Developed proposed definition for "telespectroradiometer"
- Proposed wording for 4.2.2.1, paragraph 1, line 2
- Change "2C" to "2B" in the proposed text (2C is no longer made).
- 4.2.2.2, Note 2: Modified proposed text and recommended that it be inserted as a new note, rather than replace the existing Note 2.
- 4.2.2.2, 2<sup>nd</sup> paragraph before Note 2: Modified recommendation to edit the first sentence, rather than remove it.
- 4.2.2.2, 2<sup>nd</sup> paragraph before Note 2: Change the recommendation to add the specification of reference color samples to a recommendation to remove the text from 4.2.2.2 and create a new section that provides definitive guidance on inter-instrument agreement that applies to all 3 measurement conditions. Draft wording for the new section was developed.
- 4.2.2.3: Provided proposed text for an informative note to provide information re the ISO 14981 test method.
- 4.3.1: Added a new comment that Annex A from the 1996 version of the standard should be included in this revision.
- 4.4.1: Provided proposed text to revise this section.
- 5.1, Example: Changed proposal to recommend that 2 nm be changed to 10 nm. Also moved the recommendation re Annex A to a new comment on 4.3.1.

The ISO ballot closes on April 23. Following this week's meeting, the U.S. vote and comments, as edited, will be submitted to ISO through ANSI.

— **Review comments on ISO/NWI/TS 10128**

It was noted that the U.S. TAG ballot on a new work item ISO/TS 10128, *Graphic technology — Methods for calibration of a printing system with digital data*, closed February 22. The U.S. voted to approve the new work item, and also voted to approve the accompanying draft as a CD for DIS ballot. However, the U.S. had a large number of comments. In preparation for the upcoming TC 130 meeting in Paris, the committee reviewed the comments submitted by the U.S. so that the committee could discuss the issues and be prepared to address them at the meeting.

Presley reported that Kodak had identified areas of the standard that are, or could be, related to patents held by Kodak. These have been identified to ISO and will be handled appropriately within the standard.

One new issue that was identified was the suggestion that tone value that is derived colorimetrically (rather than densitometrically), needs to be identified as such. It was agreed to introduce the terms "colorimetric tone value" (CTV) and "colorimetric tone value increase" (CTVI), and provide a definition. It was suggested this could be handled in 4.1.5.

The committee also reviewed and discussed comments that were submitted by Germany and Sweden, developed a U.S. position on each proposal in preparation for the TC 130 meeting.

— **Review comments on ISO/NWIP/CD 5-1**

A revision to ISO 5-1, *Photography and graphic technology — ISO standard density measurements — Part 1: Terms, symbols and notations*, was circulated for ballot for approval as a new work item, along with a draft document that was circulated for ballot as a CD for DIS. The ISO ballot closed on March 18. The comments of the US TAG to TC 130 were combined with the comments of the US TAG to TC 42 to formulate the official US vote, which was to approve with comments. The revision was approved as a new item of work, and the draft was approved as a CD for DIS. Only the U.S. submitted comments. These comments had been circulated to the US TAG prior to submission, so it was felt no further discussion was needed. The committee also felt that we are prepared to discuss these comments at the April JWG 21 meeting.

— **Review comments on ISO/NWIP/CD 5-2**

A revision to ISO 5-2, *Photography and graphic technology — ISO standard density measurements — Part 2: Geometric conditions for transmission density*, was circulated for ballot for approval as a new work item, along with a draft document that was circulated for ballot as a CD for DIS. The ISO ballot closed on March 18. The comments of the US TAG to TC 130 were combined with the comments of the US TAG to TC 42 to formulate the official US vote, which was to approve with comments. The revision was approved as a new item of work, and the draft was approved as a CD for DIS. The committee reviewed consolidated comments that were received from all countries submitting comments (US and Japan). The US comments had been circulated to the US TAG prior to submission. The committee looked at the single comment submitted by Japan and felt there was not enough information provided for the committee to develop a position. Japan will be asked to provide more information at the JWG 21 meeting.

— **Review comments on ISO/NWIP/CD 5-3**

A revision to ISO 5-3, *Photography and graphic technology — ISO standard density measurements — Part 3: Spectral conditions*, was circulated for ballot for approval as new work item, along with a draft document that was circulated for ballot as a CD for DIS. The ISO ballot closed on March 18. The comments of the US TAG to TC 130 were combined with the comments of the US TAG to TC 42 to formulate the official US vote, which was to approve with comments. The revision was approved as a new item of work, and the draft was approved as a CD for DIS. The committee reviewed consolidated comments that were received from all countries submitting comments (US and Japan). The US comments had been circulated to the US TAG prior to submission. The committee discussed some of the more complex US comments, including the apparent conflict between this document and ISO 13655 measuring conditions M1-M3. Comments submitted by Japan were also reviewed.

— **Review comments on ISO/NWIP/CD 5-4**

A revision to ISO 5-4, *Photography and graphic technology — ISO standard density measurements — Part 4: Geometric conditions for reflection density*, was circulated for ballot for approval as new work item, along with a draft document that was circulated for ballot as a CD for DIS. The ISO ballot closed on March 18. The comments of the US TAG to TC 130 were combined with the comments of the US TAG to TC 42 to formulate the official US vote, which was to approve with comments. The revision was approved as a new item of work, and the draft was approved as a CD for DIS. The committee reviewed consolidated comments that were received from all countries submitting comments (US and Japan). The US comments had been circulated to the US TAG prior to submission. The committee discussed the single comment submitted by Japan.

— **Identify issues relating to ISO 2846-5**

It was noted that ISO 2846-5:2005, *Graphic technology — Colour and transparency of printing ink sets for four-colour printing — Part 5: Flexographic printing*, is currently in systematic review. The US TAG ballot closes May 2.

— **Identify issues relating to ISO 15994**

It was noted that ISO 15994:2005, *Graphic technology — Testing of prints — Visual luster*, is currently in systematic review. The US TAG ballot closes May 2.

At this time, it is not clear that anyone is implementing this standard.

**11 Activity status reports**

**11a SWOP**

Presley reported IDEAlliance has decided to restructure the SWOP Committee. At this time, there is no work being done by the committee.

**11b SNAP**

No report.

**11c GRACoL**

This committee continues to work on the "how-to's" for the G7 process.

**11d FTA**

No report.

**11e IDEAlliance Print Properties Committee**

This group continues to work on monitor certification issues.

**12 Other business**

No other business was identified.

**13 Date and location of next meeting**

The next joint meeting will be held Tuesday-Wednesday, July 15-16, at CGS in Minneapolis. For the fall meeting, Abbott will work with Dianne Kennedy to see if it will be possible to co-locate the CGATS/TAG meeting with a meeting of the IDEAlliance Print Properties Committee.

**14 Adjournment**

There being no further business, the meeting was adjourned. The committee expressed their appreciation to Howard Nelson, Larry Steele, and Arizona State University for hosting the meeting.