

# COMMITTEE FOR GRAPHIC ARTS TECHNOLOGIES STANDARDS

## Secretariat:

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**CGATS/SC3 N 1151**  
**CGATS/SC4 N 1078**  
**USTAG/TC130 N 3686**

## Minutes

### JOINT MEETING CGATS SC3 and SC4 / USTAG WG3 and WG4

Kodak – Oakdale Facility  
1 Imation Way  
Discovery Building, 3rd Floor  
Oakdale, MN 55128  
Thursday, March 25 9:00 am – 5:00 pm  
Friday, March 26 9:00 am – 12 noon

#### 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
Howard Nelson, Chair SC4	ASU
Dave McDowell, Chair USTAG	NPES
Debbie Orf, Secretary	NPES
Bob Chung	RIT
Jim Coleman	NAPIM
Joe Fazzi	IDEAlliance
Chris Fegle	Kodak
Fred Hsu	RIT
Heath Luetkens	CGS
Lee Ornati	Mitsubishi Imaging
Dick Presley	Kodak
Danny Rich	Sun Chemical
Steve Smiley	Vertis Communications
Larry Warter	Fujifilm USA

#### 2. Review and approve Agenda (SC3 N 1149)

The committee reviewed the agenda which had been distributed prior to the meeting. The following changes were made to the agenda.

- Discussion of F\* was added to number 7, review of US comments on 2<sup>nd</sup> CD of ISO 12647-8

Under Other Business the following items were added:

- Review and resolve comment on TR011
- Discuss the possibility of having a general CGATS/USTAG meeting to address issues other than those pertaining only to CGATS SC3 and SC4

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

### 3. Review and approve Minutes of the November 2-3, 2009 meeting (SC3 N 1146)

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

### 4. Review status of action items from the November 2009 meeting (SC3 N 1147)

AI #	Action Item	Status
SC4-09-25	<b>Nelson</b> will revise the language on section 2 of this document and transmit to <b>Cheydleur</b> for discussion and approval.	Completed.
TAG-09-26	<b>McDowell, Birkett</b> and <b>Spontelli</b> will work on a document to forward to TC130 WG3 in support of paper correction showing that both correction techniques produce similar results and describing the tools used.	Open. DQM asked for input but has received nothing to date from Spontelli and Birkett
TAG-09-27	<b>Cheydleur</b> and <b>Presley</b> to create and measure blank media to see in sheet variability	Cancelled.
SC4-09-28	By January 10, Goodman will incorporate suggestions from today's meeting into the CtP plate document. With help from <b>Pope, Ornati, Warter, Birkett, Presley, Suffoletto, Goodman, Schroeder,</b> and <b>Sigg</b> , Goodman will prepare a new draft for circulation to the committee for additional input.	Open.
SC4-09-29	<b>Smiley</b> and <b>Warter</b> will write an introduction and create a modified scope for the Near Neutral Calibration Methodology using G7 Neutral Print Density Curve document.	Completed.

### 5. Review McDowell Summary of USTAG/CGATS Substrate Experiment and possible follow-up (USTAGN3634)

McDowell reported that the M0, M1 and M2 measurement data had been compiled into three individual spreadsheets that are available for anyone to use (USTAGN3558-3560). These included spectral data, and the computed CIE XYZ and LAB data.

In his summary report (USTAGN3634) he offered the following observations and conclusions:

- Despite cautions in existing standards on the measurement of materials containing OBA, there is a wide variation in the amount of OBA used in graphic arts papers and the amount of OBA used appears to be increasing. This trend makes inclusion of measurement data with uncontrolled amounts of UV illumination (M0) unreliable. As shown in Sheet 1 of USTAGN3633, the tolerance on matching requirements using such measurements needs to be increased to at least a Delta-E of 10 unless the OBA content of the paper is restricted (and adhered to).
- For comparisons of substrates (e.g. ISO 12647-7 and ISO 12647-8) with varying amounts of OBA, measurement conditions M1 or M2 are far better choices and values for both should be in all new standards and/or where materials are being compared. An M0 instrument is permitted to have UV content anywhere between M1

and M2, or even have more UV than M1 but that is not probable.

c. Uncertainty of measurement and within sheet uniformity is a real issue. In the M1 measurement data the two substrate patches (ID 1 and 1367) varied from a Delta-E of 0.1 to 0.65 with an average of 0.29 across the 13 papers. When all 29 duplicate patches of the IT8.7/4 target are evaluated, the average Delta-E is 0.33 and the max is 1.6.

d. The tristimulus correction technique seems to provide a reasonable adjustment of the data. However, in some cases the uncertainty of data, as evaluated by the duplicate patches, is of the same order of magnitude as the differences in predicted vs. measured data. In all cases the predicted data is closer than a characterization data set for a different substrate. However, if the substrate difference is a Delta-E of less than 1.5 to 2.0 the correction is probably not worthwhile.

He also noted that subsequent to the analysis of the test data he had used the tristimulus correction technique "backwards" to predict M1 data based on either M0 or M2 data using the known value of the substrate under M1 measurement conditions. This seemed to do a reasonable job of predicting M1 data, although methods of obtaining M1 data for the substrate are not obvious.

Dick Presley had created pictorial images on several of the substrates used for the test. These were viewed in a light booth and the visual observations correlated with the measurement data.

McDowell thanked Cheydleur, Smiley and Presley for all the work done to create and measure these samples.

During discussion of the effect of optical brightening agents (OBAs) Danny Rich described the absorption and emission bands and their relationship to the CMY ink reflectance's. His chart is attached.

## **6. Review of Proposed US comments on 2<sup>nd</sup> CD of ISO 12647-8 (USTAGN3641) and F\* question**

*Graphic technology – Process control for the production of half-tone colour separations, proof and production prints – Part 8: Validation print processes working directly from digital data*

This document was first balloted as a CD as part of the NWI ballot (TC130N1472). Although the NWI was approved, the accompanying document was not approved as a CD. Since then a draft CD2 has been reviewed within TC130 WG3 and this was the basis for the CD2 distributed as TC130N1588. The original due date was 3/22/2010; however an extension to 4/5/2010 was requested by the US to allow review of the US comments in this meeting.

The committee reviewed the proposed US comments, which had been distributed prior to the meeting as USTAGN3641, and discussed the position that the U.S. should take during discussion of this document at the April meeting in St. Gallen. The final US National Body (USNB) comments are USTAGN3664.

During a discussion of section 4.2.1 Validation print substrate color and gloss it was suggested M0 should be changed to M1 where the substrate to be used for the production print is known, but not compatible with the printing process to be used to create the validation print. At issue is the fact that M1 did not exist at the time this document was written. It was agreed to include M1 by changing the text where appropriate to read "shall be M0 and should be M1".

During a discussion on defining F\* it was decided to replace Delta E sub c with Delta f and to add notes in section 4.2.2.2 Table 2 to define Delta H\*ab and Delta F and note commonality with Delta E sub c.

It was agreed the paragraph under 4.2.3 Short and long term repeatability is too long and difficult to understand. As a result of discussion it was agreed the entire paragraph should be deleted and the US comment was amended to read "all validation prints shall meet the basic requirement and variation tolerances only apply to production runs".

It was noted that sections 4.2.4.1 Color stabilization period and 4.2.4.2 Fading and light fastness are

contradictory. Section 4.2.4.1 states that the time required to reach mechanical stability against a rubbing action should not exceed 30 minutes. Then 4.2.4.2 states the validation print stabilization period shall be specified by the manufacturer. It was agreed that the colorant stabilization period should take the manufacturer recommendations into account and then not exceed 30 min. It was agreed the existing text should be replaced with a clause that puts stabilization limits on handling/measurement resistance and color change that the manufacturer shall specify and meet.

McDowell and Warter took an action offline to rewrite Clause 5 taking into account the concerns of those present. As a result of that effort, McDowell reported that since Clause 5, Test methods, did not clearly differentiate between the control target and various test patches it is suggested the title be changed to "Test objects" with the following sub-clauses:

- 5.1 System validation
- 5.2 Validation print control strip
- 5.3 Additional test objects

New text was provided for all of Clause 5 to be included with the USNB comments and the committee agreed that these changes reflected the feelings of those present.

During a discussion on validation print creation site certification contained in Annex B it was suggested that the entire annex be deleted. It was felt that as long as the color requirements are met there is no requirement that a site has to have a certified system. There was also a concern that this does not define certification and therefore should not be included in this document. ISO has very stringent requirements relating to certification and it is believed that Annex B does not meet those requirements. It was agreed, however, that this annex provides important information and that making it an informative annex would adequately address this concern.

It was suggested that many of these recommended changes should also be reflected in the next revision of ISO 12647-7.

**Action Item TAG-10-01: McDowell** will prepare the USNB comments on ISO 12547-7 CD2 for submission to ISO and circulation to CGATS and the USTAG.

#### **7. Review updated Recommended Industry Practice document: *Color characterization of a printing system***

Cheydleur reported that there are 3 existing Technical Reports regarding creating characterization data for reference printing conditions. These reports are based on the use of multiple labs and specialized knowledge. There has been a request to prepare something more understandable for the layman; therefore, the goal here is to create a document that illustrates a simple process to create color characterization data for an individual printing device or printing site. This is not recommended for use by groups who are developing color characterization data sets that may be used by a broad industry segment.

The document (SC4N1076) prepared by Cheydleur and Nelson was discussed and appropriate edits made during the meeting.

**Action Item SC4-10-01: Cheydleur** will clean up the Recommended Industry Practice for color characterization of a printing system document and provide to Orf to be balloted to the committee.

#### **8. X-Rite Presentation on new measurement standard**

Cheydleur reported on work by X-Rite that will provide closer agreement among the various classes of spectral instruments provided by X-Rite. Historically the current X-Rite line of equipment was developed partially in the US and partially in Europe by the predecessor companies. This resulted in differences in traceability of the primary standards used for design and calibration. This has been solved and X-Rite will soon be providing guidance and tools to allow a better match between the various instrument classes (see CGATS N 1163)

#### **9. Universal Characterization Data**

**a) Review Zwang/Steinheart letters re Universal Characterization Data (TC130N1607)**

The background on the letters from Zwang (Ghent Workgroup) and Steinhart (IDEAlliance) re a Universal characterization data set were reviewed. It was noted that this item is now on the agenda for the TC130 WG3 meeting in Switzerland. In discussions of the possible scenarios, it was agreed that if WG3 did not initiate work to follow-up on these requests/proposals that the US would be prepared to initiate a NWI proposal to create a Technical Specification documenting the IDEAlliance proposed Universal characterization data set. This would be a US National Body proposed NWI rather than a NWI out of committee. It was recognized that regardless of the approach used there would be discussion and modifications of the details before a document was finalized.

**10. Review status of CxF and input to ISO standard**

No document was presented at this time. Cheydleur reported that at the ECI meeting Drummer raised the question of CxF not being an open source piece of material. Cheydleur will address this subject in Switzerland when the question is raised there.

**Action Item TAG-10-02:** Cheydleur and McDowell to complete the ISO declaration form for X-rite's identification of the limitations on use of CxF 3 in ISO standards.

At the FOGRA color management conference, Adobe discussed CxF as a component of PDF/X metadata and how it might work.

**Action Item TAG-10-03:** McDowell will provide word docs of ISO 12642 (Characterization targets) and ISO 12643 (Scanner targets) to Cheydleur who will create custom resources as potential parts of ISO 17972.

**Action Item TAG-10-04:** Cheydleur will have a draft of TC130 ISO 17972-1 (the base document that shows the relation of ISO 17972 and CxF) ready by April 9 for circulation to WG2.

**11. Review US position re ISO 14861 and German comments on NWI and Working Draft (TC130N1575) ISO 14861 Requirements for colour proofing systems using electronic displays**

Lutkens (editor of ISO 14861) presented the consolidated comments on the NWI ballot for review by the committee in preparation for discussions in St Gallen. The fundamental change requested by the Germans was not to reference 12646 in this document. The committee agreed that the USTAG position is anything that the monitor manufacturer provides should go into a revision of 12646 and everything else should be put into ISO 14861. One issue that has arisen in discussions with the chair of TC130 WG3 is that if it is agreed there should be a revision of ISO 12646, an editor is needed. Lutkens reported that he has agreed to be editor for a revision of ISO 12646.

**12. Status of :**

**a) ISO 15076 ICC Spec**

ISO 15076 has been submitted to ISO/CS where it is now undergoing final editing in preparation for publication.

**b) ISO 15930-7 and ISO 15930-8 (PDF/X-4 and PDF/X-5) Minor Revisions**

ISO 15930-7 *Graphic technology — Prepress digital data exchange using PDF — Part 7:*

*Complete exchange of printing data (PDF/X-4) and partial exchange of printing data with external profile reference (PDF/X-4p) using PDF 1.6*

ISO 15930-8 *Graphic technology — Prepress digital data exchange using PDF —Part 8: Partial exchange of printing data using PDF 1.6 (PDF/X-5)*

The FDIS ballots have gone out and are due April 15. The official close is May 9, 2010.

**c) ISO 16612-2 VDP Spec**

ISO 16612-2 *Graphic technology – Variable data exchange – Part 2: Using PDF/X-4 and PDF/X-5 (VDF/VT-1 and PDF/VT-2)*

The document has been submitted to DIN for submission to ISO/CS for final publication.

**d) ISO 14066 (TC 207/SC 7 DIS re Greenhouse Gas issues)**

ISO/DIS 14066, *Greenhouse gases – Competence requirements for greenhouse gas validation teams and verification teams*

This document has been balloted to experts and observers of TC130 TF1 – Carbon Footprinting. The ballot is due May 7, 2010. The official close is June 7, 2010.

**13. Review and resolve comments on IT8 7.3 and 7.4**

These documents were balloted within CGATS for reaffirmation. Comments were reviewed and resolved on both documents which can now be reaffirmed. It was agreed that it would be worthwhile to review the patch values of IT8.7/4 and identify additional patches that should be considered for inclusion in a revised (larger) target.

**Action Item SC4-10-02: Orf** to place a note on the cover of the electronic version of IT8.7/3 and on the NPES website noting that IT8/7.3 is deprecated and IT8.7/4 should be used for all new work.

**Action Item SC4-10-03: Cheydleur and McDowell** will put out a call for suggestions for additional patches that are needed in a characterization target that are not included in the present IT8.7/4 target.

**14. Activity status reports**

**a. SWOP**

No Report

**b. SNAP**

No Report

**c. GRACoL**

No Report

**d. FTA**

No Report

**e. IDEAlliance Print Properties Committee**

Fazzi noted that Mike Ruff made a presentation at the PCC meeting on the current 12647-5 which he will provide to Orf for circulation to the committee.

He requested that the USTAG initiate a revision of ISO 12647-5 and indicated that Mike Ruff will volunteer to be the document editor. The committee agreed to this proposition.

He reported that there are display graphics for wide format web inkjet that is clearly of a different resolution domain than most traditional inkjet work. The question was raised, should we develop a standard for display graphics? It was agreed to initiate this in CGATS SC4, develop a draft document and then move it forward into TC130.

IDEAlliance is working on a wedge for a test target for screen printing that falls within the definition in

12647-8. It was agreed that this should be part of the revision of the screen printing document that Ruff is working on.

The G7 spec is being worked on and will be presented to CGATS at the July meeting in Rochester.

## **15. Other business**

### **a. Review and resolve comment on CGATS TR011**

The only comment on the reaffirmation ballot of CGATS TR011 was from Bob Chung who wanted pointers to specific characterization data added. In discussions of Bob's request there were objections to the addition of pointers to specific characterization data but it was recognized that this document was created prior to the establishment of standard characterization data (reference printing conditions) and their widespread use. Addition of this aspect of the current workflow would be beneficial to CGATS TR011. SC4 accepted the offer of Bob Chung to lead a small group to revise this document to incorporate current practice (e.g. characterization data, etc.)

**Action Item SC9-10-01:** Orf to send out notice to invite anyone interested in being part of this revision of CGATS TR011 to contact her.

**Action Item SC9-10-02:** Chung to provide a first draft of a revised CGATS TR011 by October meeting.

### **b. Discuss the possibility of having a CGATS/USTAG meeting to address issues other than those pertaining just to CGATS SC3 and SC4**

McDowell pointed out that this series of meetings has been specifically identified as dealing with issues relating to CGATS SC3 and SC4 and the USTAG to TC130. However, there is no forum to discuss general CGATS issues. He suggested that we identify this as a general CGATS/USTAG meeting in which issues relating to any CGATS SC can be discussed (with prior agenda notification). The committee agreed that going forward this should be a joint USTAG/CGATS meeting.

**Action Item CGATS-10-01:** Orf will send out a note to the full CGATS membership indicating that we are opening the scope of this meeting to include items that impact any CGATS SCs as well as USTAG to TC130 issues.

## **16. Date and location of next joint meeting**

The next IDEAlliance Print Properties Committee meeting will be held July 13-14, 2010 at RIT in Rochester, NY. The next joint meeting of CGATS and USTAG/TC130 will be held July 15-16, 2010 at the same facility.

## **17. Adjournment**

There being no further business, the meeting was adjourned. The committee expressed their appreciation to Kodak and Dick Presley for providing coffee, lunches and meeting space.

