

**ISO/TC 130/WG2 — Prepress Data Exchange
36th Meeting
Holiday Inn, Paris La Villette
Paris, France
16 April 2008**

1 Call to Order - Welcome - Introductions, Roll Call of Experts, Announcements

The meeting was called to order at 9:00 a.m. by David McDowell, Convener. The following technical experts were in attendance and introduced themselves:

David McDowell, Convener	NPES	USA
Mary Abbott, Secretary	NPES	USA
Nicholas Bonner	Océ	France
Ray Cheydleur	X-Rite	USA
Tim Donahue	Eastman Kodak Company	USA
Olaf Drümmer	Callas Software	Germany
Yuji Egawa	DaiNippon Printing Company	Japan
Pascale Ginguéné	Screen Angel	France
Phil Green	London College of Communication	UK
Wilhelm Heid	MAN Roland	Germany
Jyri Hujanen	Hansaprint Ltd.	Finland
Dov Isaacs	Adobe	USA
Akihiro Ito	Fuji Xerox	Japan
Hajime Kaizaki	Fujifilm	Japan
Andy Kraushaar	Fogra	Germany
Heath Luetkens	CGS	USA
Makoto Matsuki	NTT Quaris	Japan
Masaaki Matsuo	Toyo Ink	Japan
Bruno Mortara	ABTG	Brazil
Laurie Pate	BSI	UK
Craig Revie	Fujifilm	UK
Danny Rich	Sun Chemical/NAPIM	USA
Steve Smiley	Vertis/FTA	USA
Yuken Tanabe	Epson UK	UK
Genji Tao	JPMA	Japan
Hitoshi Urabe	Fuji Film	Japan
Erwin Widmer	Ugra	Switzerland
David Williams	Ricoh	USA
Dan Wilson	CGS	USA
Tomonori Yuasa	Muroran Institute of Technology	Japan
Karl Meineki		
Frank Diechhoff	BVDM	

2 Review and approve agenda

The committee reviewed the draft agenda (N 1281), which had been distributed prior to the meeting. The following were added:

- Under 7, report from TF 2
- Under 13, proofing approval metadata
- Under 14, liaison report from Ecma

The agenda was approved as amended (N 1281R).

3 Identification of new documents

The WG2 documents listed below were identified as having been distributed since the last meeting (including documents provided at this meeting). Documents not yet distributed will be posted on the WG2 portion of ISO Livelink.

- N 1267 Report to 2007 Plenary in Tokyo
- N 1268 Errors in ISO 12639:2006, noted by Japan during translation into JIS standard
- N 1269 Read-Me file for ISO/WD 12640-5 from Holm
- N 1270 Report on CIE work impacting TC 130
- N 1271 CxF2 presentation by Cheydleur
- N 1272 Minutes of 24 September 2007 meeting in Tokyo
- N 1272a Attendance List for 24 September 2007 meeting
- N 1273 Action Items from 24 September 2007 meeting in Tokyo
- N 1274 Email distributing information on January 2008 PDF-related meetings of TC 171/SC2; 11/8/07
- N 1275 Ifra Special Report, "Inter-Instrument Agreement in Colour and Density Measurement"
- N 1276 Email re establishment of TC 130 WG 9, joint with TC 42, to work on ISO 12640-5; 12/6/07
- N 1277 Contact List for WG2 and task forces as of January 2008
- N 1278 Letter to PODi inviting them to participate in the development of ISO 16612-2; 12/13/07
- N 1279 Meeting notice for April 2008 meeting in Paris; 2/1/08
- N 1280 Call for images for ISO/WD 12640-4
- N 1281 Draft Agenda for 16 April 2008 meeting in Paris
- N 1282 Status report on TC 130 WG 2 projects
- N 1283 Email transmitting info re availability of XPS; 3/11/08
- N 1284 Report from Urabe on status of ISO 12640-4
- N 1285 ISO/WD 12640-4, Draft #5, April 2008
- N 1286 Email distributing documents relating to ISO 28178 to WG 2; 4/15/08
- N 1287 X-Rite letter re ISO 28178
- N 1288 Publication draft of ISO 28178
- N 1289 Chairman's report from WG2/TF2 to WG2, April 2008
- N 1290 Liaison report from Ecma TC 46 (XPS) to WG2, April 2008
- N 1291 Final resolution of comments on ISO/DIS 28178 [get from DQM]
- N 1292 Presentation by Cheydleur on CxF2 and its relationship to standards
- N 1293 Attendance list for 16 April 2008 meeting

4 Review and approve minutes of September 2007 meeting

The committee reviewed the minutes of the 24 September 2007 meeting held in Tokyo, Japan (N 1272). There being no corrections, the minutes were approved as distributed.

5 Review status of action items from September 2007 meeting

The committee reviewed the action items from the September 2007 meeting (N 1273), noting the status of each as follows:

#	Action Item	Status
07-02	The following editing committee will revise ISO DIS 28178 based on decisions made at this meeting: Isaacs, Cheydleur, Iobst, Yuasa, McDowell (Chair) , and will provide the revised document to Abbott for a 2-week review.	Completed

#	Action Item	Status
07-03	Abbott will circulate the revised version of 28178 to WG2 experts for a 2-week review prior to submission to ISO/CS for publication.	Completed
07-07	McDowell will discuss with the ISO editor the proper way to make identified corrections to ISO 12639.	Closed; ISO editor said it can be revised, can issue a corrigendum, or issue and amendment. A group will discuss which means they feel is appropriate.
07-08	Urabe, Holm, Revie and Kraushaar will review the XYZ images of ISO 12640-2 for possible errors, and report to the committee at the next meeting.	Completed. A report will be given at today's meeting.
07-09	Holm, Urabe, and Kraushaar will provide data that will accompany the scene-referred images for ISO/WD 12640-5, and the state the images will be in (a description of what they will represent).	Open Transferred to JWG9 as 08-01
07-10	Cheydleur will report at the Spring WG2 meeting, on the status of a possible standard based on the CxF2 work.	Completed at today's meeting.

Relative to Action Item 07-08 above, at the last meeting it was reported that someone had compared the XYZ and RGB images of ISO 12640-2 and noted differences that were not attributable to the differences in encoding (16 bit vs. 8 bit). Revie investigated the issue and in his report reminded the group that when these images are viewed or compared an ICC profile must be used to convert from the encoded data to viewable data. For the RGB images this is not a problem, as standard RGB profiles are available. However, there is not a standard XYZ profile that can be used. When the XYZ profile that was used (in the test that was reported as providing erroneous results) was examined, it was discovered that there was an error in the white point identification. When a new profile was prepared and the images were compared they were a satisfactory match. However, there is concern that others may also have similar problems.

Holm and Revie would like to make the XYZ profile available through ICC. It was agreed we should also amend ISO 12640-2 to either add this profile as an informative annex or provide a pointer to it on the ICC website.

Action Item 08-01: Urabe, Revie and McDowell will prepare an amendment to ISO 12640-2 to include an XYZ profile, or a pointer to it, and also to make the profile available through the ICC profile registry.

6 Review status of WG 2 documents and pending projects

A written report of the status of the WG 2 work (WG 2 N 1282) was distributed by e-mail. The Experts were asked to review this report and provide any additions or corrections to Abbott.

6a Periodic reviews

No WG2 documents are currently undergoing ISO Systematic Review.

6b ISO 15930-7

McDowell reported that ISO 15930-7 was published 1 March 2008.

6c ISO 15930-8

McDowell reported that the publication proof of ISO 15930-8 had been reviewed and returned to ISO/CS and it is expected that the document will be published very soon. [Secretary's note: ISO 15930-8 was published on 1 May 2008.]

7 Report on status of WG2 Task Forces and Joint Working Groups

7a Task Force 2 (PDF/X)

Martin Bailey, Chair of TF 2, provided a written report on the status of the task force work (N 1289).

In it he reports that WG2/TF2 has completed its work on 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*, and 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 task force has no immediate plans for development of additional PDF/X conformance levels. There are discussions in TC130/WG2/TF3 (Variable data printing) that may lead to requests for one or more new conformance levels at a later stage.

The committee thanked Martin Bailey for his leadership of TF 2 and the members of the task force for their work on these parts of the PDF/X family of standards.

7b Task Force 3 (Variable data exchange)

Donahue reported that the development of ISO 16612-2, *Graphic technology — Variable data exchange — Part 2: Using PDF/X-4 and PDF/X-5 (PDF/VT)*, is well under way. Since the September meeting, several conference calls have been held to discuss technical issues and revised drafts have been issued. The task force met earlier this week to review the current draft.

Donahue noted that PDF/VT is based on PDF/4 and PDF/X-5 as well as a proposed extension to PDF to add a data structure to enable multiple documents to be carried in a single file. An open issue still under study is the mechanism to allow proper support of mixed printing conditions within a file.

During the TF3 meeting earlier in the week, a partial technical review of draft #6 of the proposed document was accomplished. A revised draft is being prepared for WD circulation within the task force. The task force will continue to hold conference call discussions with the goal of having a document ready for CD ballot following the fall meeting.

It was pointed out that the committee would like more input from both vendors and potential users of the standard and ways to accomplish the publicity necessary to enable this were discussed.

Action Item 08-02: Drümmer, Donahue and Isaacs will develop an article to be placed in the ISO Bulletin and other publications regarding the PDF/VT work.

7c JWG 9 – ISO 12640-5

This joint working group will be meeting later today to continue the development work on ISO 12640-5 which will be a set of scene-referred images.

Urabe reported that TC 42 WG 18 discussed the need for a new color space encoding for these images. One issue is dynamic range and headroom. A second issue is bit-accuracy. Current encodings may not support both dynamic range and bit-accuracy. A final decision on the encoding to be used has not been reached.

8 Report on progress of ISO 12640-4 (wgRGB/SCID)

Urabe provided a status report on ISO/WD 12640-4 (N 1284). He noted there had been a request for more images including flesh-tone, high-key, and low-key images, which could be printed together in order to make a subjective evaluation. He displayed images he had provided, as well as images provided by Jack Holm and Eric Walowit. He noted that the six additional images he had selected from those submitted would satisfy the recommended need. This will result in 14 natural images.

He discussed the image processing procedure used on all the images. He noted that the current processed images can be downloaded from <http://ampac.mech.muroran-it.ac.jp/ISO12640-4/>.

He noted that draft #5 of the document (N 1285) had been distributed recently.

McDowell reported that as a result of correspondence with both ISO and Adobe, it appears it will be permissible to use "Adobe" in the name of the standard under prescribed conditions. One other issue noted is that if the standard includes a profile, it must be an Adobe profile, but Adobe profiles are copyrighted. However, it was felt that if the Adobe profile is embedded in each image, it is likely Adobe will give permission for its use.

Action Item 08-03: McDowell will request permission from Adobe to embed the Adobe profile within each of the images with the proper credit noted.

At the last Plenary a resolution was approved to permit submission of ISO 12640-4 for NWI and concurrent CD ballot, once the committee feels the work is ready. As a result of discussion, the committee agreed that the work is now ready for NWI and CD ballot. It was decided to circulate low resolution TIFF images containing an ICC profile with the document balloted.

Action Item 08-04: Urabe will prepare the images to be included with the ballot as TIFF files with the word "DRAFT" across each image.

Action Item 08-05: Urabe will provide a Word file of the document to McDowell and Abbott, who will format the text of the standard for ballot.

Action Item 08-06: McDowell will discuss with DIN and ISO if it is permissible to simply include a link to the university website for the ISO/WD 12640-4 images that are part of the CD ballot.

The committee thanked Urabe and Holm for their excellent work on this standard.

9 Color data encoding

9a Report of editing committee on ISO 28128

McDowell noted that ISO/DIS 28128 was approved with comments and no negative votes in March 2007. However, during the review of comments in Thailand the working group decided that additional verification of the XML implementation was desirable, and an editing committee was formed to address this issue.

The editing committee has now completed their verification. McDowell reported that he had recently distributed information to the committee indicating that X-Rite has reviewed the standard and has been able to successfully map between ISO 28178 and CxF 2.0. A copy of the edited draft to be sent for publication was provided to the

committee. Documents N 1286, N 1287, and N 1288 are relevant. It was noted that the dtd and the schema will be published as a normative part of the standard.

It was confirmed that there is a product currently on the market that reports data in CGATS.17 format. The CGATS.17 ASCII format differs only in a couple of minor areas from ISO 28178.

9b Discussion of potential reactivation of work on WI 17972

It was noted that WI 17972, *Graphic technology – Prepress data exchange – Colour data exchange format (cdxf)* was dropped for lack of progress. However, there is a renewed interest in this work.

Cheydleur presented updated work done by X-Rite on CxF 2.0 to develop a standard format/schema that could be developed as an ISO standard (N 1292). He noted that progress has been made since he reported at the last meeting.

He noted that CxF 2.0 is fully compliant XML which validates properly and is backward compatible. It maps both ASCII and XML of the previous CGATS.17 and 28178. The schema, supporting documentation and use case files are publicly available at ColorExchangeFormat.com. Also, there is a royalty-free licensed SDK tool available from X-Rite.

Cheydleur reviewed the market need and applications for CxF and its advantages, as well as the user requirements it satisfies.

He requested that the committee consider the reactivation of ISO 17972 as a work item and that a draft of the standard including element definitions be developed. He noted that ISO TC 38 (Textiles) had developed a new work item proposal for an XML data exchange format. However, since the work on ISO 17972 is further along, a liaison has been formed with TC 38 to facilitate a "bridge" between these two work items. There may be other groups interested in the work, as well.

There was discussion regarding the scope of the standard. Consideration was given to identifying the required and optional tags that would be needed for the exchange of various types of data (e.g. ICC profile data, target data, etc.). These would build upon the X-Rite CxF2 specification, and would provide subsets for its use specific to graphic arts applications. This would be separate from work done by TC 38 (or others), whose needs may differ, but would allow the committees to cooperate where there are common needs.

As a result of considerable discussion, it was agreed that a new work item to reactivate ISO 17972 should be circulated for ballot. The committee developed the following project description:

"This international standard defines data exchange conformance subsets of CxF2 to exchange graphic technology measurement data and associated metadata. These conformance subsets do not include content data but focus on colour, test and measurement data necessary to support graphic technology applications."

The committee identified the following areas needing conformance subsets:

- scanner target characterization data
- characterization data sets
- target definition
- target measurement data
- substrate properties
- ICC profiles
- ink testing data (i.e. ISO 2846)
- press or proof acceptance/conformance data reports
- calibration data
- spot colour process aims

Action Item 08-07: Cheydleur, Smiley and McDowell will prepare a sample CxF file containing multiple data sets relating to an ICC Profile for review prior to the next meeting.

Action Item 08-08: McDowell will request that work relating to CxF be initiated at Stage 0 as ISO 17972.

In closing, it was noted that the relevance of CxF goes far beyond graphic technology applications, which is highlighted by the interest of TC 38. Cheydleur noted that at some future date, X-Rite will likely be interested in turning over CxF to ISO for development as a standard, assigning the rights to ISO. However, at this early stage, X-Rite is continuing to develop the work, in cooperation with the standards activities, in an attempt to ensure that concerns and needs of the industry are adequately addressed as quickly as possible. Any activity to move CxF itself into ISO would be a separate work item.

10 Report on status of joint work with ISO TC 171

10a SC2/WG5 - ISO 19005-2 (PDF/A-2)

McDowell reported that the PDF/A work is being done in TC171/SC2/JWG5 (in which TC 130 participates).

He noted that the committee is working on ISO 19005-2, *Document management — Electronic document file format for long-term preservation — Part 2: Use of PDF 1.7 (PDF/A-2)*, which is based on PDF 1.7. A working draft was circulated within JWG5 for comment, and resulted in a large number of comments, which will be addressed at their next meeting.

10b SC2/WG7 – ISO 32000 (PDF)

McDowell reported that ISO 32000, *Document management – Portable document format – PDF 1.7*, has been approved and has been submitted to ISO for publication. It is technically identical to PDF 1.7, but has been revised to better match the ISO document formatting and style requirements. During this revision Adobe also made many changes to the wording of the Adobe version to clarify requirements and remove ambiguity.

11 Report on status of CIE work impacting TC130/WG2

11.1 CIE Division 8

McDowell and Green reported that the key work item in CIE Division 8 is the work in TC 8.10 which is collecting information about lighting information in typical offices. The work is moving slowly and the current activity is largely focused on developing a procedure for collecting and analyzing such data.

11.2 CIE TC 1-57 (Colorimetry standards)

McDowell reported that that TC1-57 is charged with developing CIE standards for colorimetry based on the work documented in CIE Publication 15. It is felt that documenting these computational requirements in individual ISO/CIE standards will provide improved accessibility and easier referencing by the larger standards community.

12 Report of TC42 related technical work of interest to TC130/WG2

12a ISO/TC 42 JWG 20 – Digital Cameras

Nothing new to report.

12b ISO/TC 42 JWG 21 – Densitometry

The revisions of ISO 5-1, ISO 5-2, ISO 5-3 and ISO 5-4 were circulated for NWI and CD ballot. The drafts were approved as new work items and as CDs with comments. The comments will be addressed at a meeting of JWG 21 later this week.

12c ISO/TC 42 JWG 22 – Color Management

Nothing new to report.

12d ISO/TC 42 JWG 23 – Extended color encoding

ISO/WD 22028-4, *Photography and graphic technology — Extended colour encodings for digital image storage, manipulation and interchange — Part 4: European Colour Initiative RGB colour image encoding (eciRGB (2008))* has been distributed to JWG23 for review and comment by July 1, 2008. It is the intent of JWG 23 to send ISO 22028-4 for DTS balloting by September 2008.

Those interested may contact Mary Abbott for a review copy.

12e ISO/TC 42 JWG 24 – Revision of ISO 3664, Viewing conditions

The document is currently in DIS ballot. There has been discussion of a proposed annex to ISO 3664 addressing compliance measurement, which was submitted after preparation of the document for DIS ballot. It is possible this may be included in the standard, or may be developed separately as a technical report or white paper. This will be discussed at the WG 3 meeting this week.

13. New topics

Proofing approval metadata

Revie presented a UK proposal for a "proof approval record", which would be defined by an extension to the soft proofing standard (or related part) to include some kind of standard proofing ticket, perhaps using the Ghent Workgroup (GWG) soft proofing ticket as a starting point. The purpose is to allow effective communication of metadata about a soft proof (e.g. who viewed the proof, under what conditions they viewed it, did they approve or disapprove the proof).

The committee discussed this issue, and it was agreed that we should encourage the GWG to develop a specific proposal for consideration at the next meeting of WG2.

Action Item 08-09: Revie will prepare a specific proposal relating to the handling of proof approval metadata (including one or more use cases, a proposed approach, etc.) for discussion at the next meeting.

14. Liaison Reports (written reports requested)

14a International Color Consortium (ICC)

Green reported that the profile registry is now up and running, and several profiles have been registered. ICC is working to revise the format of the characterization data registry.

14b European Colour Initiative (ECI)

Drümmer reported ECI has received permission from ISO to use the naming convention for their current profiles, but they will change that naming convention for future profiles.

The ECI profiles will be offered on the ICC profile registry soon.

14c Ifra

No report.

14d Ecma

The application for a Category D Liaison between Ecma TC 46 and TC 130 WG 2 was approved by the ISO Technical Management Board. A written liaison report was provided by Martin Bailey (N 1290). There is a URL in the report that takes one to a site where more information about the XPS work can be found, including a current draft.

15. National Body Activities (reports invited)

No national body reports were presented.

16. Future meeting plans

WG2 TF3 will need 2 days during the Fall 2008 meeting, preferably Monday and Tuesday.

WG2 will need 1 day in conjunction with the Fall 2008 meeting, which is scheduled for September 22-27 in the Netherlands. Wednesday, following the TF 3 meeting was proposed.

17. Adjourn

The committee thanked SICOGIF and Ms. Pascale Ginguene for their support of the meeting. There being no further business the meeting was adjourned.