

**ISO/TC 130/JWG 9 N 030**

**ISO/TC 130/JWG 9 – ISO 12640-5  
4<sup>th</sup> Meeting  
21 September 2009  
Beijing, China**

**1. Call to Order - Welcome – Introductions - Roll Call of Experts - Announcements**

The meeting was called to order at 14:10 by David McDowell, Convener. The host (the Standardization Administration of the PRC (SAC), the National Technical Committee 170 on Printing of the Standardization Administration of China (SAC/TC 170), the General Administration for Printing and Publishing (GAPP) and the Printing Technology Association of China (PTAC)) was thanked for the lunch, facilities, food and all the preparations.

The following technical experts were in attendance and introduced themselves:

David McDowell, Convener	NPES	USA
Mary Abbott, Secretary	NPES	USA
Debbie Orf, Secretary	NPES	USA
Larry Warter	Fuji Graphic Systems USA	USA
Victor Asseiceiro	GMG Americas	USA
Alessandro Beltrami	Assn. Arti Coraficne Bo	IT
Clark Chung	Heidelberg China	China
Phil Green	LCC	UK
Aran Hansuebsai	TISI	Thailand
Wengiong He	Shenzhen Polytechnic	China
Mei Ling Ho	GMI Graphic Measures Intl.	China
Andy Krashaar	Fogra	Germany
Zhen Liu	University of Shanghai for Science and Technology	China
Makoto Matsuki	NTT Quaris	Japan
Bruno Mortara	ABTG	Brazil
Koichi Osada	NPMA	Japan
Mary Lou Pelaprat	ISO/CS	Switzerland
Craig Revie	Fujifilm	UK
Santi Songsermsawas	Color Group of Thailand	Thailand
Hiroaki Takita	Dai Nippon Printing	Japan
Hitoshi Urabe	Fujifilm	Japan
Xiaoxia Wan	Wuhan University	China
Erwin Widmer	Ugra	Switzerland
Yuanhong Zhu	Shenzhen Polytechnick	China

## 2. Review and approve agenda (N 026)

The committee reviewed the draft agenda (N 026), which had been distributed prior to the meeting. The agenda was approved as distributed.

## 3. Review and approve Minutes of the May 2009 meeting (N 020R)

The committee reviewed the minutes of the 16 May 2009 meeting held in Fort Worth, Texas, USA. There being no corrections, the minutes were approved as distributed.

## 4. Review Action Items of the May 2009 meeting (N 021R)

#	Action Item	Status
09-01	<b>McDowell</b> will provide instructions for uploading and managing the ftp site created for the purpose of submitting candidate images.	Completed
09-02	<b>McDowell</b> and <b>Urabe</b> will work together to transfer the images currently on the Muroran ftp site to the Kodak ftp site.	Completed
09-03	<b>Holm</b> and <b>Urabe</b> will document the process of making the images to be sure everyone is comfortable with the creation process.	Completed (N024 & ICC web site)
09-04	<b>Holm</b> , <b>Urabe</b> and <b>Revie</b> will prepare instructions on how to view the images for evaluation and comment.	Completed (N 025)
09-05	<b>Urabe</b> and <b>Revie</b> will draft a description of the synthetic images and provide it to the committee for review and comment.	Completed (N024 & N027)
09-06	<b>McDowell</b> will investigate (with Kodak and others) the need for and procedures concerning "property rights" permission.	To be done. Final answers not yet received.
09-07	<b>Urabe</b> and <b>Holm</b> will provide a revised draft by July 1 to be circulated for a 30-day comment period.	Completed (N 024)

## 5. Review of draft of ISO 12640-5 (N 024, N027, N028)

Urabe provided a status report on ISO 12640-5 explaining how scene-referred images can be used. He noted that 47 HDR (high dynamic range) images were submitted and of these 16 (N028) were chosen for further consideration. Experts at this meeting were asked to vote for their preferences on a printed sheet showing these images. It was pointed out there are very few images incorporating skin color represented in this group and that more images are needed from different ethnic groups.

Urabe proposes to remove some of the images because their dynamic range is too large for the current encoding system. The proposed photos to be removed are N2, N6, N8, N9, and N23. Image N13 will possibly be removed and N20 will be replaced. There is a copyright issue with using image N7 as it incorporates a Disney figure.

In discussion it was noted that the primary purpose of this standard is to provide a set of scene-referred images for use in the development and evaluation of color rendering algorithms. One issue that must be considered is that the current encoding range available for RIMM data is fixed point and it is possible that TC42 will have a floating point encoding available in 2-3 years. When the floating point encoding is available a larger dynamic range can be encoded. The option for us will be to revise this part of ISO 12640 or to add another part to the series in the next year or two. This may have an impact on the number of images selected and the selections themselves.

There was discussion on the number of images that should be used. The argument was made that having too many images would lead to fragmentation in comparison – different tests would select different subsets of the images. Others felt that a larger selection of images would offer a greater range of subject data. It was agreed that a large set would be useful as long as there was a smaller basic subset that could always be included to facilitate comparison.

It was noted there should be more images ready to evaluate at the upcoming ICC meeting being held in Albuquerque in November and comments/input can be obtained from the color experts at that meeting.

Urabe's proposal is to add average, dynamic range and adopted white into Table 2. He presented an example of the various methods of calculating dynamic range (see JWG9N027). There was a discussion on adding two measures of dynamic range. It was agreed to use absolute range (maximum vs. minimum values) and practical dynamic range (1%-95% percentile).

**Action Item 09-08:** Phil Green will provide the recommended numbers of percentiles for dynamic range to Urabe that have been used in the past.

Revie stated that the current working draft has 3 synthetic images, the first one (S01) is based on imaging data from 12640-3, Table B4. He pointed out that the data used for S02 changed to a new encoding creating the need for a new boundary plot. The figure (S02) illustrating this data set will be a sRGB illustration of the data with a warning that it is not to be confused with real data. It was agreed that there should be a detailed explanation in the annex of how this data was

created. The colour primaries of data set S03 were calculated by projecting AdobeRGB primaries on to the spectral locus or RIMM gamut boundary.

**Action Item 09-09:** Revie and Urabe will prepare a rationale for the use of the AdobeRGB to calculate colour primaries on the spectral locus.

TIFF/IT (ISO 12639) and TIFF/EP (ISO 12234-2) are the two choices available for the format to be used for the images in the final standard. TIFF/IT is the preferred method by Urabe (the editor).

It was agreed that as soon as we have a proposed image set, a working draft of ISO 12640-5 that incorporates the recommended image set will be prepared and distributed. In addition a reduced resolution version of the images (with the profile embedded) would be placed on a website (ICC website proposed), in a password-protected area, so that anyone in the working group could download and review them.

**Action Item 09-10:** Urabe will finalize the preliminary images and prepare a WD to be circulated by Orf.

**Action Item 09-11:** Green will set up a password-protected area on the ICC website in coordination with Orf (who is the ICC website administrator) where images can be reviewed for a 30-day period. Green will also create an evaluation (ranking) sheet for review of the images.

## **8. Review new action items**

The action items were reviewed and will be distributed to the committee along with the minutes.

## **9. Next meeting**

Informal discussions will be held at the ICC meetings in November and February. The next meeting of JWG9 will be held as part of the TC130 working group meetings, April 19-24, 2010 in Switzerland. A half day is proposed.

## **10. Adjourn**

There being no further business, the meeting was adjourned