

**ISO/TC 130/WG2 — Prepress Data Exchange
37th Meeting
Amstelveen, The Netherlands
25 September 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 |
| Elcio de Sousa | ABTG | Brazil |
| Frank Diechhoff | bvdm | Germany |
| Yuji Egawa | Dainippon Printing Company | Japan |
| Julio GarcioMaroto | Feigraf | Spain |
| Aran Hansuebsai | TISI | Thailand |
| Jack Holm | Color & Imaging Technology Consultant | USA |
| John Ibost | Newspaper Association of America | USA |
| Akihiro Ito | Fuji Xerox | Japan |
| Dianne Kennedy | IDEAlliance | USA |
| Andy Kraushaar | Fogra | Germany |
| Lucy Liu | Heidelberg China | China |
| Heath Luetkens | CGS | USA |
| Winnie Man | APTEC | China |
| Makoto Matsuki | NTT Quaris | Japan |
| Masaaki Matsuo | Toyo Ink | Japan |
| Karl Meinecki | bvdm | Germany |
| Bruno Mortara | ABTG | Brazil |
| Masayuki Nakajima | Tokyo Tech | Japan |
| Debbie Orf | NPES | USA |
| Koichi Osada | JPMA | Japan |
| Brenda Pang | Institute of Print Media Professionals | China |
| Craig Revie | Fujifilm | UK |
| Steve Smiley | Vertis/FTA | USA |
| Santi Songsermsawas | Color Group Thailand | Thailand |
| Bryan Sunderland | Q.C.I./BSI | UK |
| Genji Tao | JPMA | Japan |
| Roland Thees | IFRA | Germany |
| Supree Thongpatch | Color Group | Thailand |
| Hitoshi Urabe | Fujifilm | Japan |
| Larry Warter | Fujifilm USA | USA |
| Erwin Widmer | Ugra | Switzerland |
| Karin Winkelman | DIN | Germany |
| Cord Wischhöffer | DIN | Germany |

Wilco de Groot welcomed the committee on behalf of the Dutch National Standards Body.

The convener welcomed Debbie Orf, who will be part of the support team from the USA, supporting Mary Abbott. He also noted the presence of Cord Wischhöffer, Secretary of TC 130, and Karin Winkelman, who works with Cord supporting TC 130, and especially WG3 and WG 4.

2 Review and approve agenda

The committee reviewed the draft agenda (N 1303), which had been distributed prior to the meeting. The following were added:

- Corrected 10b to change "TC 36" to "TC 38"

The agenda was approved as amended (N 1303R).

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 1294 | Attendance List for April 16, 2008 meeting in Paris |
| N 1295 | Minutes of April 16, 2008 meeting |
| N 1296 | Action Items from April 16, 2008 meeting |
| N 1297 | Meeting notice for 25 September 2008 in Amsterdam; 5/27/08 |
| N 1298 | Liaison report from Ecma re XPS WD 1.2 |
| N 1299 | Not assigned |
| N 1300 | ISO/CD 12640-4 for ballot |
| N 1301 | Memo transmitting revised meeting schedule for September 2008; 7/18/08 |
| N 1302 | Response from Adobe re reference to Adobe RGB in ISO 12640-4 |
| N 1303 | Draft agenda for September 2008 meeting |
| N 1304 | Proposed corrigendum to ISO 12640-2 |
| N 1305 | Status report on TC 130 WG 2 projects, September 2008 |
| N 1306 | ISO 28178 final for publication |
| N 1307 | Final Resolution of Comments DIS 28178 |
| N 1308 | Proposal from Germany (Drümmer), "Suggestions for extending the PDF syntax (as of ISO 32000-1) in the upcoming ISO 32000-2 standard" |

4 Review and approve minutes of April 2008 meeting

The committee reviewed the minutes of the 16 April 2008 meeting held in Paris (N 1295). There being no corrections, the minutes were approved as distributed.

5 Review status of action items from April 2008 meeting

The committee reviewed the action items from the April 2008 meeting (N 1296), noting the status of each as follows:

| # | Action Item | Status |
|-------|---|---|
| 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 to also make the profile available through the ICC profile registry. | Completed. It was decided that a technical corrigendum would be appropriate. Draft wording for the corrigendum (N 1304) was circulated to the committee for review and comments. Edited text has been submitted to ISO for publication. |
| 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. | Discussions have begun and the item remains open. |

| # | Action Item | Status |
|-------|---|---|
| 08-03 | McDowell will request permission from Adobe to embed the Adobe profile within each of the ISO 12640-4 images with the proper credit noted. | Completed. Adobe legal department has reviewed and approved the inclusion of the profile. It was noted that all images of 12640-4 include the Adobe RGB profile (N 1302) |
| 08-04 | Urabe will prepare the images to be included with the ballot of ISO 12640-4 as TIFF files with the word "DRAFT" across each image. | Completed. Low-res images are included with the CD ballot. |
| 08-05 | Urabe will provide a Word file of ISO 12640-4 to McDowell and Abbott, who will format the text of the standard for ballot. | Completed. The document has been submitted for CD ballot. |
| 08-06 | McDowell will discuss with DIN and ISO if it is permissible to simply include a link to the Muroran university website for the ISO/WD 12640-4 images that are part of the CD ballot. | Cancelled. It was decided to include low resolution images as part of the CD ballot. |
| 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. | Completed. |
| 08-08 | McDowell will request that work relating to CxF be initiated at Stage 0 as ISO 17972. | Open. Will investigate whether this can be done by Plenary resolution or if a NWI ballot is required. |
| 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. | A proposal was made to Ghent PDF Workgroup which was very well received. They will update their proofing ticket format to include hard copy proofing and when they do so will consider how this can be made an ISO standard. Revie will give an update at this meeting. |

6 Review status of WG 2 documents and pending projects

A written report of the status of the WG 2 work (N 1305) was distributed by e-mail. The Experts were asked to review this report and provide any additions or corrections to Abbott. McDowell reviewed highlights of that report.

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

7a Task Force 2 (PDF/X)

McDowell reported that, with the publication of ISO 15930-7 and ISO 15930-8, the current work of TF 2 is essentially complete and the task force is inactive.

7b Task Force 3 (Variable data exchange)

Since the April meeting, eleven conference call meetings have been held to discuss technical issues relating to ISO 16612-2, *Graphic technology — Variable data exchange — Part 2: Using PDF/X-4 and PDF/X-5 (PDF/VT-1 and PDF/VT-2)*, which is currently at draft #8. The task force met for 2 days earlier this week to work on the current draft.

Mortara reported that the development of ISO 16612-2 is progressing well. Most of the stakeholders who are interested in the future implantation of the standard participated in this week's meeting. Both Mortara and Revie commented on the valuable input of Paul Jones of PODi regarding lessons learned from the PPML work.

Mortara also noted that work on the ISO 32000 version of PDF will add robustness and functionality to the PDF/VT work. Revie noted that the PDF/VT standard is intended to build a variable data solution that builds on top of PDF/X4 and PDF/X-5 (which allows external references). This allows for both variable and transactional data applications. This week's meeting dealt heavily with issues relating to caching information that is reused. It was also noted that PDF/VT is closely integrated with JDF, which is used for job control information. PDF/VT will control the relationship of the content data of the print job, while JDF will be used to control how the job will be printed.

The committee has agreed to another face-to-face meeting January 19-21 in Berlin, Germany. The goal is to finalize the document for CD ballot by the end of January.

TF3 is engaging the broader community through a Yahoo discussion group which is available at <http://finance.groups.yahoo.com/group/vPDF/>.

7c JWG 7 – ISO 15076 (ICC)

McDowell noted that JWG 7 is a joint activity of TC 130 and the ICC (International Color Consortium), with the responsibility of publishing ICC documents as ISO standards. The first of these, ISO 15076-1:2005 (*Image technology colour management – Architecture, profile format and data structure – Part 1: Based on ICC.1:2004-10*) is currently undergoing ISO Systematic Review.

He reported that the ICC has been working on a revision of the ICC Specification and is discussing whether this revision should go forward as a revision of ISO 15076-1, or should be developed as a Part 2. As a result, McDowell will be sending a letter from JWG 7 to the TC 130 national bodies with this information, and recommending that the current version of ISO 15076-1 be reaffirmed until a firm decision has been made regarding a revision of Part 1 or the development of Part 2.

Holm noted that it is likely the course of action will be a revision of Part 1. However, even if a decision is made to develop the new version of the ICC Specification as ISO 15076-2, there will likely still be a revision of Part 1 to "clean up" the standard.

7d JWG 9 – ISO 12640-5

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

Urabe reported he has circulated a document to JWG 9 which contains recommendations on how to proceed, the scope of the work, how to make the images, what space should be used, etc. These issues will be discussed at this week's meeting.

Holm reported that this part of ISO 12640 will address images that are going to be in scene space and which have added complexities. This work is being done jointly with TC 42, which is interested in this work from the point of conversion from scene space to rendered space through a variety of methods.

8 Proposed corrigendum to ISO 12640-2

At the last meeting, WG2 agreed to create an amendment or technical corrigendum to ISO 12640-2 to add a note describing (and pointing to) a profile to assist in importing the linearly encoded CIEXYZ data into colour management systems. The profile will be available through the ICC profile registry. It was determined that a technical corrigendum would be more appropriate and draft wording for the corrigendum was circulated to the

WG 2 Experts. Comments received were incorporated and the revised text has been submitted to ISO for publication.

The technical corrigendum, will add the following wording to the end of 5.2.3:

Since the initial publication of ISO 12640-2, colour management systems have become more widely used. Use of the XYZ image files of this document with colour management systems requires use of an International Color Consortium (ICC) profile. The independent channel scaling of the XYZ image data of this document means that simple D65 CIEXYZ profiles will produce incorrect results. Consequently, the profile "D65channelscaledXYZ.icc" has been created to facilitate consistent interpretation (input) of these data. This profile is intended for interpretation of the D65 channel scaled XYZ image files of this document. It is not appropriate for use with standards CIDXYZ data, either for interpretation or creation. This profile is freely available at www.color.org/XYZprofiles.

It was noted that the profile is currently available on the members-only portion of the ICC website and will be shortly moved to the public portion of the ICC website.

Action Item 08-10: McDowell will follow up with ICC to ensure this profile is properly posted on a publicly accessible portion of the website.

Once the corrigendum has been published, it will be available as a free download from the ISO catalogue. At that point, a pointer to that ISO site can be added to the ICC website.

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

ISO/CD 12640-4 is currently in ballot, with the ballot closing November 1. Comments received will be addressed at the next meeting.

McDowell noted there had been issues relating to the embedding the Adobe RGB profile in the images so that they will open correctly. Inclusion of the profile makes use of the images more consistent. Permission was received from Adobe (N 1302) for inclusion of the profile and use of the Adobe RGB colour-space name [Adobe RGB(1998)] in the title of the document.

In response to a question as to why a "standardized" colour-space like OPI RGB was not used instead of Adobe RGB, Holm described the differences between OPI RGB and Adobe RGB, noting that an Adobe RGB image is a "finished" image, and defines the exact image desired, while OPI RGB leaves some rendering characteristics as optional.

Mortara suggested that a set of application notes or an informative annex would be very helpful.

Action Item 08-11: Mortara will review the document specifically for the purpose of identifying areas in which additional information may be useful to provide further guidance for the less experienced user.

At the spring meeting we should review the need for and potential contents of an application note for the ISO 12640 series. For example, one issue relating to Part 1 would be how to associate the CMYK/SCID images with a specific printing condition. We will be looking for an editor for this work if there are any interested volunteers.

10 Colour data encoding

10a Report on ISO 28128

McDowell reported that practical validation of the encoding defined in the standard, requested during the final DIS review had been accomplished by use of the X-Rite CxF commercial software (N1287). During preparation for publication, it was discovered that the schema was slightly out of date. The necessary corrections were made by Iobst and Kennedy. Since the document was initially prepared, the use of a dtd in addition to the schema has gone out of favor and therefore the dtd was dropped.

McDowell reported that the final edited draft, along with updated related files, has been sent to ISO Central Secretariat for publication. A demonstration suite relating to the standard has been posted on the NPES Standards Workroom at <http://www.npes.org/standards/tools.html>. Kennedy will provide a link to a streaming webinar on XML which may be of interest to members of the committee.

10b Discussion of reactivation of work on WI 17972 and liaison with TC 38

At the last meeting, it was agreed that steps should be taken to reactivate ISO 17972 at Stage 0. The intent is to consider developing one or more standards based on CxF for various application areas within graphic technology for the exchange of data.

Cheydleur reported that he and Smiley prepared a sample CxF file containing multiple data sets relating to an ICC profile for review. They included 3 data sets from a press run, an aim characterization data set, an average of those data sets, and a profile, and put the data into a single CxF file. He noted that CxF does not embed the profile. They extracted data out of the profile, so there are two sets of this data. In addition, CxF writes two different formats, compressed (Zip compression) and uncompressed.

He noted that the requirements for a CxF file are pretty broad. So it would be helpful for the standard to identify what data must be included for graphic arts applications. However, he felt it would be desirable to avoid prohibiting any elements of CxF, but define how a reading system must handle various features.

Kennedy discussed the differences between XML and CxF, noting that CxF is an XML application. The standard would create one or more subsets of that application for use in the exchange of graphic arts data. Kraushaar suggested that the committee identify several use cases to see how a CxF-based standard would be used for these use cases.

It was noted that at this time, X-Rite is not willing to release control of CxF, but is happy to allow us to build standards based on CxF. If we need additional features, X-Rite is willing to work to extend CxF to enable those features. Cheydleur noted that X-Rite has made the CxF schema publicly available. It was also noted there are others (other than X-Rite) who are building tools to read and write CxF files. He made the files available to anyone having an interest.

Cheydleur noted that a related standard is under development by ISO/TC 38 (Textiles). The standard, ISO/CD 10617, *Standard data format for colorimetric communication – Textiles and related measurement*, is currently in CD ballot, closing November 21. It is felt that at this time that standard does not have all the elements that are needed for the exchange of graphic arts data. In addition, the XML structure used in that standard differs from the structure of CxF, so that data files created in accordance with that standard would need to go through a translator to be processed by a CxF reader.

Action Item 08-12: Abbott will circulate a copy of ISO/CD 10617 to WG2 for information, and request that comments be sent to Cheydleur by November 1.

Action Item 08-13: Iobst, Kraushaar and McDowell will review ISO/CD 10617 and provide comments to Cheydleur.

Action Item 08-14: Cheydleur, as TC 130 liaison to TC 38, will submit TC 130 comments on ISO/CD 10617 to TC 38.

The committee reviewed the areas identified at the last meeting that need conformance subsets, noting those already covered in ISO 28178, and those that are not adequately addressed in ISO 28178 and need further information to allow them to be addressed in ISO 17972.

Those fully defined in ISO 28178 are:

- scanner target characterization data (ISO 28178)
- characterization data sets (ISO 28178)
- target measurement data (ISO 28178)

Those requiring additional definition are:

- target definition
- substrate properties
- ICC profile container/pointer
- ICC profile data as XML data
- ink testing data (i.e. ISO 2846) beyond colorimetry
- press or proof acceptance/conformance data reports
 - ISO 12647-7 evaluation
 - ISO 12647-2, -3 OK sheet report
 - ISO 12647-2, -3 print run variation
- calibration data
 - plating TVI curves
- spot colour process aims
- measurement geometry/environment information for soft proofing data
- gloss measurement data and associated metadata

It was agreed that the next step is to look at the existing CxF definitions and identify which of the variables in CxF are required to support each of the target applications identified above that are not already addressed in ISO 28178. Cheydleur provided a document (N 1293) he had prepared for the April meeting. Annex A of that document identifies the CxF2.0 mapping of the elements in CGATS.17.

It appears the committee needs to address two main issues, possibly requiring more than one ISO document: 1) the features of CxF2 that are allowed for exchange of graphic arts data, and 2) a list of the things that are mandatory/optional for various application areas.

It was suggested that the committee consider creating a Yahoo discussion group to collect input for this work. No decision was made but this will be considered as work progresses.

The committee agreed to the following title and scope:

Title: *Graphic technology — Colour data exchange using CxF*

Scope: *This international standard defines a data exchange conformance subset of CxF2 to exchange graphic technology measurement data and associated metadata. These conformance subsets do not include document content or image data but focus on colour, test and measurement data necessary to support graphic technology applications.*

Action Item 08-15: A task group led by Cheydeur and including Iobst, Kennedy, Kraushaar, Luetkens, and Smiley will prepare a proposal regarding options for the committee to consider by February.

Resolution: TC 130 WG 2 requests that the TC 130 Secretariat submit the proposal for the reactivation of the work item ISO 17972 as a preliminary work item (Stage 0) to the P members of TC 130 for approval.

[Convener's note: The resolution was approved at TC 130 Plenary].

11 Potential new work items

11a Proofing approval metadata

Revie noted that at the last WG 2 meeting he 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 PDF Workgroup soft proofing ticket as a starting point. The purpose would be to allow effective communication of metadata about a soft proof (e.g. who viewed the proof, under what conditions they viewed it, whether or not they approved the proof, etc.).

The objective is to have TC 130 standardize this proofing ticket. TC 130 suggested the Ghent PDF Workgroup update their proofing ticket format to include hard copy proofing. It was felt this important because often a hard copy proof is made in one location, while the printing is done at another. Therefore, it would be good to know who approved the document for printing, and capture this information as part of the document.

Revie presented an overview of a proposed way to address hard copy proofing. A copy of the presentation is N 1315. A small group within the Ghent PDF Workgroup is working on this issue.

A draft of the soft-proofing ticket document is available, and it was felt it would be good if TC 130 could be involved in the development of the Ghent PDF Workgroup document to ensure it will comply with the ISO standard format, etc.

It was suggested that the soft-proofing issue might be incorporated as part of ISO 12647-7. However, it was felt that it would be better for this to be developed as a stand-alone standard that would interact with both ISO 12647-7 and the PDF/X standards.

Action Item 08-16: Abbott will circulate a copy of the draft document (N 1316) to WG 2 for review and comment by the end of November, noting that it is a draft for comment only.

Action Item 08-17: Revie will prepare a summary document describing identified issues and possible ways forward to be distributed to the members of both WG 2 and WG 2/TF 2 for review and comment, and discussion at the spring meeting.

11b Other proposals

No other proposals were presented.

12 Report on status of joint work with ISO TC 171

12a TC 171/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 TC171/SC2/JWG5 for comment, and resulted in a large number of comments, which will be addressed at their next meeting, scheduled for November in Beijing.

12b ISO 171/SC2/WG7 – ISO 32000 (PDF)

McDowell reported that ISO 32000-1, *Document management – Portable document format – PDF 1.7*, has been published. This standard is technically identical to PDF 1.7. Work has begun on ISO 32000-2, with input from several other groups.

Martin Bailey has prepared a list of all of the extensions (or "stretches") that were made to PDF to allow PDF/X-4 and PDF/X-5 to be completed, so that they can be included in ISO 32000. This list will be submitted through BSI. Olaf Drümmer has provided input relating to several other capabilities that are important to the graphic arts. These will be sent forward through DIN. Some items on this list are the ability to tag individual elements with output intent, the ability to retain a null output intent, a way to introduce a flag that says to use black point compensation, and the addition of a colour conversion intent. These are contained in N 1308.

There is a meeting in Beijing in November to discuss the proposed content of ISO 32000-2

13 Report on status of CIE work impacting TC130/WG2

McDowell reported that CIE TC1-57 is continuing to develop colorimetric calculation standards. The latest proposed standard, CIE 014-3.1, *Colorimetry – Part 3: CIE Tristimulus Values*, is almost ready for review. It will be sent out to members of TC130 once it is released for review.

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

14a ISO/TC 42 JWG 20 – Digital Cameras

JWG 20 is responsible for ISO 17321 (digital camera characterization). There has been no activity in this group.

14b ISO/TC 42 JWG 21 – Densitometry

The CD comments on ISO 5-1, ISO 5-2, ISO 5-3 and ISO 5-4 have been incorporated and the revised documents circulated for pre-DIS review. They will be reviewed at a meeting this week, and then placed in DIS ballot.

14c ISO/TC 42 JWG 22 – Color Management

JWG 22 is the ISO part of a joint working group between ISO TC 42 and IEC TC 100. TC 42 JWG 22 is further an ISO JWG charged with the responsibility for collecting input from all ISO TCs involved. TC 130 is a member of JWG 22. Currently, a two-part standard relating to the gamut ID metadata for specifying behavior of video display is being developed. One part is the gamut descriptor and other part is a subset of an ICC profile to define output referred encoding.

14d ISO/TC 42 JWG 23 – Extended color encoding

Holm reported that 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))* is currently out for ISO/DTS ballot.

He also noted that the committee is working on revisions to ISO 22028-2 (ROMM/RGB) and ISO 22028-3 (RIMM/RGB). ISO 22028-2 is being revised to add informative material relating to a reference medium for that color encoding. Work is essentially complete, but figures are being prepared.

There has been preliminary discussion to amend ISO 22028-3 (RIMM/RGB) to add a floating point encoding capability. This will be discussed at next week's meeting. Urabe noted that this is related to the needs of JWG 9 in the preparation of ISO 12640-5.

14e ISO/TC 42 JWG 24 – Revision of ISO 3664 (Viewing conditions)

The revision of ISO 3664 completed DIS ballot. Comments received from that ballot will be addressed at next week's meeting in Cologne.

14f ISO/TC 42 WG 18 – Revision of ISO 12234-1 and -2 series and JPEG XR

Although WG 18 is not a JWG, Holm reported that WG 18 is revising the two-part standard (ISO 12234), which addresses digital camera removable memory. The revision of Part 1 will add JPEG2000; the revision of Part 2 will add DNG into TIFF/EP.

15 Liaison Reports (written reports requested)

15a International Color Consortium (ICC)

See discussions earlier relative to JWG 7.

15b European Colour Initiative (ECI)

Meinecke reported on work being done to implement ISO 12647-2, with offset projects being done using MFC paper, standard newsprint, coated newsprint, coated newsprint 300 and uncoated newsprint. His report is N 1318.

15c Ifra

Roland Thees reported on an IFRA proposal for a new print process standard that is out for review. It was noted that it is possible this work could become part of ISO 12647-3. His report is N 1313.

15d Ecma

A written liaison report was provided by Martin Bailey (N 1309).

16 National Body Activities (reports invited)

No national body reports were presented.

17 Future meeting plans

The next TC 130 working group meetings are scheduled for May 18-22, 2009, in Ft. Worth, Texas. WG 2 will need 1 day, and WG2 TF3 will need 3 days.

The Fall meeting will held in conjunction with the TC 130 Working Group and Plenary meetings in China.

18 Adjourn

The committee thanked Wilco de Groot and IGT, Koninklijke, Grafimedia and VIGC for their support of the meeting and lunch, IGT for the social event, and Eleni Tzatzalos and Leonie Kuijpes for their support and assistance with meeting-related needs.

There being no further business the meeting was adjourned.