



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
INTERNATIONAL COMMISSION ON ILLUMINATION
INTERNATIONALE BELEUCHTUNGSKOMMISSION

Canadian National Committee Comité National Canadien



CNC/CIE Annual Report 2009

Minutes of 54th Annual Meeting
2009-October-15 and 16

and

Division Members' Reports



MINUTES OF THE 54th ANNUAL CNC/CIE MEETING

2009-October-15 and 16

The 54th annual meeting of the Canadian National Committee of the Commission Internationale de l'Éclairage (CNC/CIE) was held on Thursday and Friday, October 15 and 16, 2009 at the National Institute of Standards and Technology (NIST), Building 221 (Physics), Room A366, 100 Bureau Drive, Gaithersburg, Maryland, USA 20899-8442.

The meeting was part of the Joint CNC/CIE and CIE/USA 2009 Technical Conference and Annual Meetings held at NIST on October!15–16, 2009. The conference and annual meetings were hosted by the CIE/USA. The program for the two days is given in Appendix A.

Note: the following acronyms may be used in this report:

| | |
|----------|---|
| CIE | Commission Internationale de l'Éclairage |
| CIE-BA | CIE Board of Administration |
| CIE-CB | CIE Central Bureau |
| CIE-DD | CIE Division Director |
| NC | CIE National Committee |
| TC | CIE Technical Committee |
| CNC | Canadian National Committee |
| CNC/CIE | Canadian National Committee of the CIE |
| CIE/USA | US National Committee of the CIE |
| ISO | International Organization for Standardization |
| IESNA | Illuminating Engineering Society of North America |
| SCC | Standards Council of Canada |
| NRC-INMS | Institute for National Measurement Standards at the National Research Council of Canada |
| NRC-IRC | Institute for Research in Construction at the National Research Council of Canada |
| NRC-IRO | International Relations Office at the National Research Council of Canada |
| CISET | NRC Advisory Committee on International Science, Engineering and Technology |
| NRCan | Natural Resources Canada |
| DRDC | Defence Research and Development Canada |
| M/AM | Members/Advisory Members |

The 54th annual CNC/CIE meeting was held in two Sessions: Session A was held on Thursday, 2009-October-15 from 15:45 to 17:15; Session B was held on Friday, 2009-October-16 from 9:00 to 10:30.

The Division Members' reports were presented jointly with the CIE/USA on Friday morning, October!16, 2009 from 10:30 to 12:30. The Canadian Division Members have also submitted written reports for the purpose of our CNC/CIE annual meeting and annual report. These reports are attached to these Minutes.

1. Call-to-Order and Approval of Agenda:

The 54th annual meeting of the Canadian National Committee of the Commission Internationale de l'Éclairage (CNC/CIE) was called to order at 15:50 on Thursday, October 15, 2009 by L.A.!Whitehead, President.

Ten Members and Advisory Members were in attendance. The list of all attendees, regrets and proxies is given in Appendix!B. The teleconference call facility was arranged and hosted by J.A.!Veitch.

The President expressed our appreciation to NIST for providing the excellent facilities for these meetings.

The agenda, as circulated by email on 2009-October-13 (Appendix!C), was accepted.

2. Minutes of the 53rd CNC/CIE Annual Meeting:

The secretary indicated that an electronic version of the Minutes of the 53rd Annual Meeting had been emailed to all Members and Advisory Members on 2009-October-13. It was moved by J.C.!Zwinkels, seconded by V.!Venkataramanan, that the Minutes be accepted as distributed. Passed.

The action items from the 53rd Annual Meeting (Appendix!D) were considered and the actions taken are reported in Appendix!D (Results column) and as follows:

AI-4: J.C.!Zwinkels reported that K.!Niall had prepared a report that was submitted at the Division 2 meeting in Budapest (see Division 2 report).

AI-10: J.A.!Love indicated that NRCan has a List of Participants for their Lighting Summit conference of 2009-May. V.!Venkataramanan stated that he had a copy of that list and also a list of participants for the Solid State Lighting Workshop he conducted in 2009-July. He indicated that he would send a copy of both of these lists to M.K.!Timnings.

AI-11: J.C.!Zwinkels and L.A.!Whitehead reported that there appeared to be a lack of interest at the international level for the CIE Supportive Member Campaign. It was decided not to pursue any further action upon this item.

There were no further Matters Arising.

3. President's Report:

L.A.!Whitehead presented and discussed his report, which is attached as Appendix!E. With respect to our annual report to NRC-IRO, J.A.!Veitch stated that she knew of two other CNCs who had not received feedback from NRC-IRO.

4. Vice-President's Report:

J.A.!Veitch presented and discussed her report, which is attached as Appendix!F.

5. Secretary's Report:

A.A. Gaertner presented his report, which is attached as Appendix!G. He briefly summarised each item in the report.

6. Financial and Publications Report:

K.F.!Lin was unable to attend this meeting, but he had prepared a report (Appendix!H) that was presented by A.A.!Gaertner. He pointed out that there are two parts to the report: the CIE/CNC Publication Stock List, and the CNC/CIE Publication – Canada Financial Report. He indicated that there was only one publication from the CNC/CIE stock of CIE Publications sold this year, and that no purchases from the CIE were made by the CNC/CIE. The Secretary also pointed out that there was a credit at the CIE-CB from publication sales by the CIE-CB to Canadians. This should be obtained from the CIE-CB.

7. Requests for Financial Support:

The Secretary reported that there were no requests for funding during the year since the last annual meeting. L.A.!Whitehead suggested that we consider some financial help for travel to our next annual meeting. This could be discussed further in Agenda Item 12.2.

8. CNC/CIE Subcommittee Reports

8.1 CNC/CIE Website report:

J.A.!Veitch presented her report, which is attached as Appendix I. She indicated that our Webmaster, Bob Bridges was rebuilding the site. She requested that Division Members keep her informed about Canadian participation in the CIE TCs.

8.2 CNC/CIE Finance Subcommittee report:

S.M.!McFadden reported that there had not been much activity of this subcommittee during the past year. There had been no response from the subcommittee members on several issues, such as the costing of CIE publications and a possible workshop on lighting quality. L.A.!Whitehead indicated that he would try to facilitate cooperation between the several CNC/CIE Subcommittees. Discussion followed concerning including a planning session at the 2010 CNC/CIE annual meeting, with the invited participation of members from the Canadian lighting industry, for a workshop on lighting quality to be held at the time of the joint meeting with the CIE/USA in 2011. Further discussion was postponed until Agenda Item 12.2.

8.3 CNC/CIE Student Award Subcommittee report:

V.!Venkataramanan reported that he had been unable to pursue this activity this year. He indicated that he would work on it this next year.

8.4 CNC/CIE Outreach Subcommittee report:

This had been discussed in Agenda Item 2 above, AI-10.

9. Revision of CNC/CIE Code of Procedure:

Since A.R.!Robertson was unable to attend this meeting, A.A.!Gaertner summarized the steps leading up to the presentation of the final draft of 2008-October-14 (Appendix!J) for final vote at this meeting:

The CNC/CIE Code of Procedure currently in force (dated 2005-September-21) was approved by letter ballot of all CNC/CIE Members on 2005-August-26, and final approval by the NRC-INMS Director General was received on 2005-September-21. The Nominating Committee appointed by the CNC/CIE at the 2007 annual meeting felt that not all the nominating procedures for the CNC/CIE were clearly defined and asked A.R.!Robertson to revise the Code of Procedure accordingly. A.R.!Robertson did so and a copy of the draft (2008-October-14) was sent to all Members and Advisory Members on 2008-October-15 for consideration at the CNC/CIE 53rd annual meeting on 2008-October-24. It was decided at that annual meeting that this draft was ready for final approval, subject to clarification of the CNC/CIE Secretariat. A subcommittee of three ex-Presidents (A.R.!Robertson (chair), J.A.!Love, and S.M.!McFadden) was formed to clarify the meaning of 'Secretariat' in Section 4 of the Code of Procedure. This subcommittee decided that Section 4 *"is based on a renewed agreement between NRC and INMS, signed in 2004, which says "INMS will continue to be financially responsible for operating and managing the CNC/CIE." Our conclusion from this is that continuing to have*

the Secretary be an INMS staff member is the only practical arrangement short of renegotiating the agreement with NRC Corporate Services.” The Draft 2008-October-14 version of the Code of Procedure thus remained as the recommended version. To comply with the two-month notice of motion rule (Section 21, Code of Procedure), this version was sent by email to all CNC/CIE Members and Advisory Members on 2009-August-12 with a Notice of Motion to be presented at this meeting to accept this version as the new CNC/CIE Code of Procedure.

It was moved by C. Suvagau, seconded by S.M. McFadden, that the final draft of 2008-October-14 be accepted as the new CNC/CIE Code of Procedure. The motion was passed. The Secretary is now to forward this Code of Procedure to the DG of NRC-INMS for approval, as per Section 21 of the Code of Procedure.

10. CISET Annual Performance Review (APR) of the CNC/CIE:

The President opened a short discussion concerning lighting activities of members that are not yet being included in the APR. Items such as innovative street lighting and pulp-and-paper issues were mentioned. J.A. Veitch indicated that she was willing to work on the preparation of the next APR, and that she would want more input from the CNC/CIE members for the next report.

The secretary indicated that he had just received information from the NRC concerning the Canadian Partner Agreement with NRC-INMS in support of Canada's affiliation with the CIE.

Note: The structure of the NRC relationship with the CNCs can be summarized as follows:

The NRC maintains affiliations with international bodies, such as the CIE, on behalf of Canada. NRC is authorized by the Federal Government to provide funds for membership with international bodies to enable the Canadian scientific community to have access to international meetings, networking and knowledge exchange. NRC shares the responsibility for these international affiliations with Canadian partners through Canadian Partner Agreements. Each partner creates and maintains a CNC, composed of leading Canadian researchers, to support Canada's affiliation with the relevant international scientific bodies. In the case of the CIE, the NRC maintains a Canadian Partner Agreement with NRC-INMS, which creates and maintains the CNC/CIE to support Canada's affiliation with the CIE. The NRC uses the APR to assess these international affiliations; the CISET reviews these APRs and makes recommendations to the NRC on whether the specific Canadian Partner Agreement should continue.

In June 2009, CISET reviewed our CNC/CIE 2008 APR and recommended the continuation of the Canadian Partner Agreement with NRC-INMS. NRC has accepted this recommendation and has proposed to NRC-INMS the renewal of this agreement, to remain in effect until March 31, 2011, conditional on a successful APR and the availability of funds. The acceptance of this agreement will be by the Director General of NRC-INMS, Dr. James McLaren. (Note: 2009-October-29, this was done.)

J.A. Veitch noted that this same letter from NRC had recommended that CNCs adopt Terms of Reference, and had included a sample generic CNC Terms of Reference. Since the CNC/CIE already has a Code of Procedure (see Agenda Item 9 above), she suggested that the Secretary check that our CNC/CIE Code of Procedure does not conflict with their sample.

***** Session A of the 54th annual CNC/CIE meeting was formally closed at 17:07.

***** Session B of the 54th annual CNC/CIE meeting was called to order at 9:00 on Friday, October 16, 2009 by L.A. Whitehead, President. Ten Members and Advisory Members were in attendance. The list of all attendees, regrets and proxies is given in Appendix B. The teleconference call facility was arranged and hosted by J.A. Veitch. Since M.K. Timmings was able to join the meeting via teleconference, several items from Agenda Item 2 above were reviewed.

11. Nominations and Appointments (CNC/CIE):

The Secretary distributed a list of the current CNC/CIE Members and Advisory Members (Appendix K).

11.1 CNC/CIE Officers:

Since A.A. Gaertner had indicated at the last annual meeting that he would step down as CNC/CIE Secretary at the end of his present term on 2009-December-31, a nominating subcommittee of three ex-Presidents (A.R. Robertson (chair), J.A. Love, and S.M. McFadden) was formed at that meeting to nominate a new CNC/CIE Secretary. S.M. McFadden reported on the activities of this subcommittee. They have nominated Dr. Réjean Baribeau. Their nomination, together with a biography of Réjean Baribeau, and a Call for Additional Nominations, was emailed to all CNC/CIE Members and Advisory Members on 2009-August-12 by the Secretary. No further nominations were received.

It was moved by S.M. McFadden, seconded by C. Suvagau, that Réjean Baribeau be nominated as CNC/CIE Secretary, and that the present Secretary submit this nomination to the DG of NRC-INMS for approval. Passed. The appointment is to take effect on 2010-January-01.

11.2 CNC/CIE Members and Advisory Members:

It was moved by L.A. Whitehead, seconded by S.M. McFadden, that A.A. Gaertner be nominated to continue as CNC/CIE Member. Passed. The Secretary is to forward this CNC/CIE Member nomination to the Director General of INMS for final approval and appointment.

The Secretary noted that Nolie Agellon of the Ontario Ministry of Transportation had retired and resigned from CNC/CIE Advisory Membership. Nolie has suggested the appointment of Mr. Martin Aitkenhead, Head of the Electrical Engineering Section at the Ontario Ministry of Transportation, as a CNC/CIE Advisory Member. Mr. Aitkenhead has indicated his willingness to serve. It was moved by A.A. Gaertner, seconded by M.K. Timmings, that Martin Aitkenhead be appointed as a CNC/CIE Advisory Member. Passed.

S.M. McFadden indicated that although K. Niall is working abroad, he is still working for the Canadian Government, and therefore may remain as a CNC/CIE Advisory Member.

J.D.Y. Deslauriers indicated that P. Reinhardt had changed responsibilities and recommended that she be removed from CNC/CIE Advisory Membership.

11.3 Canadian CIE Division Members:

S.M. McFadden, Canadian CIE Division 1 Member, indicated that she would like someone else to become involved in CIE Division 1 after 2011. Several suggestions were presented. J.C. Zwinkels offered to follow-up with one of her contacts.

12. Other Business:

12.1 Correspondence:

There was none to report.

12.3 Other Business:

This item was discussed before item 12.2 to allow greater discussion for item 12.2.

Report on CIE 2009 General Assembly meeting:

L.A.!Whitehead indicated that he would submit a formal report after he receives the official CIE Minutes of the meeting. The Secretary is to check whether they are available. J.C.!Zwinkels presented a verbal summary of the informal notes she recorded during the GA meeting. (Note: 2010-March-22: The formal report from L.A.!Whitehead has been received and is attached as Appendix!L.)

12.2 Date and Place of next Year's Meeting:

L.A.!Whitehead opened an extensive discussion concerning the location and the content of our next annual meeting. He suggested that our next annual meeting could be used to prepare a program for the technical session of the joint Canada/USA meeting that we plan to host in 2011. C.!Suvagau suggested that this 2010 planning meeting could be held in Western Canada, with the 2011 joint meeting held in Eastern Canada. Both Calgary and Vancouver were suggested venues for the next meeting. Possible collaboration with the local IESNA chapters was suggested. It was decided that the 2010 meeting be held in Western Canada and a small subcommittee of Western Canadians, L.A.!Whitehead (Chair), J.A.!Love and C.!Suvagau, was formed to resolve the final date (mid-October?) and location, with a deadline of the next week or two.

L.A.!Whitehead suggested that we organize a technical session or workshop as part of our 2010 meeting to gather input for a formal technical session at the 2011 joint meeting. He invited suggestions on how we could obtain/encourage the participation of the lighting industry at this workshop to plan the 2011 technical session such that it would contain presentations of interest and service to the lighting community. J.C.!Zwinkels pointed out that we need to decide on a theme, time/location and keynote speakers in order to obtain the community's interest and enable them to obtain approval to attend the workshop. She suggested that the theme of the 2011 joint meeting could be a follow-up on the CIE 2010 meeting (held in Vienna 2010-March-14 to 17) theme of lighting quality and energy efficiency. It was suggested that 'sustainability' also be included. It was decided that the CNC/CIE Finance Subcommittee elicit the interest and suggestions of the lighting industry, using the mailing list available from M.K.!Timnings as discussed above in Agenda Item 2 (AI-10).

L.A.!Whitehead summarized the immediate procedure that we need to follow:

- finish the mailing list discussed in Agenda Item 2 above,
- send mailing list to S.M.!McFadden (Finance Subcommittee),
- Finance Subcommittee to prepare a letter announcing our workshop and to elicit interest and comments from the recipients on the mailing list,
- based on the feedback, the program for the workshop can be revised,
- finalize date and location of 2010 annual meeting and workshop,
- this activity can be reported on the APR (Agenda Item 10 above).

13. Adjournment

M.K. Timmings expressed his thanks, and that of the participants, to J.A. Veitch for arranging the teleconference facilities at this meeting. The meeting was adjourned at approximately 10:17.

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2010-September-21

CNC/CIE 54th Annual Meeting

2009-October-15 and 16

Action Items

| Action Item Number (AI#) | 54th Minutes Item Number | Responsible | Action |
|--------------------------|--------------------------|---|---|
| 1 | 2, 4 | J.A.!Veitch | contact SCC, CSA re Canadians on their lighting committees. |
| 2 | 2 | A.A.!Gaertner | memorial for W.K.!Adrian, contribution to Nuckolls Fund |
| 3 | 2 | J.A.!Veitch, J.C.!Zwinkels | potential liaison between CIE Div 2 and IEEE concerning LEDS |
| 4 | 2 | J. Bastianpillai, M.K.!Timmings | J.!Bastianpillai wishes to participate in TC5-23 |
| 5 | 2 | B.D.!Jordan, J.D.Y.!Deslauriers | B.D.!Jordan wishes to participate in TC6-61 |
| 6 | 2, 8.3 | V.!Venkataramanan | Student Award Subcommittee: terms of reference and award |
| 7 | 2, 8.4 | M.K.!Timmings, V.!Venkataramanan | Outreach Subcommittee, list of Canadian Companies |
| 8 | 9 | A.A.!Gaertner | send new Code of Procedure to NRC-INMS DG for approval |
| 9 | 10 | J.A.!Veitch | prepare response to 2009 APR |
| 10 | 10 | A.A.!Gaertner | check Code of Procedure with NRC sample |
| 11 | 11.1 | A.A.!Gaertner | submit nomination of R.!Baribeau as CNC/CIE Secretary to DG of NRC-INMS |
| 12 | 11.2 | A.A.!Gaertner | submit nomination of A.A.!Gaertner as CNC/CIE Member to DG of NRC-INMS |
| 13 | 11.3 | all | possible Canadian CIE Division 1 Member after 2011 |
| 14 | 12.3 | A.A.!Gaertner | determine availability of GA 2009 Minutes |
| 15 | 12.3 | L.A.!Whitehead | prepare report on CIE 2009 General Assembly |
| 16 | 12.2 | L.A.!Whitehead, J.A.!Love, C.!Suvagau | resolve date and location of next annual meeting |
| 17 | 12.2 | Finance Subcommittee: S.M.!McFadden (chair), K.F.!Lin, J.A.!Love and V.!Venkataramanan | contact 'lighting industry' re suggestions/participation in 2010 workshop |

LIST OF APPENDICES

- APPENDIX A: Program for 2009 Joint Annual Meeting of CIE/USA and CIE/Canada
- APPENDIX B: Attendees to the 54th CNC/CIE Annual Meeting 2009-October-15 and 16
- APPENDIX C: Agenda for the 54th CNC/CIE Annual Meeting 2009-October-15 and 16
- APPENDIX D: Action Items from the 53rd CNC/CIE Annual Meeting 2008-October-24
- APPENDIX E: President's Report
- APPENDIX F: Vice-President's Report
- APPENDIX G: Secretary's Report
- APPENDIX H: Financial and Publications Report
- APPENDIX I: CNC/CIE Web Site Report
- APPENDIX J: Draft CNC/CIE Code of Procedure 2008-October-14
- APPENDIX K: CNC/CIE Members and Advisory Members
- APPENDIX L: Report on CIE 2009 General Assembly

APPENDIX A

2009 Joint Annual Meeting of CIE/USA and CIE/Canada October 15 & 16, 2009, NIST, Gaithersburg, MD

Meeting Room: Note the change of meeting rooms. All meetings (except some committee meetings) will be held at B343, Building 220 (also called Metrology Building). See the **Directions to NIST and meeting room**, attached in this document.

Conference Call: Available for some meetings. See call instructions in the program.

Advance registration required: All participants must have sent meeting registration (there is no fee) to Tom Lemons <tmlattla@aol.com> and, in addition, all non-US citizens must have sent NIST foreign visitor registration to Yoshi Ohno <ohno@nist.gov> by Oct. 2. No visitors will be allowed to enter NIST without registration in advance. For any possible late requests, contact Yoshi Ohno. **Picture ID (for US citizen) or Passport (for non-citizen) is required at the NIST gate.** Don't forget to bring it.

Program

Thursday, October 15, 2009

Committee meetings (B343, Building 220)

8:00 to 10:00 AM CIE/USA Executive Committee Meeting
Conference call participation (877) 783 2009, Pass Code 211097

10:00 to 10:30 Coffee break and registration for Joint Technical Session

Joint Technical Session (B343, Building 220)

10:30 to 11:15 *Using Core Sunlight to Improve Office Illumination*, Lorne Whitehead, Univ. of British Columbia, Vancouver, BC, Canada

11:15 to Noon *From Research to Hypotheses: Daylight in Classrooms*
Jim Love, University of Calgary, Calgary, Alberta, Canada

Noon to 1 PM Lunch – Available at NIST Cafeteria
(Participants will be escorted by NIST staff.)

1:00 to 1:30 *Spectrally Tunable Lighting Facility*
Wendy Davis, NIST, USA

1:30 to 2:00 *Visual Evaluation Experiment on Chroma Enhancement Effects in Color Rendering of Light*, Yoshi Ohno, NIST, USA

2:00 to 2:30 *NVLAP Accreditation Program for Solid State Lighting Products Testing*
Cameron Miller, NIST, USA

2:30 to 3:15 *Functional and Decorative Luminaires – What’s the Difference and Why Is it Important?*,
Terry McGowan

3:15 to 3:45 Coffee Break

Committee meetings

3:45 to 5:15 CIE/USA ANSI TAG Annual Meeting (B343, Building 220)
Conference call participation for TAG Members – contact Philip Wychorski

3:45 to 5:15 CIE Canada committee meeting (A366, Building 221)
Conference call participation – contact Arnold Gaertner

Friday, October 16, 2009

9 to 10:30 AM CIE/USA Annual Meeting (B343, Building 220)
Conference call participation (877) 783 2009, Pass Code 539889

9 to 10:30 AM CIE/Canada Annual Meeting (A366, Building 221)
Conference call participation – contact Arnold Gaertner

10:30 to 11:00 Coffee Break (B343, Building 220)

11:00 to 12:30 Joint Annual Meeting of CIE/USA and CIE/Canada

12:30 to 1:30 Lunch available at NIST Cafeteria
(Luncheon of new USA Executive Committee members, at NIST cafeteria)
After lunch, walk outside to Bldg. 220.

1:30 to 2:30 NIST lab tour: Spectrally Tunable Light Facility and Photometry Lab
Meet at Building 220 Entrance hall at 1:30 PM (If you are late, call ex. 8138 from a phone
at the door.)

NOTE:

If you are on the Executive Committee and cannot attend but will participate via the conference call, please notify Tom Lemons at tmlattla@aol.com

If you are a CIE/USA Member and cannot attend the Annual Meeting but want to attend via the conference call, please notify Tom Lemons at tmlattla@aol.com

Directions: ~~See attached below.~~ Especially, please read instructions at NIST Main Gate, and instructions from Main Gate to meeting room.

APPENDIX B

CNC/CIE 54th Annual Meeting

2009-October-15 and 16

Attendees

| | |
|------------------------------|----------------------------------|
| ¹ Réjean Baribeau | National Research Council (INMS) |
| Yvon Deslauriers | Health Canada (RPB) |
| Arnold Gaertner | National Research Council (INMS) |
| ² James Love | University of Calgary |
| Sharon McFadden | DRDC Toronto |
| Cristian Suvagau | BC Hydro |
| ³ Martyn Timmings | Canlyte Inc./Philips |
| ¹ Jennifer Veitch | National Research Council (IRC) |
| Venkat Venkataramanan | University of Toronto |
| Lorne Whitehead | University of British Columbia |
| Joanne Zwinkels | National Research Council (INMS) |

Regrets

| | |
|------------------------------|------------------------------------|
| Joe Bastianpillai | Lumentech Engineers Inc. |
| Allyson Chrysler | Crossey Engineering Ltd |
| Byron Jordan | FPIinnovations (PAPRICAN) |
| André Laperrière | Hydro-Québec |
| K. Frank Lin | Lighting Sciences Canada Ltd. |
| ² James Love | University of Calgary |
| Keith Niall | Government of Canada |
| Thomy Nilsson | University of Prince Edward Island |
| Ivan Pasini | Pasini Lighting Services |
| Alan Robertson | National Research Council (INMS) |
| Alexander Rosemann | BC Hydro |
| Andrew Silbiger | Andrew Silbiger Management Inc. |
| ³ Martyn Timmings | Canlyte Inc./Philips |

Proxies

| | |
|------------------------------|------------------|
| Byron Jordan | Joanne Zwinkels |
| Ivan Pasini | Joanne Zwinkels |
| Alan Robertson | Arnold Gaertner |
| ³ Martyn Timmings | Cristian Suvagau |

¹ Attended via teleconference.

² Attended Session A (2009-October 15) only.

³ Attended only Session B (2009-October 16), by teleconference.

APPENDIX C

CNC/CIE 54th Annual Meeting

2009-October-15 and 16

15:45 to 17:15 (Thursday, October 15), 9:00 to 10:30 (Friday, October 16)

PROPOSED AGENDA:

The reports from Division Members will be presented in collaboration with the CIE/USA at the Joint CNC/CIE and CIE/USA meeting to be held 10:30 to 12:30 on Friday, 2009-October-16

1. Call to Order and Approval of Agenda L.A.!Whitehead
2. Minutes of the 53rd Annual CNC/CIE meeting L.A.!Whitehead
 - Action items
 - Matters arising
3. President's report L.A.!Whitehead
4. Vice-President's report J.A.!Veitch
5. Secretary's report A.A.!Gaertner
6. Financial and Publications report K.F.!Lin
7. Requests for Financial Support L.A.!Whitehead
8. CNC/CIE Subcommittee reports:
 - 8.1 CNC/CIE website report J.A.!Veitch
 - 8.2 CNC/CIE Finance Subcommittee report S. M.!McFadden
 - 8.3 CNC/CIE Student Award Subcommittee V.!Venkataramanan
 - 8.4 CNC/CIE Outreach Subcommittee M.K.!Timmings
9. Revision of CNC/CIE Code of Procedure A.R.!Robertson
10. CISET Annual Performance Review of the CNC/CIE L.A.!Whitehead
11. Nominations and Appointments (CNC/CIE) L.A.!Whitehead
 - 11.1 CNC/CIE Officers
 - 11.2 CNC/CIE Members and Advisory Members
 - 11.3 Canadian CIE Division Members
12. Other Business L.A.!Whitehead
 - 12.1 Correspondence
 - 12.2 Date and Place for next year's meeting
 - 12.3 Any other business
13. Adjournment L.A.!Whitehead

2009-Oct-09 draft

APPENDIX D

CNC/CIE 54th Annual Meeting

Action items from CNC/CIE 53rd Annual Meeting

| Action Item Number (AI#) | 53rd Minutes Item Number | Responsible | Action | Result |
|--------------------------|--------------------------|--|--|---|
| 1 | 2 | A.A.!Gaertner, J.A.!Veitch | contact SCC re Canadians on ISO TCs and WGs. | J.A.!Veitch is presently acting upon this |
| 2 | 5 | M.K.!Timnings | obtain contact address for Reid Crowther and Partners Ltd. | - completed |
| 3 | 7 | A.A.!Gaertner, J.A.!Veitch | memorial for W.K.!Adrian, contribution to Nuckolls Fund | A.A.!Gaertner is presently acting upon this |
| 4 | 8 | S.M.!McFadden, J.C.!Zwinkels | update on Division 2 Reportership R2-33 by K.!Niall | - see Minutes |
| 5 | 8 | J.A.!Veitch, J.C.!Zwinkels | potential liaison between CIE Div 2 and IEEE concerning LEDS | - to be followed up |
| 6 | 8 | J. Bastianpillai, M.K.!Timnings | J.!Bastianpillai to participate in TC5-23 | - to be followed up |
| 7 | 8 | B.D.!Jordan, J.D.Y.!Deslauriers | B.D.!Jordan to participate in TC6-61 | - to be followed up |
| 8 | 10.2 | V.!Venkataramanan | Student Award Subcommittee: terms of reference and award | - ongoing |
| 9 | 11 | A.A.!Gaertner | Proceed to ballot CNC/CIE Code of Procedure | - to be reported upon in Agenda Item 9 |
| 10 | 12 | M.K.!Timnings, all | Outreach Subcommittee, list of Canadian Companies | - see Minutes |
| 11 | 13 | A.A.!Gaertner | CNC/CIE to Participate in CIE Supportive Membership Campaign | - see Minutes |
| 12 | 14.2 | A.A.!Gaertner | forward recommendation re K.F.!Lin as CNC/CIE Member and Publications Officer/Treasurer to NRC-INMS-DG | - completed |
| 13 | 14.2 | A.R.!Robertson, J.A.!Love, S.M.!McFadden | Nominating Committee to clarify 'Secretariat' and to nominate a CNC/CIE Secretary | - completed |
| 14 | 15.2 | J.A.!Love, V.!Venkataramanan | Liaison with CIE/USA re 2009 joint meeting technical session | - completed |



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
INTERNATIONAL COMMISSION ON ILLUMINATION
INTERNATIONALE BELEUCHTUNGSKOMMISSION

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APPENDIX E

CNC/CIE 54th Annual Meeting

President's Report

CNC/CIE President's Report
October, 2009

Lorne A. Whitehead, Ph.D., P.Eng.
lorne.whitehead@ubc.ca

I am pleased to present this brief report on my activities this year as CNC President.

First, with others, I assisted Jennifer Veitch in preparation of the annual report to the NRC International Relations Office, which achieved the goal of obtaining renewal of the funding of our CIE membership dues. Jennifer has described this in her Vice President's report so there is no need for elaboration here.

Additionally, after being alerted by Arnold Gaertner and Jennifer Veitch to the issue described below, I coordinated our CNC response. We had found, unexpectedly, that we were facing a problem at the CIE Mid-Term General Assembly Meeting on May 26, 2009 in Budapest. A plan had been proposed to eliminate any revenue flowing to National Committees with respect to sales of CIE publications in their respective countries. This would have been highly disadvantageous to the CNC, but possibly not to some other NC's, depending on the details of their funding models, which vary from country to country. With the help of Joanne Zwinkels, we organized a telephone meeting that also included Sharon McFadden and Alan Robertson, on May 21, 2009. In this meeting we decided there was an urgent need to make a cogent written submission recommending against this change, and to send it to CIE President Franz Hengstberger before commencement of the mid-term meeting. We did so, offering to meet with him, preferably before the meeting. Joanne and I both attended the mid-term meeting, and we were pleased to learn from Franz, during an off-line conversation over coffee, that our message had been received, and that in response the problematic proposed changes had been dropped entirely. Joanne kindly prepared informal notes of the mid term general assembly meeting and these will be discussed at the October 15, 2009 CNC meeting. After such discussion, a condensed formal report will be prepared to accompany the official meeting minutes which will be submitted to the NRC-IRO and the DG of NRC-INMS as required under our statutes.

Lastly, I have been continuing in my unofficial efforts to advance appreciation of lighting in Canada. At UBC I have continued to work with a group of faculty members who are submitting a funding request to NSERC for a new interdisciplinary graduate program in sustainable building physics, and a lighting course would be an important component. Their proposal has passed the first stage of the NSERC selection process and we should hear the result later this year. Additionally, my laboratory has been leading a consortium including BCIT, BC Hydro, NRCan, Public Works Canada, 3M Canada, Ledalite, Busby Perkins & Will, Morrison Hershfield, and the BC Ice Fund, that has obtained funding through Sustainable Development Technology Canada totalling \$6.4 million for core sunlight demonstration projects in Canada over the next 4 years.



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APPENDIX F

CNC/CIE 54th Annual Meeting

Vice-President's Report

**CNC/CIE Vice-President's Report
October, 2009**

Jennifer A. Veitch, Ph.D.
jennifer.veitch@nrc-cnrc.gc.ca

In my capacity as Vice-President of the CNC, this year I undertook three principal tasks.

The largest of these was to lead the preparation of the annual report to the NRC International Relations Office. Again, it was impressive to see how substantial is Canada's contribution to lighting internationally, particularly through CIE. We attempted to address areas of weakness identified in feedback from the NRC-IRO; unfortunately we have not had any feedback on how well we did. We apparently succeeded in keeping our funding, but it would be nice to know how we can further improve our standing next year.

I am continuing in my efforts to increase our links to people who serve on Canadian and international standards committees in CSA, ISO, and the like. An attempt to identify specific individuals through the Standards Council of Canada (SCC) and Canadian Standards Association (CSA) web sites was unsuccessful. The next step is to write to the leadership at the SCC and CSA to ask for their assistance identifying and contacting the people involved. The plan is to invite those individuals to join the CNC/CIE at least as General Interest members, but with the possibility of their becoming Advisory Members. We can then encourage them to develop deeper contacts with their CNC/CIE counterparts in relevant areas. In some areas the links are already quite good; for example, Joanne Zwinkels and Byron Jordan are or have been convenors of ISO committees. However, we have almost no contact, for example, with people on CSA committees for office ergonomics and no direct input to the lighting recommendations therein.

Finally, on Sept. 25 I attended the annual meeting of the CNC for CODATA (www.codata.org/canada/), held in Ottawa. CODATA is the Committee on Data for Science and Technology, an Interdisciplinary Scientific Committee of the International Council for Science. CODATA's goals are:

- The improvement of the quality and accessibility of data, as well as the methods by which data are acquired, managed, analysed and evaluated, with a particular emphasis on developing countries
- The facilitation of international cooperation among those collecting, organizing and using data
- The promotion of an increased awareness in the scientific and technical community of the importance of these activities
- The consideration of data access and intellectual property issues

It was an interesting meeting for several reasons. In particular, I learned that there is an attempt within CODATA to form an international working group to establish data management protocols for spectral data across the range from UVR through the near IR. This topic has clear interest and relevance to CIE Division 2, and I will be passing contact information on this to our Division 2 delegate. There is also an international attempt to create perpetual archiving for project information that is not published, through a system called DataCite (www.datacite.org). This might be of interest to the CIE, as a way to archive various records without the burden of setting up and maintaining a new system.



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APPENDIX G

CNC/CIE 54th Annual Meeting

Secretary's Report



CNC/CIE SECRETARY'S REPORT TO THE 54th ANNUAL MEETING

2009-October-15/16

The following acronyms may be used in this report:

| | |
|-----------|---|
| CEN: | Comité Européen de Normalisation |
| CIE-CB: | CIE Central Bureau in Vienna, Austria |
| CIE-BA: | CIE Board of Administration |
| CNC/CIE: | Canadian National Committee of CIE |
| CIE/USA: | US National Committee of the CIE |
| GA: | General Assembly |
| ISO: | International Organization for Standardization |
| NC: | National Committee |
| NRC: | National Research Council of Canada |
| CISSET: | NRC advisory Committee on International Science, Engineering and Technology |
| NRC-IRO: | NRC International Relations Office |
| NRC-INMS: | NRC Institute for National Measurement Standards |
| NRC-IRC: | NRC Institute for Research in Construction |
| NRCan: | Natural Resources Canada |

This report covers the period from 2008-October-24 to 2009-October-14.

CIE MATTERS:

1. Annual Membership Fee:

The annual membership fee for the CNC/CIE as a member of the CIE for 2009 is 7,099 EUROS, which was \$11,127.00 Cdn. The NRC-International Relations Office has continued to make these payments on our behalf.

The NRC, through a Grant Transfer Program, supports Canadian scientific organizations to affiliate with their corresponding international union and program bodies. As part of our CIE membership through the NRC, we are also affiliated with the International Council for Science (ICSU) and 29 other international scientific unions. The NRC membership to these international scientific organizations allows active participation by members of the Canadian scientific community in international scientific endeavors.

2. CIE Midterm Meeting

The CIE Midterm General Assembly meeting was held in Budapest, Hungary, on 2009-May-26. The CNC/CIE delegate was L.A. Whitehead, with J.C. Zwinkels as our non-voting advisor. This meeting discussed and decided on several important aspects of the structure of the CIE. A report on this meeting will be given at this CNC/CIE meeting and a formal report will be prepared. CIE Divisions 1, 2, 3, 4, 5, 6, and many TCs also held meetings during this time. J.A. Veitch was also present at some of these meetings. A CIE Conference on Light and Lighting 2009 with Special Emphasis on LED and Solid State Lighting was held 2009-May-27 to 29 in Budapest.

3. CIE Memberships - Ukraine:

The CIE-CB, on 2009-August-17, informed all CIE NCs that the National Commission on Illumination of Ukraine has applied for CIE Membership as a National Committee. A ballot was sent to all NCs for their vote, with a deadline of 2009-November-17. A CNC/CIE letter ballot for the approval of this Membership was sent (email) to 53 of our Members (16) and Advisory Members (37) on 2009-August-21, with a deadline for reply to the CNC/CIE Secretary of 2009-November-02.

4. CIE Conference "CIE 2010 Lighting Quality and Energy Efficiency", 2010-March-14 to 17

The CIE President, Dr. Franz Hengstberger, has indicated that "the 2010 conference will hopefully become the first of the large, high-impact events we would like to organize regularly in the future through the CIE Scientific Services GmbH. If it is as successful as we hope it will be, it will elevate the CIE to the key international role player position on the topic of lighting quality and energy efficiency, which it should rightfully have but which it

has not succeeded so far in achieving in the eyes of many of the other role players in this field. We hope to engage all these role players in our conference and produce Proceedings, which will become the reference information resource on this topic for all national, regional and international projects in this field from here on. It will also show us what financial potential such events have for us as income generators and tell us what additional measures we will have to put into place to excel in this activity.” He has asked for our utmost support. The deadline for submission of abstracts is 2009-October-15. The registration deadline for authors is 2009-November-30. I have sent information concerning sponsorship opportunities to all on the CNC/CIE email list. Up-to-date information may be found on the website (vienna2010.cie.co.at).

5. CIE Statutes: CIE Auditors

The CNC/CIE sent (2009-July-27) its approval to the CIE-CB of the following amendment to the CIE Statutes: “6.5 The **General Assembly** shall appoint at least 2 internal auditors, who shall **conduct an annual audit** the financial accounts of the Commission to verify the proper nature of the accounting and the use of resources in accordance with the terms of the Statutes **within four months** after the preparation of the profit and loss account.”

6. CIE Draft Standards:

CIE DS 014-5.3/E:2008 *Colorimetry–Part 5: CIE 1976 L*u*v* Colour Space and u', v' Uniform Chromaticity Scale Diagram.*

This Draft Standard (DS 014-5.2) had been submitted by the CIE-CB to all NCs for comments on 2008-February-06. After all comments had been received, this final version was submitted on 2008-October-02 by the CIE-Central Bureau to all NCs for final vote, with a deadline of 2009-January-02. Copies were mailed on 2008-October-09, with a deadline of 2008-December-15, to each of the 16 CNC/CIE Members for their final vote. Replies were received from 8 Members, all in favor of publication. This vote was conveyed to the CIE-CB on 2008-December-24. This DS was approved by the CIE as CIE standard *CIE S 014-5/E:2009 Colorimetry–Part 5: CIE 1976 L*u*v* Colour Space and u', v' Uniform Chromaticity Scale Diagram.*

7. Mailings:

Amongst others, the following CIE materials have been received and mailed and/or emailed to the membership as appropriate:

Note that the CIE NEWS is also available on the CIE website (www.cie.co.at)

CIE Press Releases:

Publication CIE 121-SP1:2009 *Goniophotometry of Luminaires – Supplement 1: Luminaires for Emergency Lighting.*

Publication CIE 158:2009 *Ocular Lighting Effects on Human Physiology and Behaviour.*

Publication CIE 184:2009 *Indoor Daylight Illuminants.*

Publication CIE x033:2008 *Proceedings of the CIE Expert Symposium on “Advances in Photometry and Colorimetry”, 7-8 July 2008, Turin, Italy.*

Publication CIE Standard CIE S 014-5/E:2009 *CIE 1976 L*u*v* Colour Space and u', v' Uniform Chromaticity Scale Diagram.*

Joint ISO/CIE Standard ISO 11664-1 / CIE S 014-1/E:2006 *CIE Standard Colorimetric Observers.*

Joint ISO/CIE Standard ISO 11664-2 / CIE S 014-2/E:2006 *CIE Standard Illuminants for Colorimetry.*

Joint ISO/CIE Standard ISO 11664-4 / CIE S 014-4/E:2007 *Colorimetry-Part 4: CIE 1976 L*a*b* Colour Spaces.*

CNC/CIE MATTERS:

1. CNC/CIE 2009 Annual Meeting:

This meeting will be held as part of a joint CNC/CIE and CIE/USA Technical Conference and Annual Meetings at the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland, USA. We extend our thanks to the CIE/USA for organizing this meeting and to Dr. Yoshi Ohno of NIST for hosting the meetings.

2. Annual Performance Review of the CNC/CIE:

The NRC International Relations Office has developed an Annual Performance Review (APR) questionnaire, requested by the NRC advisory Committee on International Science, Engineering and Technology (CISSET), that focuses on assessing the impact of Canada’s international affiliations supported through the NRC Grant Transfer Program. The questionnaire is distributed to all NRC Partners/CNCs. Annual dues and any other payments will be withheld until receipt and successful review of the questionnaire by CISSET. We received the second of these APR questionnaires on 2008-November 21. After extensive work by J.A. Veitch and L.A. Whitehead, we submitted the final APR to NRC-IRO on 2009-January-30. The NRC-IRO paid the CNC/CIE annual dues to the CIE on 2009-May-13. On 2009-October-08 I received information that on the basis of this review CISSET has recommended the continuation of the Canadian Partner Agreement between NRC and NRC-INMS. NRC accepted this recommendation and has proposed a renewal until 2011-March-31, conditional on a successful APR and the

availability of funds. A copy of the APR was sent (emailed) to all CNC/CIE Members and Advisory Members on 2009-January-30.

3. Canadian Lighting Issues:

Natural Resources Canada (NRCan): The CNC/CIE is on the mailing list of the NRCan Office of Energy Efficiency to receive information concerning any lighting issues of interest to the Canadian lighting community. I then forward this information to our email list. I have also included them on our email list to receive general information concerning the CIE and CNC/CIE.

There have been three mailings from NRCan this year: Energy Efficiency Regulations (2008 December), General Service Incandescent Reflector Lamps (2009 January), and Mandatory Labelling of Lighting Product Packaging (2009 May).

4. Requests for Funding:

There were no requests for funding during this past year.

5. CNC/CIE website:

The website has been operating since 2005-October-26 at the web address of www.cie-cnc.ca. I have begun to receive requests for information through the website. If anyone has suggestions for corrections, updates, or additions, please contact the Secretary or J.A. Veitch, our website coordinator. A report on the website will be given at this meeting.

6. Mailing Lists:

6.1 At present I maintain 3 mailing lists: Members (16), Advisory Members (46), General Interest (19). In general, the difference between the first two and the third is that the third list tends to receive only CIE material (press releases of CIE publications, *CIE NEWS*) and notices of international conferences. Members and Advisory Members receive, in addition to the CIE material, more CNC information such as various ballots, and the Minutes of the annual meeting and related information.

6.2 Electronic Mail: I have sent most documents to the CNC/CIE membership this year by email. I have been using a PDF format which should be more versatile in accommodating the various computer systems, and the reader can be downloaded free from the Adobe website. I now receive most information from the CIE-CB, such as Press Releases, in electronic format. I often receive announcements of meetings in electronic format, and I forward these electronically rather than sending a large paper mailing. At present my email mailing lists are: Members (16), Advisory Members (39), General Interest (19). Please keep me updated on your email address.

7. Membership:

A list of our Members and Advisory Members is available and will be discussed during the annual meeting for the purposes of making any changes.

7.1. Officers:

At last year's annual meeting the appointment of K.F. Lin for CNC/CIE Publications Officer and Treasurer was recommended by the CNC/CIE. A letter of appointment was sent to K.F. Lin by Dr. James W. McLaren, Director-General of INMS. K.F. Lin has accepted the appointment.

7.2. Members:

At last year's annual meeting the appointment of K.F. Lin as Member of the CNC/CIE was recommended by the CNC/CIE. A letter of appointment (with 7.1 above) was sent to K.F. Lin by Dr. James W. McLaren, Director-General of INMS. K.F. Lin has accepted the appointment.

7.3. Advisory Members:

Nolie Agellon is retiring from MTO effective 2009-December-31 and has also resigned as Advisory Member to the CNC/CIE.

Nolie Agellon has recommended that Martin Aitkenhead, Head of the Electrical Engineering Section of MTO, become an Advisory Member.

7.4. General Interest:

As a result of requests during the year, I have added the following to our General Interest mailings:

Michel Côté, Président, Multico Investments Inc.
Shirley Coyle, LC, General Manager, Ruud Lighting Canada, Mississauga
Tony Suurhoff, AECOM, Calgary, Alberta

7.5 Removals:

The following people have been removed from our mailing lists:

Michael Phillips, P.Eng., Stantec, Vancouver, British Columbia (lost contact)

Respectfully submitted,

A handwritten signature in black ink that reads "Arnold Gaertner". The signature is written in a cursive style with a long horizontal stroke at the end.

A.A. Gaertner
Secretary, CNC/CIE
Institute for National Measurement Standards
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APPENDIX H

CNC/CIE 54th Annual Meeting

Financial and Publications Report

**CNC/CIE PUBLICATION - CANADA
FINANCIAL REPORT
AS OF
September 30, 2009**

| | |
|--|---------------|
| Income Statement | Page 1 |
| Balance Sheet | Page 2 |
| Bank Account Balance as of September 30, 2009 | Page 3 |
| Publication Sale: October 1, 2008 - September 30, 2009 | Page 4 |
| Publication Purchase from Central Bureau of CIE: October 1, 2008 - September 30, 2009 | Page 5 |

**CNC/CIE PUBLICATION - CANADA
FINANCIAL REPORT**

INCOME STATEMENT 01/October/2008 - 30/September/2009

Revenue

Publication sale [year 2008-2009]
Other Income

\$ 74.00
 Nil

Total Revenue

\$ 74.00

Expense

Bank charges [Oct/2008 - Sep/2009: \$5.95 x12]
Central Bureau of CIE
[re: publication purchase in year 2008-2009]
Robert Bridges - Web hosting service

\$ 71.40
 Nil
\$ 162.60

Total Expense

\$ 234.00

Net Income (Loss)

\$ (160.00)

**CNC/CIE PUBLICATION - CANADA
FINANCIAL REPORT**

BALANCE SHEET

01/October/2008 - 30/September/2009

Assets

| | |
|---|--------------|
| Bank/Cash | \$ 22,827.16 |
| Outstanding cheque - Robert Bridges (cheque cashed in Oct/2009) | \$ (162.60) |
| Accounts Receivable | Nil |
| | _____ |

Total Assets

\$ 22,664.56

Liabilities

| | |
|------------------|-------|
| Accounts Payable | Nil |
| | _____ |

Total Liabilities

\$ -

Equity

| | |
|--|--------------|
| Balance, beginning @ 30/September/2008 | \$ 22,824.56 |
| Current Income(Loss) | \$ (160.00) |
| | _____ |

Total Equity

\$ 22,664.56

Liability & Equity

\$ 22,664.56

CNC/CIE PUBLICATIONS BANK ACCOUNT - CANADA
Financial Report - Bank Account

CNC/CIE Publications Bank Account: 01/October/2008 - 30/Sep/2009

(Canada)

| Date | | Sales | Other Income | Payments to CB | Other Expenses | Balance |
|-------------|---|----------------|-----------------|-------------------|-------------------|--------------------|
| 30-Sep-2008 | Balance brought forward | | | | | \$22,824.56 |
| 31-Oct-2008 | Bank monthly charge (October/2008) | | | | \$3.95 | \$22,820.61 |
| 31-Oct-2008 | Bank record keeping fees (October/2008) | | | | \$2.00 | \$22,818.61 |
| 29-Nov-2008 | Bank monthly charge (November/2008) | | | | \$3.95 | \$22,814.66 |
| 29-Nov-2008 | Bank record keeping fees (November/2008) | | | | \$2.00 | \$22,812.66 |
| 31-Dec-2008 | Bank monthly charge (December/2008) | | | | \$3.95 | \$22,808.71 |
| 31-Dec-2008 | Bank record keeping fees (December/2008) | | | | \$2.00 | \$22,806.71 |
| 31-Jan-2009 | Bank monthly charge (January/2009) | | | | \$3.95 | \$22,802.76 |
| 31-Jan-2009 | Bank record keeping fees (January/2009) | | | | \$2.00 | \$22,800.76 |
| 28-Feb-2009 | Bank monthly charge (February/2009) | | | | \$3.95 | \$22,796.81 |
| 28-Feb-2009 | Bank record keeping fees (February/2009) | | | | \$2.00 | \$22,794.81 |
| 31-Mar-2009 | Bank monthly charge (March/2009) | | | | \$3.95 | \$22,790.86 |
| 31-Mar-2009 | Bank record keeping fees (March/2009) | | | | \$2.00 | \$22,788.86 |
| 30-Apr-2009 | Bank monthly charge (April/2009) | | | | \$3.95 | \$22,784.91 |
| 30-Apr-2009 | Bank record keeping fees (April/2009) | | | | \$2.00 | \$22,782.91 |
| 30-May-2009 | Bank monthly charge (May/2009) | | | | \$3.95 | \$22,778.96 |
| 30-May-2009 | Bank record keeping fees (May/2009) | | | | \$2.00 | \$22,776.96 |
| 30-Jun-2009 | Bank monthly charge (June/2009) | | | | \$3.95 | \$22,773.01 |
| 30-Jun-2009 | Bank record keeping fees (June/2009) | | | | \$2.00 | \$22,771.01 |
| 31-Jul-2009 | Bank monthly charge (July/2009) | | | | \$3.95 | \$22,767.06 |
| 31-Jul-2009 | Bank record keeping fees (July/2009) | | | | \$2.00 | \$22,765.06 |
| 31-Aug-2009 | Bank monthly charge (August/2009) | | | | \$3.95 | \$22,761.11 |
| 31-Aug-2009 | Bank record keeping fees (August/2009) | | | | \$2.00 | \$22,759.11 |
| 25-Sep-2009 | Deposit (CIE inv #2068 - Roger Breton) | \$74.00 | | | | \$22,833.11 |
| 30-Sep-2009 | Bank monthly charge (September/2009) | | | | \$3.95 | \$22,829.16 |
| 30-Sep-2009 | Bank record keeping fees (September/2009) | | | | \$2.00 | \$22,827.16 |
| 30-Sep-2009 | Robert Bridges-Web hosting service [CNC/CIE ck#112] | | | | \$162.60 | \$22,664.56 |
| 30-Sep-2009 | Total | \$74.00 | \$0.00 | \$0.00 | \$234.00 | \$22,664.56 |

CIE PUBLICATION SALE - CANADA

| CIE Publication Sale: 01/October/2008 - 30/September/2009 | | | | | |
|--|---|------------|-----------------|----------------|-------------------|
| Date/Inv. # | Description/Title of Publication | Qty | Sale | Expense | Net Amount |
| 14-Sep-2009 #2068 | GRAXX Inc. (Roger Breton) CIE-51.2-1999: A Method for Assessing the Quality of Daylight Simulators for Colorimetry Shipping cost - Regular mail (postage paid by LSC) | 1 | \$ 74.00 | | |
| | | | | \$ - | \$ 74.00 |
| | | | | | |
| | | | | | |
| 30-Sep-2009 | Total Sale | | \$ 74.00 | \$ - | \$ 74.00 |

CNC/CIE PUBLICATION PURCHASE - CANADA

| Publication purchase from Central Bureau of CIE: 01/October/2008 - 30/September/2009 (Canada) | | | | | | | | | |
|---|----------|----------|--|-----|----------------|----------------|----------------|----------------|----------------|
| Date | CIE Inv. | CIE Code | Title of Publication | Qty | Unit Cost | Total Cost | Discount | Running Total | Payment |
| 30-Sep-2008 | Forward | | No Purchase | | (Euro) \$ - | (Euro) \$ - | (Euro) \$ - | (Euro) \$ - | (Euro) \$ - |
| | | | Total to date as of 30-September-2009 Payment to CB @ 30-September-2009 Balance due as of 30-September-2009 | | | \$ - | \$ - | \$ - | \$ - |

CIE/CNC PUBLICATION STOCK LIST

2009-SEPTEMBER-30

| CIE No. | Title | Year | Price Code | Price Cd\$ | Sales | | | | | | | | | | Purchase | | | | | Current Stock | CB X | Note Page# | |
|---------|------------------------------------|------|------------|------------|-------|-------|-------|------|------|------|-------|-------|-------|------|----------|------|-------|-------|--|---------------|------|------------|---------|
| | | | | | 97-98 | 98-99 | 99-00 | 2001 | 2002 | 2003 | 04/05 | 05-09 | 99-00 | 2001 | 2002 | 2003 | 04/05 | 05-09 | | | | | |
| 1 | Urban sky glow | 1980 | C | 68 | | | | | | | | | | | | | | | | | 4 | | 24 |
| 2.2 | Colours of light signals | 1975 | I | 109 | | 1 | | | | | | | | | | | | | | | 2 | X | 85 |
| 8 | Street lighting & accidents | 1960 | | | | | | | | | | | | | | | | | | | 5 | X | 27 |
| 12.2 | Road lighting for motor, traffic | 1977 | C | 68 | | | | | | | | 1 | | | | | | | | | 3 | X | 51 |
| 13.3 | Colour rendering properties | 1995 | I | 109 | | 1 | | | 1 | | | | | | | | | | | | 0 | | 16 |
| 15 | Colorimetry (3rd edition) | 2004 | I | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 15.2 | Colorimetry | 1986 | H | 98 | 1 | 3 | 1 | 3 | | | 2 | | | | | 1 | | 4 | | | 2 | X | 77 |
| 16 | Daylight | 1970 | I | 109 | | | | | | | | | | | | | | | | | 5 | | 79 |
| 17.4 | International lighting vocabulary | 1987 | X | Euro | | | | | 1 | | | | | | | | | | | | 0 | | 365 |
| 18.2 | Physical photometry | 1983 | E | 80 | 1 | 1 | | | | | 1 | | | | | | | | | | 0 | | 37 |
| 19.21 | Visual performance - volume I | 1981 | K | 137 | | | | | | | | | | | | | | | | | 4 | | 124 |
| 19.22 | Visual performance - volume II | 1981 | I | 109 | | | | | 1 | | | | | | | | | | | | 3 | | 76 |
| 20 | Solar radiation | 1972 | | | | | | | | | | | | | | | | | | | 5 | X | 54 |
| 22 | Luminance distrib. on clear sky | 1973 | | | | | | | | | | | | | | | | | | | 4 | X | 30 |
| 23 | Motorway lighting | 1972 | C | 68 | | | | | | | | | | | | | | | | | 5 | | 53 |
| 24 | Luminaire photometry (indoor) | 1973 | | | | | | | | | | | | | | | | | | | 2 | X | 64 |
| 26 | Recommendation for tunnel Itg | 1973 | I | 109 | | | | | | | | | | | | | | | | | 5 | X | 80 |
| 27 | Luminaire photometry(street Itg) | 1973 | | | | | | | | | | | | | | | | | | | 4 | X | 71 |
| 28 | Sports Itg for colour tv broadcast | 1975 | | | | | | | | | | | | | | | | | | | 4 | X | 29 |
| 29.2 | Guide on interior lighting | 1986 | J | 122 | | | | | | | | | | | | | | | | | 1 | X | 113 |
| 30.2 | Calc. & Meas. (road lighting) | 1982 | L | 166 | 1 | 1 | | | 1 | | | | | | | | | | | | 0 | X | 159 |
| 31 | Glare & uniformity (road lighting) | 1976 | C | 68 | | | | | | | | | | | | | | | | | 0 | | |
| 32A | Special road lighting (French) | 1977 | D | 74 | | | | | | | | | | | | | | | | | 4 | | 36 |
| 32B | Special road lighting (English) | 1977 | D | 74 | | | | | | | | | | | | | | | | | 5 | | 22 |
| 33A | Deprec.&install.road Itg (French) | 1977 | C | 68 | | | | | | | | | | | | | | | | | 4 | | 32 |
| 33B | Deprec.&install.road Itg(English) | 1977 | C | 68 | | | | | | | | | | | | | | | | | 5 | | 24 |
| 34 | Road lighting installation data | 1977 | E | 80 | | | | | | | | 1 | | | | | | | | | 2 | | 39 |
| 35 | Lighting of traffic signs | 1978 | | | | | | | | | | | | | | | | | | | 1 | X | 23 |
| 37 | Exterior lighting in the environ. | 1976 | | | | | | | | | | | | | | | | | | | 5 | X | 62 |
| 38 | Characteristics of materials | 1977 | L | 166 | | | | | | | | | | | | | | | | | 4 | | 214 |
| 39.2 | Surf.colours for visual signals | 1983 | I | 109 | 1 | | | | | | | | | | | | | | | | 3 | | 69 |
| 40 | Interior lighting calculations | 1978 | G | 91 | | | | | | | | | | | | | | | | | 4 | | 60 |
| 41 | Light as true visual quantity | 1978 | E | 80 | | | | | | | | | | | | | | | | | 4 | | 40 |
| 42 | Lighting for tennis | 1978 | C | 68 | | | | | | | | | | | | | | | | | 6 | | 23 |
| 43 | Photometry of floodlights | 1979 | F | 86 | | | | | | | | | | | | | | | | | 4 | | 50 |
| 44 | Absolute reflection measurements | 1979 | H | 98 | | | | | | | | | | | | | | | | | 2 | | 55 |
| 45 | Lighting for ice sports | 1979 | C | 68 | | | | | | | | 1 | | | | | | | | | 4 | | 23 |
| 46 | Material reflection stanadards | 1979 | J | 122 | | | | | | | | | | | | | | | | | 4 | | 99 |
| 47 | Road lighting for wet condition | 1979 | I | 109 | | | | | | | | 1 | | | | | | | | | 3 | | 94 |
| 48 | Road traffic signals | 1980 | E | 80 | | | | | 1 | | | | | | | | | | | | 0 | | |
| 49 | Emergency lighting | 1981 | B | 57 | | | | | | | | | | | | | | | | | 3 | | 9 |
| 51 | Daylight simulators for colorim. | 1981 | D | 74 | | | | | | 1 | | | | | | | | | | | 1 | X | 26 |
| 51.2 | Qual.of daylight simu.for colorime | 1999 | D | 74 | | | | | | | | 1 | | 2 | | | | | | | 1 | | 36 |
| 52 | Interior lighting calculations | 1982 | L | 166 | | | | | | | | | | | | | | | | | 4 | | 164 |
| 53 | Radiometers & photometers | 1982 | D | 74 | 1 | 1 | 1 | 1 | | | | | | | | 1 | | | | | 0 | | |
| 54 | Retroreflection - def./meas. | 1982 | D | 74 | | | 1 | | | | | | | | | | | | | | 1 | X | 28 |
| 54.2 | Retroreflection:def. & measure. | 2001 | G | 91 | | | | | | 1 | | | | | | 2 | | | | | 1 | | 54 |
| 55 | Discomfort glare (interior) | 1983 | F | 86 | | | | | | | | | | | | | | | | | 3 | | 43 |

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| | | | | | 97-98 | 98-99 | 99-00 | 2001 | 2002 | 2003 | 04/05 | 05-09 | 99-00 | 2001 | 2002 | 2003 | | | |
| 56 | Proceedings 1983/light&lighting | 1983 | L | 166 | | | | | | | | | | | | | 5 | X | |
| 57 | Lighting for football | 1983 | B | 57 | | | | | | | | | | | | | 4 | | 9 |
| 58 | Lighting for sports hall | 1983 | A | 43 | | | | | | | 1 | | | | | | 3 | | 4 |
| 59 | Polarization | 1984 | D | 74 | | | | | | | | | | | | | 4 | | 25 |
| 60 | Vision/visual display work station | 1984 | D | 74 | | | | | | | | | | | | | 1 | | 29 |
| 61 | Tunnel entrance lighting | 1984 | I | 109 | | | 1 | | | | | | | | | | 2 | | 72 |
| 62 | Lighting for swimming pools | 1984 | C | 68 | | | | 1 | | | | | | | | | 1 | | 16 |
| 63 | Spectroradiometry | 1984 | G | 91 | | 1 | 1 | 1 | | 1 | | | 1 | | 2 | | 1 | | |
| 64 | Spectral responsivity of detect. | 1984 | H | 98 | | 1 | | | | | | | | | | | 2 | | 66 |
| 65 | Absolute radiometers | 1985 | D | 74 | | | | | | | | | | | | | 3 | | 31 |
| 66 | Road surfaces & lighting | 1984 | H | 98 | | | | | | | 1 | | | | | | 1 | | 70 |
| 67 | Photometry of sports lighting | 1986 | A | 43 | | | | | | | 1 | | | | | | 1 | | 13 |
| 68 | Lighting of exterior working area | 1986 | H | 98 | | | | | | | | | | | | | 4 | X | 77 |
| 69 | Illuminance meters | 1987 | E | 80 | 1 | | 1 | | | 1 | | | | | 3 | | 2 | | 36 |
| 70 | Meas. of luminous intensity | 1987 | F | 86 | | | | | | | | | | | | | 2 | | 44 |
| 71 | Proceedings 1987-Volume I | 1987 | | | | | | | | | | | | | | | 1 | X | 396 |
| 71 | Proceedings 1987-Volume II | 1987 | | | | | | | | | | | | | | | 1 | X | 151 |
| 72 | Retroreflectors at night | 1987 | G | 91 | | | | | | | 1 | | | | | | 1 | | 50 |
| 73 | Visual aspect of road markings | 1988 | G | 91 | | | | | | | | | | | | | 1 | | 53 |
| 74 | Roadsigns | 1988 | K | 137 | | | | | | | | | | | | | 3 | | 134 |
| 75 | Spectral luminous efficiency | 1988 | C | 68 | | | | | | | | | | | | | 2 | | 20 |
| 76 | Meas. of luminescent specimens | 1988 | H | 98 | | | | | | | | | | | | | 2 | | 68 |
| 77 | Electric light sources | 1988 | K | 137 | | | | | | | | | | | | | 0 | | |
| 78 | Brightness-luminance relations | 1988 | M | 195 | | | | | | | | | | | | | 2 | | 173 |
| 79 | Road traffic lights | 1988 | C | 68 | | | | 1 | | | | | | | | | 0 | | |
| 80 | Observer metamerism | 1989 | C | 68 | | | | | | | | | | | | | 2 | | 17 |
| 81 | Mesopic photometry | 1989 | D | 74 | | | | | | | | | | | | | 3 | | 27 |
| 82 | CIE history (1913-1988) | 1990 | M | 195 | | | | | | | | | | | | | 1 | | 77 |
| 83 | Lighting of sports for tv&film sys. | 1989 | C | 68 | | | | | | | 1 | | | | | | 0 | | 14 |
| 84 | Meas. of luminous flux | 1989 | F | 86 | | 1 | 1 | | | | 1 | | | | | | 1 | | |
| 85 | Solar spectral irradiance | 1989 | F | 86 | | | | | | | 1 | | | | 2 | | 0 | | 48 |
| 86 | 1988 2 deg.spec.lum.eff.function | 1990 | B | 57 | | | | | | | | | | | | | 2 | | 11 |
| 87 | Self-luminous displays | 1990 | E | 80 | | | | | | 1 | | | | | | | 0 | | |
| 88 | Lighting for road tunnels&underpa | 1990 | F | 86 | 1 | | | | 1 | | | | | | | | 0 | X | 42 |
| 88(2nd ed.) | Lighting for road tunnels&underpa | 2004 | D | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 89 | Technical collection 1990 | 1991 | F | 86 | | | | | | | | | | | | | 2 | | 51 |
| 90 | Sunscreen testing (UV B) | 1991 | B | 57 | | | | | | | | | | | | | 2 | | 11 |
| 91 | Proceedings 1991-Volume I, P1 | 1991 | | | | | | | | | | | | | | | 2 | X | 131 |
| 91 | Proceedings 1991-Volume I, P2 | 1991 | | | | | | | | | | | | | | | 2 | X | 166 |
| 91 | Proceedings 1991-Volume II | 1991 | | | | | | | | | | | | | | | 2 | X | 205 |
| 92 | Guide for lighting of urban areas | 1992 | D | 74 | | | | 1 | | | | | | | | | 0 | X | 38 (#136) |
| 93 | Road lighting/accident counter me | 1992 | J | 122 | 1 | | | | | | | | | | | | 3 | | 117 |
| 94 | Guide for floodlighting | 1993 | H | 98 | | | | | | | | | | | | | 1 | | 63 |
| 95 | Contrast & visibility | 1992 | F | 86 | | | | | 1 | | | | | | | | 0 | | 52 |
| 96 | Electric light sources | 1992 | C | 68 | | | | | | | | | | | | | 0 | | |
| 97 | Maintenance/indoor lgt systems | 1992 | C | 68 | | | | | | | | | | | | | 2 | X | 24 |
| 97(2nd ed.) | Maintenance/indoor lgt systems | 2005 | D | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 98 | Personal dosimetry of uv radiat. | 1992 | C | 68 | | | | | | | | | | | | | 1 | | 17 |

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| | | | | | 97-98 | 98-99 | 99-00 | 2001 | 2002 | 2003 | 04/05 | 05-09 | 99-00 | 2001 | 2002 | 2003 | | | |
| 99 | Lighting education(1983-1989) | 1992 | B | 57 | | | | | | | | | | | | | 1 | | 21 |
| 100 | Visual task of night driving | 1992 | G | 91 | | | | | | | | | | | | | 2 | | 60 |
| 101 | Parametric effects/colour differ. | 1993 | B | 57 | | | | | | | | | | | | | 0 | | |
| 102 | File format-photometric data | 1993 | C | 68 | | | | | | | | | | | | | 1 | | 23 |
| 103 | CIE technical collection 1993 | 1993 | G | 91 | | | | | | | | | | | | | 0 | | |
| 104 | Daytime running lights (DRL) | 1993 | B | 57 | | | | | | | | | | | | | 1 | | 14 |
| 105 | Spectroradiometry-optical radia. | 1993 | C | 68 | 1 | 1 | | | | | | | | | | | 1 | | 20 |
| 106 | Collection/photobi.& photochem. | 1993 | F | 86 | | | | | | | | | | | | | 1 | | 52 |
| 107 | Colours of signal lights | 1994 | E | 80 | | | | | | | | | | | | | 1 | | 38 |
| 108 | Daylight measurement | 1994 | F | 86 | | | | | | | | | | | | | 1 | | 49 |
| 109 | Corresponding colours | 1994 | B | 57 | | | | | 1 | | | | | | | | 1 | | 14 |
| 110 | Spatial distribution of daylight | 1994 | D | 74 | 1 | | | | | | | | | | | | 0 | | |
| 111 | Variable message signs | 1994 | F | 86 | | | | | 1 | | | | | | | | 1 | | 56 |
| 112 | Glare evaluation system-outdoor | 1994 | B | 57 | | 1 | | | | | 1 | | | | | | 0 | | 9 |
| 113 | Retroreflective road signs(night) | 1995 | G | 91 | | | | | | | | | | | | | 1 | | 56 |
| 114 | Collection-photometry&radiometry | 1994 | E | 80 | | | | | | | | | | | | | 2 | | 42 |
| 115 | Lighting of roads for motor ped. | 1995 | C | 68 | | 1 | | | | | 1 | | | | | | 0 | | 20 |
| 116 | Colour difference evaluation | 1995 | B | 57 | | | 1 | | | | | | | | | | 1 | | 17 |
| 117 | Discomfort glare in interior lighting | 1995 | D | 74 | 1 | | | | | | | | | | | | 1 | | 35 |
| 118 | Collection-colour & vision | 1995 | G | 91 | | | | | | | | | | | | | 2 | | 64 |
| 119 | Proceeding of New Delhi Vol.1 | 1995 | X | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 120 | Proceeding of New Delhi Vol.2 | 1996 | K | 137 | | | | | | | | | | | | | 0 | X | |
| 121 | Goniophotometry of luminaires | 1996 | F | 86 | | 1 | | | 1 | 2 | | | | | | | 1 | | 43 |
| 121-SP1 | Goniophotometry of luminaires | 2009 | B | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 122 | Digital&colorimetric data for CRT | 1996 | C | 68 | | | | | | 1 | | | | | | | 0 | | 26 |
| 123 | Low vision | 1997 | L | 166 | | | | | | | | | | | | | 2 | | 157 |
| 123CD | Low vision: CD-ROM | 1997 | X | Euro | 1 | | | | | | | | | | | | 0 | | CB/Euro |
| 124 | Collection-colour & vision | 1997 | E | 80 | | | | | | | | | | | | | 2 | | 43 |
| 125 | Standard erythema dose | 1997 | A | 43 | | | | | 1 | | | | | | | | 1 | | 5 |
| 126 | Minimizing sky glow | 1997 | B | 57 | | | | | | | | | | | | | 2 | | 18 |
| 127 | Measurement of LEDs | 1997 | C | 68 | 1 | 2 | | 1 | 3 | 3 | 1 | | | | | 4 | 4 | 1 | 21 |
| 127 | Measurement of LEDs | 2007 | D | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 127 | Measurement of LEDs(French) | 2007 | D | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 128 | Lighting of open cast mines | 1998 | C | 68 | | | | | | | | | | | | | 2 | | 22 |
| 129 | Lighting exterior work areas | 1998 | B | 57 | | | | | 1 | | | | | | | | 1 | | 20 |
| 130 | Measurement of reflec.& trans. | 1998 | G | 91 | | 1 | | | | | | | | | | | 1 | | 63 |
| 131 | CIECAM97s colour appearance | 1998 | B | 57 | | | | | 1 | | | | | | | | 1 | X | 14 |
| 132 | Design methods for lgtg of roads | 1999 | F | 86 | | | | | | | | | | | | | 2 | | 52 |
| 133 | Proc.24th ses.CIE,Warsaw | 1999 | X | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 133CD | Proc.24th ses.CIE,Warsaw | 1999 | X | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 134 | Collection in photobi&photochem. | 1999 | F | 86 | | 1 | | | | | | | | | | | 1 | | 53 |
| 135 | Vision and colour | 1999 | H | 98 | | | | | | | | | | | | 2 | | 2 | 80 |
| 136 | Guide to lighting of urban areas | 2000 | D | 74 | | | | 1 | 1 | | 1 | | | | 2 | 1 | 0 | | 36 |
| 137 | Conspicuity of traffic sign | 2000 | D | 74 | | | | | | | | | | | 2 | | 2 | | 41 |
| 138 | Col.in photobiology & photochem. | 2000 | F | 86 | | 1 | | | | | | | | | 2 | | 1 | | 54 |
| 139 | Diurnal&seas. var.in humans | 2001 | G | 91 | | | | | | | | | | | | | 0 | | |
| 139CD | Diurnal&seas. var.in humans | 2001 | X | Euro | | | | | | | | | | | | | 0 | | CB/Euro |
| 140 | Road lighting calculations | 2000 | D | 74 | | | | 1 | | | 1 | | | | 2 | | 0 | | 32 |
| 141 | Test of suppl.systems of photo. | 2001 | I | 109 | | | | | | | | | | | | 2 | 2 | | 83 |
| 142 | Impr.to ind.color-diff. evaluation | 2001 | B | 57 | | | | 1 | | | | | | | | 2 | 1 | | 14 |

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| | | | | | 97-98 | 98-99 | 99-00 | 2001 | 2002 | 2003 | 04/05 | 05-09 | 99-00 | 2001 | 2002 | 2003 | | | | 04/05 |
| 143 | Colour vision req.for transport | 2001 | E | 80 | | | | 1 | 1 | | | | | | 2 | | | 0 | | 44 |
| 144 | Road surf. & marking refl.charact. | 2001 | D | 74 | | | | | | | | | | | 2 | | | 2 | | 34 |
| 145 | Cor.for vision&visual perform. | 2002 | E | 80 | | | | | 2 | | | | | | | 2 | | 0 | | 34 |
| 146/147 | CIE collection on glare 2002 | 2002 | C | 68 | | | | | 1 | | | | | | | 2 | | 1 | | 29 |
| | 146-CIE equations for disab.glare | | | | | | | | | | | | | | | | | | | |
| | 147-glare from small....sources | | | | | | | | | | | | | | | | | | | |
| 148 | Action spect.of skin /w...lasers | 2002 | B | 57 | | | | | | | | | | | | 2 | | 2 | | 13 |
| 149 | Use of tungsten filament lamp | 2002 | C | 68 | | | | | | | | | | | | 2 | | 2 | | 25 |
| 150 | Guide...obtrusive light from outdr. | 2003 | E | 80 | | | | | | 2 | 1 | | | | | | | 0 | | |
| 151 | Spectral weighting of Solar UV | 2003 | D | 74 | | | | | | | | | | | | 2 | 1 | 2 | | 30 |
| 152 | Proc.of 25th Session of CIE | 2003 | X | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 152CD | Proc.of 25th Session of CIE | 2003 | X | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 153 | Interc.of luminous flux of HPS | 2003 | A | 43 | | | | | | | | | | | | 2 | | 2 | | 8 |
| 154 | Maint.of outdoor lighting system | 2003 | C | Euro | | | | | 1 | 1 | | | | | | 2 | | 0 | | CB/Euro |
| 154(Fren.) | Maint.of outdoor lighting system | 2003 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 155 | Ultraviolet air disinfection | 2003 | G | 91 | | | | | 1 | 1 | | | | | | 2 | | 0 | | 64 |
| 155(Fren.) | Ultraviolet air disinfection | 2003 | G | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 156 |Gamut mapping algorithms | 2004 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 156(Fren.) |Gamut mapping algorithms | 2004 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 157 | ..Museum object by optical rad. | 2004 | D | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 157(Fren.) | ..Museum object by optical rad. | 2004 | D | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 158 | Ocular light effects on human.. | 2009 | F | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 158(Fren.) | Ocular light effects on human.. | 2004 | F | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 159 | Colour appearance..CIECAM02 | 2004 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 159(Fren.) | Colour appearance..CIECAM02 | 2004 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 160 | Chromatic adaptation transfm. | 2004 | D | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 161 | Lighting ..for obstructed interior | 2004 | D | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 161(Fren.) | Lighting ..for obstructed interior | 2004 | D | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 162 | Chromatic adaptation under mix. | 2004 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 163 | Effects of fluo..of Imaging data | 2004 | B | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 163(Fren.) | Effects of fluo..of Imaging data | 2004 | B | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 164 | Hollow light guide tech. & appli. | 2005 | D | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 165 | CIE 10 deg. photopic photometer | 2005 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 166 | Cognitive colour | 2005 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 167 | Recom..tabulating spectral data | 2005 | C | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 168 | Criteria..gamut colour encoding | 2005 | I | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 168(Fren.) | Criteria..gamut colour encoding | 2005 | I | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 169 | ..Sport events for col.tev.& film, | 2005 | H | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 169(Fren.) | ..Sport events for col.tev.& film, | 2005 | H | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 170-1 | ..chromati. diag./w physio-part I | 2006 | F | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 170-1(Fre.) | ..chromati. diag./w physio-part I | 2006 | F | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 171 | Assess..lighting computer prog. | 2006 | I | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 171(Fren.) | Assess..lighting computer prog. | 2006 | I | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 172 | UV protection and clothing | 2006 | F | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 172(Fren.) | UV protection and clothing | 2006 | F | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 173 | Tubular daylight guidance syst. | 2006 | H | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 173(Fren.) | Tubular daylight guidance syst. | 2006 | H | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 174 | Action spectr..previtamin D3.. | 2006 | B | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |
| 174(Fren.) | Action spectr..previtamin D3.. | 2006 | B | Euro | | | | | | | | | | | | | | 0 | | CB/Euro |

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| | | | | | 97-98 | 98-99 | 99-00 | 2001 | 2002 | 2003 | 04/05 | 05-09 | 99-00 | 2001 | 2002 | 2003 | 04/05 | 05-09 | | | | | |
| 175 | Framework for meas.visual appe | 2006 | I | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 176 | Geometric toler.for color meas. | 2006 | C | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 177 | Colour render. of white LED | 2007 | B | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 178 | Pro.26th session.Beijing 2007 | 2007 | K | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 179 | charact.tristimulus colorimeters | 2007 | B | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 180 | Road..lighting for dev. Countries | 2007 | free | - | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 181 | Hand protection..UV exposure | 2007 | D | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 182 | Calib..total radiance factor.. | 2007 | F | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 183 | Def..cut-off vehicle headlights | 2008 | B | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 184 | Indoor daylight illuminants | 2009 | C | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| CIE Publications on Diskettes: | | | | | | | | | | | | | | | | | | | | | | | |
| D001 | Phot. & colorimetric data | 1988 | C | 68 | 1 | | 1 | | | 1 | | | | | 1 | | | 1 | | | 0 | X | |
| D001 | Phot.&colorimetric data (18.2) | 2006 | C | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| D002 | Colorimetric&colour rend. data | 2004 | J | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| D005 | Daylight simulators for colorim. | 1994 | A | 43 | | | | | | | | | | | | | | | | | 0 | | |
| D007 | Corresponding colours | 1994 | F | 86 | | | | | | | | | | | | | | | | | 0 | | |
| D008 | Colour rendering index (13.3) | 1995 | X | 53 | | | | 2 | | | | | | | 2 | | | | | | 1 | | disk |
| Standards and Draft Standards: | | | | | | | | | | | | | | | | | | | | | | | |
| ISO10526 | Standard illuminants | 1991 | B | 57 | | | 1 | | | | | | | | | | | | | | 1 | X | 9 |
| ISO10527/E | Colorimetric observers | 1991 | G | 91 | | | 1 | | | | | | | | | | | | | | 2 | X | 25 |
| ISO10527/F | Colorimetric observers | 1991 | | Euro | | | | | | | | | | | | | | | | | 0 | X | CB/Euro |
| S003 | Spatial distribution of daylight | 1996 | A | 43 | 1 | | | | | | | | | | | | | | | | 0 | X | |
| S004 | Colours of light signals | 2001 | B | 57 | | | | | | | | | | | | | | | | | 0 | | |
| S005/E | Illuminants for colorimetry | 1999 | B | 57 | | | | | | | | | | | | | | | | | 2 | | 12 |
| S005/F | Illuminants for colorimetry | 1999 | | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S005/D | Illuminants for colorimetry | 1998 | | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 16508/S006 | Road traffic light | 1998 | A | 43 | 1 | | | | | | | | | | | | | | | | 1 | | 5 |
| 17166/S007 | Erythema action spectrum | 1999 | A | 43 | | | 1 | | 2 | | | | | | 2 | | | | | | 1 | | 4 |
| S007/F | Erythema action spectrum | 1999 | A | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S007/D | Erythema action spectrum | 1998 | A | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 8995/S008 | Lighting of indoor work places | 2001 | C | 68 | | | 3 | | 4 | | | | | 3 | | 5 | | | | | 1 | | 19 |
| S009/E | Photobio.safety of lamp&system | 2002 | D | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S009/F | Photobio.safety of lamp&system | 2002 | D | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S009/D | Photobio.safety of lamp&system | 2002 | D | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S009/E&F | Photobio.safety of lamp&(bilingua | 2006 | I | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 23539/S010 | CIE syst.of physical photometry | 2005 | C | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 15469/S011 | Spatial distribution of daylight | 2003 | A | 43 | | | | | | 2 | | | | | | 3 | | | | | 1 | | |
| S011/E | Spat. dis.of daylight-gen. sky | 2003 | A | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| 23603/S012 | Spat.quli.of daylight simulators.. | 2004 | C | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S013/E | Int'l stand.global solar UV index | 2003 | A | 43 | | | | | | | | | | | | | | | | | 0 | | |
| S014-1/E | Colorimetry-1:colorimetric observe | 2006 | D | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S014-2/E | Colorimetry-2:illuminants | 2006 | C | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S014-4/E | Colorimetry-4:lab color spaces | 2007 | B | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S014-5/E | Colorimetry-5:luv color spaces | 2009 | B | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S015/E | Lighting of indoor work places | 2005 | C | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S016/E | Lighting req.for safety & security | 2005 | A | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S019/E | Photocarcinogenesis act.spect | 2006 | B | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| S020/E | Emergency lighting | 2007 | B | Euro | | | | | | | | | | | | | | | | | 0 | | CB/Euro |
| DS007.4 | Erythema action spectrum | 1998 | X | - | 1 | | | | | | | | | | | | | | | | 0 | X | |
| DS010.2/3 | CIE sys.of physical photometry | 2001 | X | 31 | | | 2 | | | | | | | 2 | | | | | | | 0 | X | |
| DS012.2/E | Spectral quality of daylight simu. | 2002 | X | 31 | | | | | | | | | | | | | | | | | 0 | X | |
| DS015/E | Ltg.of work places-outdoor work | 2002 | X | 31 | | | | | | 1 | | | | | | 1 | | | | | 0 | X | |
| DS018.2/E | Format for lumin.photome.data | 2007 | draft | | | | | | | | | | | | | | | | | | 0 | | |



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
INTERNATIONAL COMMISSION ON ILLUMINATION
INTERNATIONALE BELEUCHTUNGSKOMMISSION

Canadian National Committee Comité National Canadien



APPENDIX I

CNC/CIE 54th Annual Meeting

CNC/CIE Web Site Report

CNC/CIE Web Site Report September, 2009

Jennifer A. Veitch, Ph.D.
jennifer.veitch@nrc-cnrc.gc.ca

Usage

The usage of our site shows a steady increase. The average numbers of unique visitors each month have increased from 86 in 2007, 129 per month in 2008, and 172 for January through July 2009. The IP addresses associated with these visitors are from countries around the world, with the USA the most frequent source. Canada usually comes second or third in frequency, and there are a large number for which countries cannot be identified. Presentations from the 2007 Technical Conference at the Joint CIE/USA and CNC/CIE meeting are the most-visited pages, particularly the presentation by Dr. Ohno. The more substantive content we can place on the site, the more people we will reach.

Content

Our Webmaster, Bob Bridges, was unavailable in autumn 2008 because of a serious illness from which he has now recovered. Content updates did not occur following the 2008 meeting as a result, but we did explore various possibilities for adding features to the site as had been discussed at the 2008 CNC/CIE meeting. As a result, Mr. Bridges is now working to convert the site to a Joomla platform. Joomla is an open-source content management system (www.joomla.org) that will allow us to create password-protected spaces for document downloads (eliminating the need for large attachments to e-mails) and that will also permit your web secretary (me or whomever fills this role later) to update the content quickly. For instance, it will be easy to post the CIE press releases as PDF documents on the site. This conversion is expected to be completed by the end of December 2009.

Translation services for the web site have and will continue to be provided by the National Research Council of Canada Institute for Research in Construction.

Records of Canadian TC Involvement

The most difficult task each year is obtaining the information from Division delegates concerning the membership of TCs in their divisions. When I ask for the information, please send it along.

History of Lighting in Canada

I would like to add content on the history of lighting in Canada, but since 2007 I have made no progress in further developing the information. (Fortunately, the information we do have includes an e-mail interview with Prof. Adrian.) My current plan for this project is to talk to university contacts about the possibility of making this task into a course project, perhaps for a student in architecture or interior design.

Maintenance

The cost for the domain registration, site hosting, and maintenance in 2009 was \$162.60.

There will be a one-time cost in the coming year of approximately \$500 to cover the conversion to Joomla. Note that our web site costs over the years have been lower than we had originally anticipated. This change is likely to further lower our web costs by transferring routine updates to volunteer labour.

It has not been an onerous task to be the liaison for the web site, and I would be pleased to continue in that role for the coming year.



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APPENDIX J

CNC/CIE 54th Annual Meeting

Draft CNC/CIE Code of Procedure 2008-October-14

Canadian National Committee for the International Commission on Illumination

CODE OF PROCEDURE

1. Background

The International Commission on Illumination (abbreviated as CIE from its French title Commission Internationale de l'Eclairage) is a scientific, technical and cultural, non profit organization devoted to international cooperation and exchange of information among its member countries on all matters related to the science and art of light and lighting. The national adhering body for Canada is the National Research Council (NRC) which, within its allocated Grant budget for international affiliations, pays Canada's annual contribution to the CIE. However, subject to the level of the annual Treasury Board grant for international affiliation dues as well as consultation with the Committee on International Science, Engineering and Technology (CISSET), NRC retains the right to determine the level of its contribution or to terminate it.

Under an agreement between NRC Corporate Services and the NRC Institute for National Measurement Standards (INMS), signed in 1993 and renewed in 1998 and 2004, INMS is responsible for the Canadian National Committee for the CIE (CNC/CIE).

2. Objectives of CIE

The objectives of the CIE, as expressed in its Statutes, are:

1. To provide an international forum for the discussion of all matters relating to the science, technology and art of light and lighting* and for the interchange of information in these fields between countries. To achieve these goals the Commission organizes scientific educational events and holds CIE Sessions, normally every four years.
2. To develop basic standards and procedures of metrology in the fields of light and lighting.

* *Light and lighting in these objectives is to be understood in the broad sense of embracing such fundamental subjects as vision, photometry and colorimetry, involving natural and man-made radiation over the UV, the visible and the IR regions of the spectrum, and application subjects covering all usage of light, indoors and out, including environmental and aesthetic effects, as well as means for production and control of light and radiation. From 1999 onwards also the optical, visual and metrological aspects of the communication, processing and reproduction of images, using all types of analogue and digital imaging devices, storage media and imaging media are covered by CIE.*

3. To provide guidance in the application of principles and procedures in the development of international and national standards in the fields of light and lighting.
4. To prepare and publish proceedings, standards, technical reports and other publications concerned with all matters related to the science, technology and art of light and lighting.
5. To maintain liaison and technical interaction with other international organizations concerned with matters related to the science, technology, standardization and art in the fields of light and lighting.

From 1999 onwards also the optical, visual and metrological aspects of the communication, processing and reproduction of images, using all types of analogue and digital imaging devices, storage media and imaging media are covered by CIE.

3. Terms of Reference

The Terms of Reference of the CNC/CIE are:

1. To collect and reconcile the many views of the Canadian lighting community on relevant issues.
2. To identify, represent and promote the capabilities and distinctive competence of its Canadian lighting community internationally.
3. To enhance the depth and breadth of the participation of the Canadian lighting community in the activities and events of the CIE and related organizations.
4. To establish the mechanisms for communicating to the Canadian lighting community the views of the CIE and information about activities of the CIE.
5. To distribute appropriate documentation, including the newsletter of the CIE.
6. To attract and stage international events of value to the Canadian lighting community.

The CNC/CIE reports to the Director General of INMS.

These Terms of Reference include the responsibility to respond to all ballots of the CIE including the approval of new CIE Standards and Technical Reports.

4. Secretariat

The Secretariat of the CNC/CIE is located at INMS.

5. Members

The CNC/CIE consists of a maximum of nineteen Members appointed by the Director General of INMS. Terms of office are normally four calendar years beginning on January 1 and are staggered to provide continuity. It is expected that the Membership will be distributed with regards to geography, linguistics and

gender, and that it should ensure adequate representation of disciplines covered by the CIE as well as an appropriate turn-over to encourage the participation of young Canadian scientists and engineers. Members must be normally resident in Canada. In making appointments, the Director General takes account of the recommendations of the CNC/CIE.

In addition to the appointed Members, the CNC/CIE includes the following ex-officio Members:

1. The Director-General of INMS or his/her delegate.
2. Any Canadian resident who is an Officer of the CIE or a Director or Associate Director of a CIE Division.

The duties of Members are:

1. To contribute to the objectives of the CNC/CIE, as set out in its Terms of Reference.
2. To be an Officer of the CIE, to be an Officer of the CNC/CIE, to be the official Canadian Member of a CIE Division, or to assist the official Canadian Member of a CIE Division.
3. To attend meetings of the CNC/CIE.
4. To vote in letter ballots of the CNC/CIE.

The terms of office of Members are renewable for additional terms subject to the recommendation of the CNC/CIE and the approval of the Director General of INMS.

Before each Annual Meeting, the Secretary shall inform Members whose terms are expiring and ascertain whether they are willing to be re-appointed. At the meeting, Members and Advisory Members shall discuss and vote on the re-appointments and on new appointments. Potential nominees shall retire from the meeting during the discussion and voting. Following the meeting, the Secretary shall submit the nominations to the Director General of INMS for approval, accompanied by brief biographies highlighting the nominees' contributions to the CNC and the CIE. Nominations are normally for 4-year terms but shorter terms may be necessary to maintain reasonable staggering.

6. Officers

The Officers of the CNC/CIE are appointed by the Director General of INMS, on the recommendation of the CNC/CIE, from among its Members. The Officers include:

1. A President who is responsible for conducting the affairs of the CNC/CIE, calling and chairing its meetings, and reporting to NRC on its activities.
2. A Vice-President who is responsible for performing the duties of the President whenever the President is unable to perform them.
3. A Secretary, who is responsible for keeping the records of the CNC/CIE including the minutes of meetings, maintaining mailing lists (of Members,

Advisory Members and other interested persons), corresponding with the Central Bureau of the CIE, conducting letter ballots on questions which arise between meetings, and other related duties.

4. A Treasurer, who is responsible for maintaining a bank account in the name of the CNC/CIE and receiving and dispersing funds as directed by the CNC/CIE.
5. A Publications Officer, who maintains a stock of older CIE Publications and is responsible for all matters related to the sale of CIE Publications to Canadian residents.
6. Any other Officers that the CNC/CIE deems necessary.

All Officers must give a written report of their activities to the CNC/CIE at its annual meeting.

The Offices of President, Vice-President and Secretary must be held by separate people, but the Offices of Treasurer and Publications Officer may be combined with each other or with that of Secretary.

~~The slate of Officers shall be reviewed by the CNC/CIE at its first meeting following a CIE General Assembly and any recommendations for change shall be submitted to the Director General of INMS.~~

Officers are normally appointed for four-year terms starting on January 1. The terms of office are renewable for additional terms subject to the recommendation of the CNC/CIE and the approval of the Director General of INMS.

The slate of Officers shall be reviewed by the CNC/CIE at each Annual Meeting and a Nominating Committee consisting of three Members shall be appointed if the terms of any Officers are due to expire at or before the end of the following year. For each position for which the term of office is expiring, the Nominating Committee shall make at least one nomination, which can be the incumbent if he/she is willing to accept re-appointment. The Secretary shall distribute the nomination(s) to all Members and Advisory Members at least two months before the next Annual Meeting with a request for additional nominations. Nominations shall close two weeks before the meeting and the Secretary shall inform all Members and Advisory Members of any additional nominations at least one week before the meeting. All nominations, including those by the Nominating Committee, shall be accompanied by a brief biography highlighting the nominee's contributions to the CNC and the CIE. The nomination must have the approval of the nominee. A single nomination for each position shall be approved by the CNC at the meeting and the Secretary shall submit the agreed nominations to the Director General of INMS for approval.

If the term of office of a new Officer extends beyond his/her term as a Member, the latter shall be extended to bring it into agreement.

7. Executive Committee

An Executive Committee comprised of the President, Vice-President, Secretary and Treasurer conducts routine business of the CNC/CIE between meetings. All actions of the Executive Committee must be reported to the next annual meeting of the CNC/CIE as part of the Secretary's report.

8. Advisory Members

The CNC/CIE may appoint any number of Advisory Members to assist it in its duties and to assure adequate representation of all interests. Advisory Members must be normally resident in Canada and may attend meetings and take part in discussions on an equal basis with Members. When an Advisory Member is appointed, the Secretary shall inform them in writing.

The duties of Advisory Members are to contribute to the objectives of the CNC/CIE, as set out in its Terms of Reference, for example by being a member of a CIE Technical Committee or by otherwise assisting at least one official Canadian Member of a CIE Division in his/her duties.

The term of office of an Advisory Members is normally four years and is renewable subject to review by the CNC/CIE. Shorter terms may be approved to maintain reasonable staggering. The term of office of an Advisory Member appointed "ex officio" under Sections 17 and 18 corresponds to his/her term as a member of a CIE Committee.

Before each Annual Meeting, the Secretary shall inform Advisory Members whose terms are expiring and ascertain whether they are willing to be re-appointed. At the meeting, Members and Advisory Members shall discuss and vote on the re-appointments and on new appointments.

9. Observers

A representative of the NRC International Relations Office is an observer of the CNC/CIE.

10. Consultants

At the request of any Member or Advisory Member, the Secretary may invite one or more persons to attend any meeting or meetings, and/or to take part in discussions conducted by correspondence. Such persons do not have the right to vote.

11. Meetings

The President may call a meeting of the CNC/CIE whenever he/she deems it necessary or at the request of at least five Members, or at the request of the Director General of INMS. In any case there shall be a meeting in the last quarter of each calendar year. Members must be given at least three weeks notice of any CNC/CIE meeting.

12. Quorum

A quorum consists of one-half of the Members, including proxies and ex-officio Members. Advisory Members are not counted in determining a quorum.

13. Voting

In dealing with matters at meetings and by letter ballots, Members and Advisory Members are treated equally. A simple majority of Members and Advisory Members is required to ensure the passage of a motion. Members who are unable to attend a meeting may assign their vote to a proxy provided that they give written notice to the Secretary before the meeting.

14. Letter Ballots

At the request of the President or at least five Members of the CNC/CIE, or to deal with matters referred to the CNC/CIE by the CIE, the Secretary shall send out letter ballots (electronically or by hard copy) to all Members and Advisory Members to ascertain their opinion on any question that arises between meetings.

The passage of any motion thus submitted requires:

1. A simple majority of those Members and Advisory Members who vote.
2. That the number of Members who vote constitute a quorum.
3. That all Members and Advisory Members be given at least three weeks notice of the closing date of the letter ballot.

Negative votes on a letter ballot shall be accompanied by an explanation.

As a matter of expediency, and at the discretion of the President, some letter ballots may be restricted to Members only.

15. Delegates to CIE General Assemblies

When a CIE General Assembly is to be held, the CNC/CIE recommends to the Director General of INMS the nomination of two delegates (one voting, the other non-voting) for appointment by the NRC International Relations Office. The President of the CNC/CIE shall normally be the voting delegate. The delegates are expected to present the policies of the NRC International Relations Office on issues relating to finances, Statutes and By-Laws, and of the CNC/CIE on other matters. The delegates must provide a written report to the NRC International Relations Office with a copy to the Director General of INMS and to the CNC/CIE.

16. Members of CIE Divisions

The CNC/CIE, whenever possible, appoints a voting Member to each CIE Division. If the person appointed is not already a Member of the CNC/CIE, he/she shall be nominated to the Director General of INMS for appointment as a Member immediately.

The duties of the Division Members are:

1. To ascertain the views prevailing in Canada and to express these views in the deliberations of the Division either by correspondence or at meetings.
2. To report in writing to the CNC/CIE, at its annual meeting, on the activities of the Division.
3. To advise the CNC/CIE on matters pertaining to the Division and its associated Technical Committees.
4. To encourage Canadian experts to be active members of Technical Committees within the Division.
5. To inform the Secretary of all Canadians who become members of Technical Committees within the Division.

If the Canadian Division Member is unable to attend a Division meeting, ~~he/she~~the President may appoint a substitute voting member. If he/she does not do this, the President may do so. The Division Member or the President must inform the CIE Division Secretary or Director of this appointment. The substitute must present a report of his/her actions to the regular Member after the meeting.

The Member's annual report to the CNC/CIE should include the latest Activity Report of the Division (or a pointer to an electronic version), a summary of issues of particular importance to Canada, and a list of Canadian members of Technical Committees within the Division.

Division Members are normally appointed for four-year terms. The terms of office are renewable for additional terms. The slate of Division Members shall be reviewed by the CNC/CIE at each Annual Meeting.

~~The term of office of a Division Member shall end at the first meeting of the CNC/CIE following a CIE General Assembly. However, the A retiring~~ Division Member's term as a Member of the CNC/CIE is subject to the terms of Section 5 and may continue after his/her term as a Division Member ends.

To assist each Division Member, the CNC/CIE, whenever possible, appoints a minimum of two other Members or Advisory Members to assist him/her.

17. Members of CIE Technical Committees

Members of CIE Technical Committees are appointed by the Technical Committee Chair. The CNC/CIE, in consultation with the appropriate Division member, may nominate a member for a CIE Technical Committee on which it is not already represented. This right should only be used if a competent person is available and prepared to be active. Any Canadian member of a CIE Technical Committee, whether appointed directly by the Technical Committee Chair or nominated by the CNC/CIE, who is not already a Member or Advisory Member of the CNC/CIE, automatically becomes an Advisory Member.

18. Members of Other CIE Committees

Canadian Members of other CIE Committees, such as the Finance Committee, who are not already Members or Advisory Members of the CNC/CIE, automatically become Advisory Members.

19. CIE Publications

The CNC/CIE receives royalties from the CIE for CIE Publications sold to residents of Canada. In addition, the CNC/CIE has purchased certain older CIE Publications from the Central Bureau and sells them in Canada with an appropriate mark-up. Proceeds from these royalties and sales, after deduction of costs, are used to support activities of the CNC/CIE.

20. Funding

The CNC/CIE does not, in general, provide financial support for members for their CIE-related activities. In special circumstances, when warranted, the Treasurer shall pay monies for expenses incurred during official CIE business, which have been approved at the annual CNC/CIE meeting, or by the Executive Committee. The CNC/CIE shall maintain a written policy outlining the criteria for such reimbursement of expenses.

The NRC International Relations Office will, subject to the availability of funds, contribute to the travel costs of university-based Canadian delegates to a CIE General Assembly.

21. Amendment of Code of Procedure

This Code of Procedure may be amended by an affirmative vote of a simple majority of the Members of the CNC/CIE, at a meeting or by letter ballot, provided that notice of motion has been given at least two months before the date of the meeting or the closing date of the letter ballot, and that the number of Members who vote constitute a quorum. Adoption of the amended Code requires the approval of the Director General of INMS.



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APPENDIX K

CNC/CIE 54th Annual Meeting

CNC/CIE Members and Advisory Members



CNC/CIE MEMBERS

| CNC/CIE | | | TERM (expiry) | CIE |
|------------------------|--------------------|------------------|---------------|-----------------|
| President | L.A. Whitehead | British Columbia | 2011-12-31 | |
| Vice President | J.A. Veitch | Ontario | 2011-12-31 | Division 3 |
| Secretary | A.A. Gaertner | Ontario | 2009-12-31 | |
| Publications/Treasurer | K.F. Lin | Ontario | 2012-12-31 | |
| | R. Baribeau | Ontario | 2010-12-31 | Division 8 |
| | J. Bastianpillai | Ontario | 2011-12-31 | Division 4 |
| | J.D.Y. Deslauriers | Québec | 2011-12-31 | Division 6 |
| | B.D. Jordan | Ontario | 2011-12-31 | |
| | J.A. Love | Alberta | 2011-12-31 | |
| | S.M. McFadden | Ontario | 2011-12-31 | Division 1 |
| | I.C. Pasini | Ontario | 2010-12-31 | |
| | C. Suvagau | British Columbia | 2011-12-31 | |
| | M.K. Timmings | Ontario | 2011-12-31 | Division 5 |
| | V. Venkataramanan | Ontario | 2011-12-31 | |
| | J.C. Zwinkels | Ontario | 2011-12-31 | Division 2 |
| <i>ex officio</i> | A.R. Robertson | Ontario | | NRC/INMS Member |

CNC/CIE ADVISORY MEMBERS

| | | | |
|---------------------|------------------|--------------------|------------------|
| Nolie Agellon | Ontario | Denis Lavoie | Québec |
| [Martin Aitkenhead] | Ontario | Ken Loach | Ontario |
| Santo Aguanno | Ontario | P. Manning | Nova Scotia |
| Eduard Alf | Ontario | J. Bruce McArthur | Ontario |
| Chantal Arsenault | Ontario | S.W. McKnight | Ontario |
| Ian Ashdown | British Columbia | Arthur H. Mendel | Québec |
| M.G. Bassett | Ontario | Guy Newsham | Ontario |
| Chrisnel Blot | Québec | Keith Niall | Ontario |
| Mario Bucci | Ontario | T. Nilsson | P.E.I. |
| J. Allyson Chrysler | Ontario | Karen Pero | Ontario |
| Vince Cimino | Ontario | Pascale Reinhardt | Québec |
| W.B. Cowan | Ontario | J.B. Roberge | Québec |
| Biman Das | Nova Scotia | Alexander Rosemann | British Columbia |
| R.V. Day | Ontario | Mankajee Shrestha | British Columbia |
| Walter T. Delpero | Ontario | Andrew D. Silbiger | Ontario |
| Marie Dumont | Québec | Dyoni Smith | Ontario |
| Marcin Gorzkowski | Ontario | Ralph A. Smith | New Brunswick |
| John W. Harron | Ontario | Nikolay Stoev | Ontario |
| Kurt Ising | British Columbia | Eli Szamosi | Ontario |
| S.M. Kaye | Manitoba | B.W. Tansley | Ontario |
| Donald Kline | Alberta | Thanos Tzempelikos | Ontario |
| Barbara Kolesnik | Ontario | R.W. White | Québec |
| R. Lakowski | British Columbia | Ernest Wotton | Ontario |
| André Laperrière | Québec | | |

[] = require CNC/CIE appointment at annual meeting of 2009-October-15/16.

2010-September-16



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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APPENDIX L

CNC/CIE 54th Annual Meeting

Report on CIE 2009 General Assembly

Report from Lorne Whitehead, President of the CIE Canadian National Committee, who was the NRC-INMS nominated Canadian delegate attending the CIE General Assembly Meeting, 26 May 2009, Budapest, Hungary

Report dated March 21, 2010

Lorne Whitehead attended the above referenced meeting, along with Joanne Zwinkels, another member of the CIE CNC.

We took notes at the meeting and also requested the official minutes from the CIE, and have just received them. In our opinion these minutes accurately reflect the activities at the meeting and we have therefore included them as part of this report.

In advance of the meeting, we had noted one area of possible concern and expressed it in an e-mail message to the CIE President. A copy of that message is appended. Our concern was noted, and in response the CIE withdrew, prior to the budget vote, the proposed change that had caused us concern. This is noted in section 6.5 of the minutes, where we have highlighted in yellow the key modification that reads “without any changes in the crediting of publication sales”. We were pleased with the CIE’s responsiveness to the concern we expressed.

There were no other areas of concern from a Canadian perspective.

Please let me know if you have any questions about this report.

Finally, regarding travel cost reimbursement, this trip constituted part of my normal travel activities as part of my scientific work for the University of British Columbia and therefore in this case there is no need for travel reimbursement from NRC-INMS.

Sincerely,

Lorne A. Whitehead
lorne.whitehead@ubc.ca
(604) 827-4299

MINUTES of the CIE GENERAL ASSEMBLY MEETING

at the Freshmen's Castle of the Lorand Eötvös University,
Budapest, Hungary
26 May 2009

1. Opening of the meeting

- a. The President, Franz Hengstberger, opened the meeting at 9:20 and welcomed the participants
- b. The roll-count showed 25 National Committees present out of 37, sufficient for a quorum. In the course of the meeting, 1 further country representative joined. The attendance list of the GA members and observers is attached to the Minutes as Annex 1.
- c. The President asked Prof. János Schanda as host to say a few words. Prof. Schanda welcomed the Assembly at the Lorand Eötvös University, thanked all local and international organisers. Further he informed on his retirement as Chairman of the Hungarian CIE-NC and introduced Prof. György Abraham as the new official representative of Hungary.
- d. The agenda was accepted without amendments (Annex 2).
- e. The President asked for a minute of silence to commemorate the colleagues who had passed away since the CIE Session 2007:

Walter R. Stevens (Great Britain)
Werner Adrian (Canada)
Margaret B. Halstead (Great Britain)
Todor Kehlibarov (Bulgaria)
Gennady Shakhparunyants (Russian Federation)
Rikard Küller (Sweden)

2. Approval of the Minutes of the General Assembly Meeting 2007 in Beijing

The Minutes had been circulated to NCs with NCCL0714. No comments had come in, and the minutes were accepted.

3. Report of the President

F. Hengstberger presented his report.

3.1 Amendments of the Statutes

He informed the GA on the tax and legal situation of the CIE in Austria, which was one of the reasons for the proposed amendments to the Statutes. Dr Hengstberger presented the GA with the proposed revised Statutes. To avoid the loss of the favourable tax status as a non-profit organisation in Austria the split of the CIE into a non-profit and a commercial unit was proposed.

Comments:

Axel Stockmar (Germany)

would have liked to clarify the meaning of two terms the first being "economy". F. Hengstberger clarified that the obsolete term "geographic territory" has been changed to "economy" to be in line with international terminology, namely with the WTO.

M. Paul explains that the official UN German (and French) translation of the term "economy" will be used in the Statutes. (*Note: the term "Wirtschaftsraum" was used in the German translation*) Mr. Stockmar further asked for a definition of "developing countries" and stated that such a definition will be needed in Clause 5.2.1. F. Hengstberger informed that there is an official OECD list of developing countries.

Finally, Axel Stockmar mentioned that Clause 6.4.6 stated the appointment of the General Secretary for "an indefinite period of time". It was clarified that "indefinite" does not mean "infinite".

Thomas Lemons (USA)

T. Lemons indicated that there was no requirement for a TC member to be a NC member, and asked for a correction of this status.

F. Hengstberger pointed out that it is stated in the statutes that one must hold a membership to be eligible for a position as CIE officer. The only exemption is for TC members, as the Chair of the TC can choose the best experts worldwide irrespective whether they are members of the NC or not. In any case a vote at TC level is subject to a consecutive vote at Division level, and Division Members are elected by the NCs.

F. Hengstberger asked proposed to let the BA look into this question by making a survey among the NCs and to offer an opinion at the next GA-Meeting

The proposed amendments to the CIE Statutes were unanimously approved. (Annex 2)

4. Brief address of the US National Committee

On behalf of the USNC, Tom Lemons informed the GA on the current financial situation of the USNC. (Annex 3)

He proposed that the US NC should declare itself bankrupt as the liabilities would supersede the assets and there is currently no feasible and visible way how this situation should be changed sustainably. Tom Lemons stressed that the current situation, with the IESNA on the one hand and the CIE US NC on the other should not be changed.

F Hengstberger reminded that there was an intense discussion at the BA-Meeting the day before and that the BA will try to find ways out and help the US NC as it was doing with other NCs during the past years, too.

The Treasurer, Johann Schleritzko, explained that the USNC is presently contributing approx. 10% of the total dues income. In terms of the constitution the USNC will be, if they continue not to pay their dues, proposed for suspension as of 31st of December 2009 and will expelled a year later.

At a declaration of bankruptcy on any NC point 5.6.1b would come into consideration, which says "A National Committee may be expelled from the Commission when it ceases to comply with the membership conditions, or due to conduct impairing the interests of the Commission. Expulsion should be decided by the National Committees in a General Assembly or by postal vote"

Therefore he as Treasurer would certainly propose the expulsion of the USNC in order to be able to align and to secure the CIE income.

4. Application for National Committee

4.1. Application of Singapore for Associate National Committee

The General Secretary, Martina Paul, explains the documentation provided and recommends the approval of Singapore as Associate National Committee.

The application was unanimously approved (26 votes)

4.2 Application of Malaysia for National Committee

M. Paul explains the documentation provided and recommends the approval of Malaysia as National Committee.

The application was unanimously approved (26 votes)

4.3. New Application Form for National Committee

M. Paul explains that a new Application Form has been drafted. This new Application Form requests exhaustive information from applicants. (Annex 4)

F. Hengstberger asked the members of the GA to send any further comments in the matter directly to the General Secretary.

6. Report of the Treasurer

J. Schleritzko presented his report (Annex 5) with special emphasis on changes regarding the legal status of the CIE. The Year End Report 2007 (Annex 6) and Year End Report 2008 (Annex 7) were presented to the NCs.

6.1 Supportive Members Campaign

J. Schleritzko launched a second time the Supportive Member Campaign (Annex 8)

S. Jenkins (AU) pointed out that supportive members are imperative to support the NC, but money is scarce whereas Peter Dehoff (AT) mentioned that one should ask the question "What do you miss if you are not in the CIE?"

T. Fuchida (JP) declared that Japan cannot participate in the Supportive Membership Program, as it fears to lose the support of their international companies which the NC Japan needs for its own financing.

W. van Bommel (NL) explained that at the beginning, some 15 ago, the Supportive Members Program was focused on the big international companies. Nevertheless he stressed the necessity to also address Basic Members (which only contribute € 500), and e.g. get the lighting designers as members.

6.2 Conference Budget

J. Schleritzko presented the Conference Budget for the CIE 2010 "Lighting Quality and Energy Efficiency" to be held in Vienna, in March 2010.

6.3 FC Report 2007 & 2008

The FC Report was approved by 26 affirmative votes and 1 abstention.

The FC Report was approved by 25 affirmative votes and two 2 abstentions.

6.4 Proposed internal accounting policies

Proposed new policy as to handle overdue NC Dues payments :

1. The Treasurer requests that all Dues from NC's, which have not been settled, as per the 30th of June of a year, be subjected to an interest rate, as per the current Bank Overdraft rate applicable to the CIE.
2. Dues, still owing on the 31st of December, for reasons, indicating financial difficulties, shall be provided for with 50% of the outstanding value.
3. Dues, still owing on the 31st of December, the following year, shall be provided for in full.

F. Hengstberger clarifies that afore mentioned point 1) should be approved by the NCs. Point 2 and 3 have already been approved by the BA as they do not have effect on the dues whatsoever.

T. Lemons (US) requested about the interest rate. (J. Schleritzko clarifies that the current interest applicable to the CIE is 9%). T. Lemons pointed out that the USNC will not be able to pay its dues in another 10 years. He recommended to not approve the policy.

J. Schleritzko replied that this policy should be seen as an encouragement to pay and to reflect the cost associated with late payment.

P. Soardo (Italy) expressed himself against of any way of rising the dues, as with the crisis it is getting more and more difficult to raise money from industry.

The proposed point 1 of the accounting policies was declined with 12 votes in favour, 8 against and 6 abstentions.

6.5 Budget 2009-2011 (including the changes approved by the Finance Committee)

The Budgets 2009-2011 **(without any changes in the crediting of publication sales)** was approved with 24 votes in favour, 1 against and 1 abstention.

6.6. Establishment of a CIE Commercial Unit

The establishment of a commercial unit was approved with 25 votes in favour and 2 against.

6.7 Appointment of Internal Auditors

Mr. Peter Dehoff and Mr. Sándor Álmási were unanimously approved as Internal Auditors.

7. Report of the Vice-President Technical

J. Schanda presented his report (Annex 9), mentioning some highlights of the work done in TCs and Divisions.

He also proposed the publication of a "Solid State Lighting" book. The book should comprise fundamental and expert knowledge and should become a basic CIE Publication like the CIE Colorimetry Book.

8. Report of the Vice-President Publications

T. Goodman presented her report (Annex 10).

A close examination of the sales per publication showed that some “older” publications are still bestsellers. This fact should be taken into account when revising and re-editing CIE publications.

Specific information on webshop buyers were offered to NCs “on demand”. Any NC that wishes to receive information on webshop customers in its country is invited to request it from the Central Bureau.

9. Report of the Vice-President Standards

M. Seidl presented his report (Annex 11).

The Vice-President Standards reported on CIE cooperation with ISO and IEC and CELMA, as well as on needs for future work on standards.

The upcoming CIE Conference Vienna 2010, from the point of view of ISO and IEC cooperation, was addressed, too.

10. Report of the Secretary

K. Sagawa presented the CIE Affiliate Country Program (Annex 12) aimed at developing countries which are not able to afford a full CIE Membership.

The programme will be further shaped by the Board of Administration and presented to the GA for adoption at its next meeting in South Africa.

11. Report of the General Secretary

M. Paul presented her report (see Annex 13) and expressed special thanks to her team in the Central Bureau for its commitment during the last two years.

12. Report of further BA officers

10.1 Marc Fontoynt (VPVP)

Marc Fontoynt addressed the issue of Energy Conservation and the necessity of approaching the International Energy Agency (IEA). The IEC has given top priority to the testing and labelling of LED Lighting Systems globally.

He further announced the start of an exchange to examine how the IEA could support CIE work in the field of testing and validating LED lighting systems. A draft will be circulated till summer and a meeting is planned in Seoul, Korea in November for a program that is scheduled for 3 years starting from January next year.

13. Election of CIE Officers for the next Quadrennium 2011-2015

The proposed CIE Officers for the next Quadrennium 2011-2015

| | |
|--------------------|----------------------------------|
| Ann Webb | President |
| Franz Hengstberger | Past President |
| Yoshi Ohno | Vice-President Technical |
| Teresa Goodman | Vice-President Publications |
| Axel Stockmar | Vice-President Standards |
| Mark Fontoynt | Vice President without Portfolio |
| Cui Shipping | Vice-President without Portfolio |
| Yoshiki Nakamura | Secretary |
| Johann Schleritzko | Treasurer |

were unanimously approved.

14. 27th CIE Session 2011 in Sun City, South Africa

T. Milne presented, on behalf of the South African National Committee, the 27th CIE Session 2011 in Sun City, South Africa (Annex 14).

15. CIE Awards

The following persons received a CIE Award:

Prof. Pan Jiagen (China)
David Loe (Great Britain)
Sándor Almási (Hungary)
Kenjiro Hashimoto, (Japan)
Kohji Kawakami (Japan)
Takashi Ohyama (Japan)
Hirohisa Yaguchi(Japan)
Prof. Wladyslaw Dybczynski D.Sc., PhD. (Poland)
Alicja Peczynska M.Sc.Eng. (Poland)
Malgorzata Skonieczna, M.Sc.Eng. (Poland)
Dr Rolf S. Bergman (USA)
Norbert Johnson (USA)
Dr Alan L. Lewis (USA)
Justin Rennilson (USA)

16. Any other business

The next GA meeting will be held at the 27th CIE Session in Sun City, ZA, on July 10, 2011.

Two applications for the next Midterm Meeting in 2013 were received: France and India.

As the year 2013 marks the 100-year jubilee of the CIE which was founded in Paris, the application of France was approved with 20 votes in favour (2 in favour of India).

India expressed its wish to apply for the 2015 Session and so did Brazil.

J. Schanda reminded the participants that the Gala Dinner will take place at 19:00 and all GA participants were invited to attend.

15. Closing of the meeting

The President thanked the hosts for their hospitality and the GA members for their participation in the discussions. He closed the meeting at 16:30.

Annex 1: Attendance List
Annex 2: GA Agenda
Annex 3: CIE Status Report
Annex 4: New NC Application Form
Annex 5: Report of the Treasurer
Annex 6: Financial Report 2007
Annex 7: Financial Report 2008
Annex 8: Supportive Members Campaign
Annex 9: Report of the Vice-President Technical
Annex 10: Report of the Vice-President Publications

- Annex 11: Report of the Vice-President Standards
- Annex 12: CIE Affiliate Country Program
- Annex 13: Report of the General Secretary
- Annex 14: 27th CIE Session in Sun City, South Africa

Resolutions taken at the GA Meeting 2007, Beijing:

- * The GA approved the expulsion of the NC of Thailand at the end of 2007, unless at least the arrears for 2005 are received at that date.
- * The GA approved the draft budgets for 2008 and 2009.
- * The GA approved Mr. Johnson and Mr. Dehoff as internal auditors.
- * The GA approved to hold the Midterm Meeting 2009 in Budapest.
- * The GA approved to hold the CIE Session 2011 in South Africa.

From: Zwinkels, Joanne
To: Hengstberger, Franz
Cc: Gaertner, Arnold; Whitehead, Lorne
Subject: CIE General Assembly meeting in Budapest - CNC Canada concerns
Date: Friday, May 22, 2009 8:59:46 AM

Dear Franz,

I am writing, at the suggestion of Dr. Lorne Whitehead, President of the CIE Canadian NC, to ask your advice regarding the upcoming General Assembly Meeting on Tuesday. Both Dr. Whitehead and I will be attending the meeting. We have been asked to represent significant concerns on behalf of our NC members and are seeking your advice regarding the most effective way to proceed.

Our concerns center on the proposal to suspend payment of a portion of publication revenues to the national committees, in exchange for the possibility of reduced dues in the medium term. We have three basic concerns in this regard:

- 1) In the short-term, there is no reduction in NC dues and the loss of publication revenues will cause economic hardship to several national committees; in 2007, the NC credits received from publication sales were of the order of 10 to 25% of membership dues for several NCs.
- 2) This change would reduce the incentive for national committees to promote sales of publications within their countries or local economies, negatively affecting the CIE as a whole; and
- 3) This change would cause difficulties for national committees (such as ours) for which the membership dues are fully paid by a supportive external organization. Any reduction in credits received from publication sales would significantly reduce the NC's ability to finance its various communication, education, and promotion activities; thereby negatively impacting the NC's effectiveness in carrying out the aims of the CIE as a whole.

We feel it is unfortunate that the CIE national committees have not had an opportunity to fully discuss these proposed changes with their membership; typically the NCs meet in the Fall of each year and have not had an opportunity to have a meaningful exchange of views prior to the discussion and vote at the General Assembly. We therefore seek your advice on how best to express our concerns.

In particular, we wonder if the best approach could be to request that the CIE allow sufficient time for a dedicated, interactive, consultation with the national committees before such a decision is considered by the General Assembly. While this action would introduce some delay, it would have the benefit of ensuring a fairer decision, based on consultation with the broad membership, and one that would be more widely supported by the many volunteer contributors who are so essential to the success of the CIE. The alternative, of implementing the proposed budget change that may not be broadly supported, could result in a severe loss in support for the CIE as a whole and ultimately defeat the purpose of the change.

Any advice you may have would be most appreciated. Perhaps we could meet for a few minutes

on Monday to discuss this. Both Lorne and I would be available Monday afternoon or evening. Please let us know if there would be a convenient time and place for us to meet.

We are very much looking forward to seeing you in Budapest.

Sincerely,

Joanne Zwinkels

.....

Dr. Joanne Zwinkels

National Research Council Canada

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COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
INTERNATIONAL COMMISSION ON ILLUMINATION
INTERNATIONALE BELEUCHTUNGSKOMMISSION

Canadian National Committee Comité National Canadien



Canadian Division Members' Reports

CNC/CIE 54th Annual Meeting

CIE Division 1

Vision and Colour

Division 1: Vision and Colour
Report to CNC/CIE Annual Meeting

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The annual meeting of Division 1 was held 2 June 2009 in Budapest, Hungary in conjunction with the Interim meeting of the CIE. The meeting was attended by 18 country representatives with approximately 32 people attending the meeting in total. Canada was represented at the meeting by Joanne Zwinkels. Seven Technical Committees (TCs) met in conjunction with the meeting: TC1-55 Uniform colour space for industrial colour-difference evaluation, TC1-63 Validity of the range of CIEDE2000, TC1-68 Effect of stimulus size on colour appearance, TC1-69 Colour rendering of white light sources, TC1-70 Metameric samples for indoor daylight evaluation, TC1-72 Measurement of appearance network, and TC1-74 Methods for Re-Defining CIE D-Illuminants.

Highlights

Five TCs and two Reporterships were proposed. These are:

TC 1-75: A Comprehensive Model of Colour Appearance (Chair: M. Ronnier Luo, GB)

Terms of Reference: To derive colour appearance models that include prediction of the appearance of coloured stimuli viewed in typical laboratory conditions:

- ♦ that appear as unrelated colours,
- ♦ that are viewed under illumination down to scotopic levels,
- ♦ that include consideration of varying size of stimulus.

TC 1-76: Unique Hue Data (Chair: Sophie Wuerger, GB)

Terms of Reference: To study and report on unique hue data, including an analysis of the scatter of those data: this to include practical viewing conditions.

TC 1-77: Improvement of the CIE Whiteness and Tint Equations (Chair: Robert Hirschler, HU)

Terms of Reference: To recommend improvements or modifications to the existing CIE Equations for Whiteness and Tint to extend their scope of application to a wider range of instrument conditions and white materials; e.g. various tints and levels of fluorescence.

TC 1-78: Evaluation of Visual Performance in the Real Lit Environment (Chair: Monica Billger, SE)

Terms of Reference: To investigate and report on current research on visual performance that relates to psycho-physical and physiological measurements in the real lit environment, and to produce a plan for future work.

TC 1-79: Limits of Normal Colour Vision (Chair: John Barbur, GB)

Terms of Reference: 1) To document the correlation between performance on colour matching, colour discrimination, colour naming, and colour deficiency tests and factors such as variation in the peak spectral sensitivity of the M and L cones, density of the lens, density of macular pigment, variation in the optical density of the cones, L to M cone ratio, rod intrusion, illumination level, stimulus size,

gender, stimulus duration and identify any substantive gaps in the existing literature. 2) Using the above database, develop a model or models that will allow the prediction of the effect of the above factors on colour discrimination, colour matching, and colour naming performance.

R1-48: Colour Emotion and Harmony (Li- Chen Ou, TW)

Terms of Reference: To review methods for relating the emotion and harmony responses to colored stimuli with associated colorimetric measurement of those stimuli.

R1-49: Above-Threshold Pulsed Lights (Ian Tutt, GB)

Terms of Reference: To review methods for photometric prediction of the brightness and color of supra-threshold pulsed signal lights. This is a joint Report between D1, D2 and D4. Dennis Couzen will liaise with D2 and Ian Tutt with D4.

R1-50: 3D Aspects of Visual Appearance Measurement (David Simmons, GB)

Terms of Reference: 1) To review the activity of relevant organisations related to 3D vision, 3D image capture, 3D model storage and 3D display where these are relevant to visual appearance issues. 2) To establish a database of key research articles, technology and terminology related to 3D aspects of visual appearance. 3) To establish an international panel of experts able and willing to advise on 3D matters. 4) To liaise with other CIE divisions.

One TC (TC1-66) and five Reporterships (R1-32, R1-39, R1-44, R1-46, and R1-47) were closed.

Future Meetings

The next meeting of Division 1 will be held in Princeton, NJ, USA on 17-18 June 2010 in conjunction with meetings of ASTM, Technical Committee E12, Color and Appearance, and the ISCC Conference.

Canadian Participation in Division 1

Based on the latest information available to me, Canada has representatives on 17 Technical Committees in Division 1. They are as follows:

| | | | |
|--------|-----------------------------------|--------|-------------------------|
| TC1-27 | Alan Robertson | TC1-64 | S. McFadden (Chair) |
| TC1-37 | W. Cowan | TC1-67 | B. Tansley |
| TC1-42 | S. McFadden | TC1-69 | I. Ashdown |
| TC1-44 | J. Zwinkels | TC1-70 | Alexander Rosemann |
| TC1-54 | D. Kline | TC1-71 | B. Jordan, A. Robertson |
| TC1-55 | A. Robertson | TC1-72 | L. Cormier, J. Zwinkels |
| TC1-56 | A. Robertson | TC1-77 | B. Jordan |
| TC1-57 | A. Robertson (Chair), J. Zwinkels | TC1-79 | S. McFadden |
| TC1-60 | S. McFadden | | |

J. Zwinkels is also a liaison between Division 1 and ISO TC6/WG3. If anyone is interested in participating in one of the TCs, especially the newer ones, please contact Sharon McFadden.

CIE Publications

Published

TC1-57: ISO 11664-4:2008(E)/CIE S 014-4/E:2007 Colorimetry - Part 4: CIE 1976 L*a*b* Colour Space

TC1-57: CIE S014-5/E:2009, Colorimetry Part 5: CIE 1976 $L^*u^*v^*$ Colour Space and u', v' Uniform Chromaticity Scale Diagram

TC1-66: Publ. 184:2009: Indoor Daylight Illuminants

Sent for BA and Division Ballot

TC1-27: Specification of Colour Appearance for Reflective Media and Self-Luminous Display Comparison

TC1-56: Improved Colour Matching Functions

TC1-57: CIE DS014-3/E:2009, Colorimetry, Part 3: CIE Tristimulus Values

Summary of Progress of Technical Committees and Reporterships

The following summaries of activities in the various Technical Committees of Division 1 are based primarily on the excellent notes provided by Joanne Zwinkels who represented Canada at the 2009 Division 1 meeting. In most cases, only brief summaries are provided. More complete summaries can be found in the 2009 Activity Report and the minutes of the Division 1 meeting. Both are available in PDF format on the Division 1 website at <http://www.cie.co.at/div1/>. The activity report includes the terms of reference and membership for all Technical Committees and Reporterships.

Progress in Vision Section (M. Ayama, Associate Director)

TC1-36: Fundamental Chromaticity Diagram with Physiologically Significant Axes (F. Viénot): They have completed Chapter 6 of Part 2. Chapter 7 will deal with chromaticity diagrams. They had problems dealing with the definitions of the best spectral luminous efficiency function – with L- and M-cone fundamentals optimally weighted to fit experimental data. There is an enormous dispersion of the number of L and M cones in different individuals.

TC1-37: Supplementary Systems of Photometry (K. Sagawa): A draft Technical Report (TR) was prepared after the Stockholm Division meeting and circulated to members. From comments received a second draft will soon be available for circulation. The final draft should be available by the end of 2009.

TC1-41: Extension of $V_m(l)$ beyond 830 nm (P. Walraven): If the voting on Chapter 6 of the report by TC 1-36 is positive, the TC will resume its activities.

TC1-42: Colour Appearance in Peripheral Vision (M. Ayama): The text of the first draft of the TR is almost completed; fixing up figures and editorial formatting are needed. It will be distributed to the committee members shortly.

TC1-54: Age-Related Change of Visual Responses (K. Sagawa): The TR is almost completed. The ISO/IEC guide has already been published – this is very comprehensive – but conceptual. The CIE TR contains a lot of supplementary data useful for designing signage for low vision people.

TC1-58: Visual Performance in the Mesopic Range (L. Halonen): The ballot of the sixth draft had two dissenting votes. The concerns of these members are currently being addressed in a seventh draft and will be sent for ballot shortly. It is hoped to complete this work within a five year period.

TC1-60: Contrast Sensitivity Function (CSF) for Detection and Discrimination (E. Martinez-Uriegas): The Chair is currently working on integrating contributions into the third draft of the final report.

TC1-67: The Effects of Dynamic and Stereo Visual Images on Human Health (H. Ujike): This TC is considering three different aspects of the subject: photosensitive seizures (PSS), visually induced motion sickness (VIMS) and visual fatigue caused by stereoscopic images (VFSI). Separate reports are being prepared on each aspect. This TC met during the year to discuss the draft reports being prepared on each

aspect. The draft report on PSS is almost complete. The TR on VIMS will be started after their next meeting in the Netherlands. The activity of this TC is being conducted in parallel with ISO work in this area.

R1-19: Specification on Individual Variation in Heterochromatic Matching (H. Yaguchi): The report has been submitted to the editor and is being reviewed for publication in the CIE collection.

R1-36: Action Spectra for Glare (J. Fekete): There was no report this time. The Reporter will be asked to submit a final report.

R1-37: Definition of the Visual Field for Conspicuity (N. Itoh): There was no report this past year. The Reporter will be asked to submit a final report.

R1-40: Scene Dynamic Range (J. Holm): The Reporter is awaiting research results. A summary of the current status of research and some recommendations are available in the 2009 Activity Report. It was recommended to keep this Reportership open.

R1-43: Standard Deviate Observer (B. Oicherman): There was no report. The Reporter will be asked to submit a short report.

R1-44: Limits of Normal Colour Vision (S. McFadden): A final report was prepared and submitted to the Division 1 meeting. It recommended closing the Reportership and establishing a TC. The Division accepted this recommendation although there was discussion about limiting the terms of reference. Thus, this Reportership has been closed.

Progress in Colour Section (E. Carter, Associate Director)

TC1-27: Specification of Colour Appearance for Reflective Media and Self-Luminous Display Comparison (P. Alessi): The final report has been submitted for Division and BA ballot.

TC1-44: Practical Daylight Sources for Colorimetry (R. Hirschler): The third draft has been completed, discussed, and edited. A fourth draft was expected to be ready for ballot in June 2009. The Chair also recommended that a new TC be formed to evaluate daylight simulators with particular reference to the rendering of fluorescent specimens.

TC1-55: Uniform Colour Space for Industrial Colour Difference Evaluation (M. Melgosa): Five datasets have now been accumulated. These will be tested in the near future followed by discussions amongst TC members. It is hoped to have a first draft of the final report by next June. A power-point presentation on recent activity of this TC is appended to the Division minutes.

TC1-56: Improved Colour Matching Functions (M. Brill): Balloting of the report from this TC was conducted this past spring.

TC1-57: Standards in Colorimetry (A. Robertson): CIE DS014-3/E:2009, Colorimetry, Part 3: CIE Tristimulus Values is currently out for Division ballot. The CIEDE2000 Standard will be based on CIE 142-2001 and will include an informative appendix on Nobbs method for lightness, chroma and hue splitting. This will complete the series of four Standards that were assigned to this TC.

TC1-61: Categorical Colour Identification (T. Ishida): A table of contents were proposed at the last meeting. The report is not yet written. It was recommended that a draft report be circulated to TC members by October.

TC1-63: Validity of the range of CIEDE2000 (K. Richter): The TC met in Budapest. Data has now been collected on both large and small colour differences. The conclusion so far is that you cannot use CIE DE2000 for threshold differences. For large colour differences the data indicates that CIELAB is better than or equal to CIEDE2000. For more detail see the 2009 activity report and the minutes of the 2009 Division 1 meeting.

TC 1-64: Terminology for vision, colour and appearance (S. McFadden): The BA ballot on the ILV has now been completed and the comments are currently being addressed. The Chair is reviewing comments on new terms. Dr. Schanda recommended that Divisions start working on the translation of new terms in the ILV.

TC1-66: Indoor daylight illuminant (J. Schanda): The final report has been published. This TC was closed.

TC1-68: Effect of Stimulus Size on Colour Appearance (P. Bodrogi): A draft report has been prepared. It includes the results of several experiments and a proposed model for specific situations such as a display in an office environment. It is hoped to complete the work of this TC before the next meeting.

TC1-69: Colour Rendering of White Light Sources (W. Davis): This TC met in Budapest. The past year has been dedicated to conducting experiments related to the development, testing, and validation of a new colour rendition metric. It is asking for contributions of code and data by the end of 2009 and hopes to decide on a new metric by mid February 2010.

TC1-70: Metameric Samples for Indoor Daylight Evaluation (B. Kranicz): This TC met in Budapest as part of the Mid-Term meeting. It was agreed that the new metamers be made available and that the Terms of Reference of the TC be changed such that a revision of CIE Publication 51.2 be produced.

Additional Term of Reference: To update CIE Publication 51.2 to cover metameric samples over the visible wavelength range 380 nm to 780 nm and add indoor daylight illuminants and associated metameric samples.

TC1-71: Tristimulus Integration (C. Li): Currently, draft 1 of a TR is being written which will be completed soon. The following methods are included for further comparisons:

- ◆ ASTM Table 5
- ◆ ASTM Table 6
- ◆ Venable method
- ◆ Optimum weights by Li, Luo and Rigg
- ◆ Least Square Weights by Wang, Li and Luo
- ◆ Direct Selection method
- ◆ 'CIE-R' method
- ◆ Oleari 's Local Power Expansion

Further discussions and actions must be taken before testing can start using 1 nm data.

TC1-72: Measurement of Appearance Network: MApNet (M. Pointer): This TC met in Budapest as part of the Mid-Term meeting. The goals for 2009-2010 are to establish an Organising Committee for the Second Symposium on Appearance, produce an Activity Report for January 2010, and continue to work towards establishment of Technical Committees on specific subjects. The second expert symposium will be held at the Catholic University College St-Lieven, Gent, Belgium. The plan is to close the TC in 2011.

TC1-73 Real Colour Gamut (Changjun Li CN): From last October, the Chair of this TC has been considering the selection of experts to invite to be members of this TC. Real activity will start soon.

TC1-74 Methods for Re-defining CIE D Illuminants (Janos Schanda HU): This TC held its inaugural meeting in Budapest as part of the Mid-Term meeting.

R1-32: Emotional aspects of colour and light (G. Derefeldt): This Reportership was closed at the request of the Reporter.

R1-39: Alternative Forms of the CIEDE2000 Colour-Difference Equations (M. Pointer): Since CIE S014:6 on CIEDE2000 is proposing to include an informative annex on Nobbs' method for lightness,

chroma and hue splitting, it was agreed that the work of this Reportership was completed and it was closed.

R1-42: Extensions of CIECAM02 (C. Li): The Reporter made a presentation on the work of TC8-11 *CIECAM02 Mathematics* which had an open meeting during CIC16 (IS&T Color & Imaging Conference).

R1-46 Whiteness (Joanne Zwinkels CA): The Reporter recommended the establishment of a new TC (TC1-77). The recommendation was accepted and the Reportership was closed. The full report is appended to the 2009 Division 1 minutes.

R1-47 Hue Angles of Elementary Colours (Thorstein Seim NO):

The Reporter recommended the establishment of a new TC (TC1-76) to study and report on unique hue data. The recommendation was accepted and the Reportership closed. The full report is appended to the 2009 Division 1 minutes.

Liaisons

Liaison reports are available in the minutes.



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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Canadian Division Members' Reports

CNC/CIE 54th Annual Meeting

CIE Division 2

Physical Measurement of Light and Radiation

Division 2: Physical Measurement of Light and Radiation

Report to Joint CIE/Canada-USA Annual Meeting
Gaithersburg, MD, October 16, 2009

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The most recent CIE Division 2 General and TC meetings were held 30 May and 1-3 June 2009 in Budapest, Hungary in conjunction with a CIE Expert Symposium on Solid State Lighting. The following report is some of the meeting highlights. The detailed minutes of the meeting should be available shortly at the web-site: <http://cie.co.at/div2>.

Twelve Technical Committees (TCs) met in Budapest: TC2-29 Measurement of detector linearity (Eppeldauer); TC2-40 Characterizing the performance of luminance and illuminance standards (Blattner); TC2-43 Uncertainty (Sauter); TC2-47 Characterization and calibration methods of UV radiometers (Sperling); TC2-48 Spectral responsivity measurement of detectors, radiometers, and photometers (Eppeldauer); TC2-49 Photometry of flashing light (Ohno); TC 2-50 Calibration of multi-channel spectrometers (Austin); TC2-59 Characterization of imaging luminance measurement devices (Blattner); TC 2-60 Effect of instrumental bandpass function and measurement interval on spectral quantities (Woolliams); TC2-62 Imaging photometer based near field goniophotometry (Steudtner); TC 2-63 Optical measurement of high-power LEDs (Zong); TC 2-64 High speed testing methods for LEDs (Heide).

There were no changes in the D2 officers but the GA has elected the DD (Ohno) to be the VP-Technical for the next quadrennium (2011-2015). There has been a change in the Country member for the USA from N. Johnson to C. Miller.

Highlights

No TCs or Reporterships were closed..

Three new TCs and five new Reporterships were initiated (see details below).

Editorial and publication activities over the past year:

- Draft reports were edited from TC2-43, 2-48, 2-17 and 2-44. The TC 2-52 document "Photometry and goniophotometry of luminaires: Supplement 1: Luminaires of Emergency Lighting" has passed the BA and D2 ballot and is in the final editing stage. This will be published as a Technical Report, probably in June 2009.

Proposals for New Technical Committees and Reporterships

TC2-65 Photometric measurements in the mesopic range

Chair: Teresa Goodman (UK)

TR: 1) To produce a Technical Report setting out measurement requirements and procedures for implementation of the CIE task-based system for mesopic photometry; 2) To consider the implication of the new system for mesopic photometry for existing D2 publications.

Members: will include people from D1 and D4.

TC2-66 Terminology of LEDs and LED assemblies

Chair: Janos Schanda (Hungary)

TR: Review LED and LED assemblies related terms and definitions in other international and regional organizations and prepare recommendation for CIE

TC2-67 Photometry of lighting and light-signalling devices for road vehicles

Chair: Göster Werner (SE)

TR: To prepare guidelines for the measurement of photometric performance of lighting and light-signalling devices for road vehicles.

R2-42 Measurement methods for LED luminaires

Reporter: Jiagen Pan (China)

TR: To investigate the problems in measurements of electrical, thermal and optical quantities of LED luminaires and possible need for a CIE technical report

R2-43 Measurement of Integrated LED light sources

Reporter: Pei-Ting Chou (ITRI, Taiwan)

TR: To investigate the problems in optical measurements of integrated LED light sources due to thermal effects, usage of the sources, and possible need for a new CIE technical report.

R2-44 Photometric characterization of large area flat sources used for lighting

Reporter: Armin Sperling (Germany)

TR: To investigate and identify criteria for the characterization of source uniformity/homogeneity including measurement procedures and classification. For large area flat sources such as LEDS that need certain photometric properties: uniformity, angular dependence of luminance and colour coordinates.

R2-45 Measurement of the illumination uniformity for critical applications

Reporter: Meena Lysko (CSIR, South Africa)

TR:

R2-46: Photobiological safety measurement of lighting products

Reporter: T. Mou (China)

TR: To investigate the need for a recommendation for general methods for photobiological safety measurements of lighting products, including SSL products and sources.

Those interested to become a member of the new TCs, should fill out the form on the D2 website (www.cie.co.at/div2, under DOCUMENTS and FORMS near the bottom) and send it to TC chair following instructions in the form.

Changes in TCs and Reporterships

- The Chair of TC2-29 Measurement of Detector Linearity has been changed from Larason (USA) to Eppeldauer (USA).
- The title and Chair of TC 2-50 has been changed from: “LED clusters & arrays (Schutte, Germany)” to: “Measurement of the optical properties of LED clusters and arrays (Distl (Germany))”.

Summary of Progress of Technical Committees and Reporterships

Additional information on the terms of reference and membership for all Technical Committees and Reporterships can be found at the website: <http://cie.co.at/div2>

Progress in TCs: 29, 37, 40, 43, 46, 47, 48, 58, 59, 60, 62 and 64 (Sauter, AD)

TC2-29 Linearity (Eppeldauer). This TC has a new TCC (Eppeldauer has replaced Larason). The TC met in Budapest with about 40 attendees. The TR were re-confirmed and the TC report will contain 2 major parts on how to measure non-linearity and how to implement these corrections. Information on optimum selection of the electronic components so that it does not contribute to the non-linearity will be included. It is hoped to send the document for TC ballot within one year.

TC2-37 Detectors as transfer standards (Ohno). Ohno reported that Draft 10 of the document was distributed for TC ballot, and received many editorial comments. The TCC has nearly completed Draft 11 of the document, incorporating these recommended changes. This version will then be sent for D2 ballot before the next D2 meeting.

TC2-40 Characterization of luminance/illuminance meters (Blattner). The TC met in Budapest with 43 attendees. The document is close to final stage. This will be a fundamental document – a joint CIE/ISO Standard. There are still some outstanding issues such as wavelength limits for the f1 prime calculations. When these issues have been resolved by e-mail vote of TC members, the next draft of the document will go for D2 vote.

TC2-43 Uncertainty (Sauter). The TC met in Budapest. The document has already gone for TC ballot and received comments. These are largely editorial and were discussed at the TC meeting. The revised draft of the main part of this document (25 pages) and Annex A (modules for the construction of the measurement equations) will go for D2 ballot within 2 weeks. Annex B (examples) is now with the DE and is ready for TC ballot; Annex C has only one example at this time (coefficients of a tristimulus colorimeter). It is planned to include additional parts in the future – Annexes D, etc. along with updated Excel and Mathematic templates.

TC2-46 Standard on LED intensity measurement. (Scarangelo). Sperling has made contact with the TCC who has said that a small WG has been formed to finish the open items of the document. The TCC also asked about widening the scope and TR of this Standard because of the changes in application due to high power LEDs to include their measurement and also the measurement of luminous flux. The DD did not support an expansion in the TR of this TC and recommended that the TCC be encouraged to complete this work.

TC2-47 UV meters (Sperling). This TC met in Budapest with 15 members and 18 guests. The TCC explained the slow progress with one of the issues being the lack of appropriate calibration procedures for UV meters at high irradiance levels and for the determination of the out-of-band signal. The TCC will add a chapter on the calibration chain for prototype detectors and the revised version will be sent to TC members within a month.

TC2-48 Spectral responsivity measurement (Eppeldauer). TC met in Budapest with 38 attendees. The document is well-advanced (75 pages) with recent additions on near-IR, pyroelectric detectors, fluorescence and stray light correction, uncertainty sections, and extended references. The DE has edited the latest draft (Version 13) and it is planned to send the document for TC ballot before the next D2 meeting.

TC2-58 Measurement of LED radiance/luminance (Kohmoto). The TCC sent a report to the D2 Secretary. The 3rd draft of the TC report will be circulated soon to the TC members. There is an extensive summary of the key actions. There was some concern that the TR of the TC have extended from measurement issues to assessment work. The TCC will be contacted and asked for a response before the end of the year confirming the original TR.

TC2-59 Characterization of imaging luminance measurement devices (Krüger). TC met in Budapest. The document provides guidance for the user on making an uncertainty budget for their particular device based upon a model equation. It is planned to introduce some new application problems at the next TC meeting.

TC2-60 Effect of instrumental bandpass function and measurement interval on spectral quantities (Wooliams). The TC met in Budapest. The TC has had considerable discussion using the e-mail reflector and inputs from several members but there is still a question about who is the target audience – NMIs, manufacturers or users. It was decided to check the algorithms on real data and a few members of the TC will provide this data for testing.

TC2-62 Imaging-photometer-based near-field goniphotometry (Stedtner) . TC met in Budapest and TCC gave a status report.

TC 2-64 High speed testing methods for LEDs (Heide). This TC was created last year and met for the first time in Budapest with 14 members and 22 guests. There are 7 new TC members but there are only two instrument manufacturers represented – Osram-ES and Lumileds.

Progress in TCs: 2-23, 49, 50, and 52 (Vandermeersch, AD)

TC2-23 Photometry of street lighting luminaires (Vandermeersch). The underpinning documents in D4 are in Division ballot. A Supplement of 3-4 pages can be prepared with a few D2 members and in collaboration with D4. The main measurement issue here is to extend the D4 documents from relative to absolute measurements.

TC2-49 Flashing lights (Ohno) TC met in Budapest. Draft 4.1 of the TC document, edited by DE was discussed. There were questions regarding the definition of flashing lights, limitation of the recommended method, the repetition rate of flash, and the Talbot-plateau law. Draft 5.1 will be prepared implementing these changes and, if no objections, at TC ballot will follow.

TC2-50 LED clusters & arrays (Schütte) Sperling gave report. The TCC is no longer working in this field and has asked to resign. There was considerable discussion on whether to continue the work of this TC or to change the title and TR. It was finally proposed and approved to change the TCC to Richard Distl (Germany) and the TR were changed to: "To produce a technical report for the measurement of the optical properties of LED assemblies".

TC2-52 Emergency lighting (Vandermeersch). TCC reported that there was an informal collaboration with IEC. The work of this TC has now been completed with the preparation of the TC report.

Progress in TCs: 2-17, 19, 25, 28, 32, 42, 51, 53, 56, and 57 (Johnson, AD)

TC2-17 Simulated solar radiation (Zerlaut) No report was received. The technical report was received and reviewed by D2 Editor but there has been no further communication with TCC. The DD will try to contact TCC to determine next steps for completing the TC report.

TC2-19 Spectral coefficient of retroreflection (Johnson) The TCC sent a report. The TC has been active over the past year with ASTM E12.10 in the revision of ASTM Standard E811 to include the uncertainty values obtained in the CIE intercomparison. Another revision of the draft for CIE Publication remains in progress. One of the TC members reported that the work of this TC is not yet completed since some calculation are not yet done.

TC2-28 Characterization of spectrophotometers (Goodman) TCC reported that a very complete draft of the TC document is available but not in electronic format although she is working on this. There was discussion about whether this document is still relevant after so many years in preparation. The TCC said that most of the report deals with fundamentals so it is still relevant and recommended completing the work of this TC.

TC2-32 Wet horizontal road markings (Johnson) This TC has a new TCC since the Turin meeting. The TCC reported that there is considerable interest in this subject and an ASTM meeting is scheduled for June to consider revisions of ASTM procedure E2176 and E2177. He expects to coordinate some additional contacts at this meeting and obtain their input to the latest draft of the document.

TC2-51 Multi-channel spectrometers (Austin) The TC met in Budapest with 28 attendees. There were also two other TC meetings between Beijing and Budapest. Recent inputs to the report have been obtained on diffraction grating performance, baseline detection, and wavelength scale setting. Draft 4 of the TC report will be prepared with suggestions from the meeting, including converting to CIE format and determining uncertainties. At least two Web-based meetings will be scheduled before the end of the year to continue progress on Draft 4.

TC2-53 Multi-geometry measurements (Roesler) There was no report from TCC. One of the TC members reported that the TC met last year in Turin but that there has been communication in the past year.

TC2-56 Standard on retroreflectance (Miller) TCC reported that the TC last met in Turin. Since then a student in his lab has been carrying out relevant measurements to improve uncertainties. There was considerable discussion about whether this new experimental data can be considered at this time; even if useful, it needs to be included in the original technical report as an Addendum before it can be used in the Standard under preparation.

TC2-57 Revision of CIE S014-2 (Robertson) Ohno read report sent by TCC. Work has been delayed pending the recommendations of TC1-74 on Methods for Re-defining the CIE D Illuminants. The problem of the interpolations issues for the D illuminants was discussed in Turin and a new TC in D1 was set up with Schanda (Hungary) as TCC. There was some discussion on whether this TC needs to wait for the work of TC 1-74 since the results will affect all of the D illuminants, including D65. The DD will contact the TCC to follow-up on these discussions on how best to advance this work and have the TC complete its original TR.

Progress of Reporterships

R2-23 Standards for the measurement of reflectance and transmittance (Rich). Reporter sent a written report. It recommends the creation of a new TC to create Standards for spectral diffuse reflectance and spectral diffuse reflectance factor, spectral regular reflectance (6:6, 45:45 and 60:60 geometries) and spectral regular transmittance. Reporter said that he would have more time in near future to prepare TR for this new TC.

R2-32 Visual appearance measurement (Pointer). Reporter sent a written report. MapNet is active currently with 73 members.

R2-33 Laser-based projection displays (*Niall, Canada*) Reporter sent a very detailed written report that will be attached to the Minutes that recommends the creation of a new TC. Schanda remarked that this a hot topic and should be reviewed before deciding to close this Reportership and form a new TC. Volunteers were requested to review the report. DD will defer the decision to close this reportership until a decision is made on the creation of the TC.

R2-34 Photon-Counting regime (*Rastello*). Reporter sent a written report. She reported on the creation of a discussion group on photon counting within the CCPR Strategic Planning Working Group. She recommends maintaining a CIE Reportership on this activity

R2-38 Measurement of spectral properties of photometers and colorimeters (*Pan*). No report.

R2-39 Display measurement standard – liaison with ICDM (*Vassie*). Reporter sent a written report that will be attached to the meeting Minutes.

R2-40 Spectral and colorimetric electronic data exchange (*Pointer*). No report.

R2-42 Photometry of curved surface sources (*Yu*). Reporter gave a very detailed Powerpoint presentation on curved surfaces that included solar cells. She showed a measurement system for an LED backlight sample where the luminance results varied strongly with the view angle. The DD asked if she proposed the creation of a new TC. The Reporter has not yet prepared TR for a new TC so it was recommended to continue this Reportership one more year and propose TR at next meeting.

Reports of Liaisons

CCPR (*Ohno*) Detailed report given including the status of the key comparisons and the liaison activities between the CCPR and CIE.

CIE D8 (*Kravetz*) No report.

ISO/TC6 (Zwinkels) A detailed written report will be included as attachment to D2 Minutes. This gives the status of the various ISO Standards on optical properties of paper, pulp and board. In particular, an important issue that will need to be resolved in the next revision of these Standards is ensuring that the terminology is consistent within the various related International Standards (i.e. Parts 1, 2, etc.) The new work item for revision of ISO 2469 *Paper, board and pulps – Measurement of diffuse radiance factor* to incorporate a means to ensure that the UV intensity is negligible below 300 nm, has been adopted as a working draft (WD). At the June 2008 meeting of the ISO TC6/WG3 Optical Properties Authorized Laboratories (known as OPALgroup), a decision was made to further harmonize calibration procedures so that measurements traceable to different calibration laboratories would agree better. This recently-adopted harmonization procedure significantly affects the whiteness values of the fluorescent reference standards

by an average of 1.7 CIE whiteness units. This change in whiteness level has been implemented by all five ISO authorized laboratories.

IEC TC34 Lamps and related equipment (G. Vandermeersch) Liaison gave a verbal report.

ISO on reflectance and transmittance (Rich) Written report received from Rich will be attached to the meeting Minutes.

IDA (Rennilson) No report.

OIML(Sauter) No report.

IALA (Tutt) No report.

IEC TC100 Colour measurement and management in multimedia systems (Rich) Written report received from Rich will be attached to the meeting Minutes.

ISO/TC 145/SC2: N519 Safety colours and safety signs – Specification of colorimetric and photometric properties of materials (J. Zwinkels, CAN). Zwinkels gave a verbal report. Her liaison activity has mainly involved reviewing draft standards and ensuring that they properly reference CIE recommended practices and publications.

IEC/SC 34A MT PRESCO – IEC TR 62504: Terms and definitions for LEDs and LED modules in general lighting (Y. Ohno, USA). Ohno gave a detailed report on the list of Standards that are being developed within IEC that are related to LEDs/SSL. He has made good contact by attending the IEC meetings and has recommended new terms.

IEC TC 110 Flat Panel Displays WG5 OLED display (T. Mou, China). No report.

Future D2 Meetings and Symposia

2010 Bern , Switzerland, tentatively during the last two weeks of June; there was no decision about an associated Symposium

2011 Sun City, South Africa (27th Quadrennial Session).

Canadian Participation in Division 2

Canada has representation on 8 Technical Committees:

| | |
|--------|--------------------------------------|
| TC2-28 | J.C. Zwinkels, A.R. Robertson (NRC) |
| TC2-35 | A.R. Robertson |
| TC2-43 | A. Gaertner (NRC) |
| TC2-47 | L.P. Boivin (NRC), B. McArthur (AES) |

TC2-48 L.P. Boivin, R. McArthur
TC2-53 J.C. Zwinkels
TC2-57 A.R. Robertson (*Chairman*), J.C. Zwinkels
TC2-60 A.R. Robertson, J.C. Zwinkels, R.Baribeau (NRC)

Two Liaisons:

ISO TC6: Paper, Pulp, Board: J.C. Zwinkels (NRC)
ISO TC 145/SC 2 Safety colours and safety signs J.C. Zwinkels (NRC)

One Reportership:

R2-33: K, Niall (DCIEM)



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Canadian Division Members' Reports

CNC/CIE 54th Annual Meeting

CIE Division 3

Interior Environment and Lighting Design

**COMMISSION INTERNATIONALE DE L'ECLAIRAGE
DIVISION 3 – INTERIOR LIGHTING AND LIGHTING DESIGN**

2009 Activity Report to the Canadian National Committee

Jennifer A. Veitch, Ph.D. – Canadian Delegate
2009-Sep-17

jennifer.veitch@nrc-cnrc.gc.ca

2009 Division 3 Meeting

The meeting was held on June 1, 2009, in Budapest, Hungary. I was in attendance as both Canadian delegate and Division Secretary. Minutes of the meeting are available on the Division 3 web site (<http://www.cie.co.at/div3>).

Current Division 3 Activities

Completed reports and publications

No new publications were completed between the 2008 and 2009 meetings.

Active TCs and Reporterships

There are 13 active technical committees. Terms of Reference and current status of the committees are available on the Division 3 web site. At its 2009 meeting the division voted to create one new TC, which was approved by the Board of Administration. The new activities are shown in italics.

The most important change for the CNC this year was the approval of Karen Pero as the new Chair of TC 3-42. The original Chair had had to step down.

| TC | Title | Chairman | Started | End? | Product |
|-----------|---|------------------|----------------|-------------|----------------|
| 3-25 | Coordination and development of the IDMP and its data | D. Dumortier | 1991 | 2004 | Web Server |
| 3-34 | Protocols for describing lighting | J. Veitch | 1999 | 2005 | Guide |
| 3-36 | Use of satellite images to derive daylight data | D. Dumortier | 2000 | 2007 | Standard |
| 3-37 | Guide for the application of the CIE general sky | D. Dumortier | 2000 | 2007 | Guide |
| 3-39 | Discomfort glare from daylight in buildings | W. Osterhaus | 2002 | 2005 | Guide |
| 3-42 | Workspace application guide | K. Pero | 2006 | 2013 | Guide |
| 3-43 | Determination of discomfort glare | L. Bedocs | 2006 | 2010 | Guide |
| 3-44 | Lighting for older people and people with visual impairment in buildings | G. Cook | 2007 | 2010 | Guide |
| 3-45 | Luminance-based design approach | Y. Nakamura | 2007 | 2010 | Guide |
| 3-46 | Research roadmap for healthful interior lighting applications | J. Veitch | 2007 | 2011 | Guide |
| 3-47 | Climate-based daylight modelling | J. Mardaljevic | 2008 | 2012 | Guide |
| 3-48 | CIE standard method of UF table calculation for indoor luminaires | P. Thorns | 2008 | 2012 | Standard |
| 3-49 | <i>Decision scheme for lighting controls for tertiary lighting in buildings</i> | <i>P. Dehoff</i> | <i>2009</i> | <i>2013</i> | <i>Guide</i> |

TC 3-43 is expected to be closed in 2010 following the publication of its report.

There are presently three active reporterships. R 3-24 produced a detailed report following the June meeting, which is likely to result in its being closed in 2010. A new TC might be the result.

| R # | Title | Reporter | Start | End? | Product |
|------|---|----------------|-------|------|-------------|
| 3-13 | Lighting vocabulary | Y. Koga | 2002 | 2004 | Publication |
| 3-24 | Assessment of overhead glare | T. McGowan | 2004 | 2005 | Review |
| 3-28 | Lighting requirements for night-shift workers | M. Knoop-Velds | 2007 | 2011 | Report |

Two reporterships were closed in 2009 because their work had been completed:

| R # | Title | Reporter | Start | End? | Product |
|------|--|----------------|-------|------|-----------|
| 3-23 | Lighting control and energy efficiency | P. Dehoff | 2004 | 2005 | Review |
| 3-26 | Climate based daylight analysis | J. Mardaljevic | 2005 | 2007 | Statement |

Current Canadian Participation in D3 Technical Committees (September 2009)

| TC# | Title | Canadian Members |
|------|---|---|
| 3-34 | Protocols for describing lighting | J. Veitch (Chairman); D. Smith (Corresponding Member) |
| 3-37 | Guide for the application of the CIE general sky | I. Ashdown |
| 3-42 | Workspace application guide | K. Pero (Chairman) |
| 3-46 | Research roadmap for healthful interior lighting applications | J. Veitch (Chairman) |

TC 3-34, which I chair, is still undergoing revision prior to the TC ballot. The goal is to be ready for Division and BA balloting in autumn 2009.

TC 3-42 is beginning its work electronically, probably using the new CollTool system set up by the Central Bureau.

TC 3-46 had its first meeting in Ljubljana, and resulted in guidance on the structure of the report. I have had to set it aside until I complete the report of TC 3-46, but I hope to have a draft report for the committee to review by spring 2010.

Other D3 Activities

I remain Secretary of Division 3 for the 2007-2011 term. This includes administering the D3 web page within the CIE site. Division web pages are being redesigned into a consistent format, so the content has changed somewhat and may yet change more.

Issues for Division 3

As in most divisions and all volunteer organizations, task completion continues to be a challenge.

Division 3 had an extensive discussion about future activities during its 2008 meeting. As expected, this resulted in the new TC this year on lighting controls to reduce energy use. In 2009 the members decided to delay creating a new TC to address the integration of electric light and daylight in design, pending the completion of the work of TC 3-47. A new TC on solid-state lighting is in the planning stages, and might be decided upon by e-mail ballot prior to the March 2010 meeting.

Next Meeting

Vienna, Austria, March 2010 (in conjunction with the CIE2010 conference Lighting Quality and Energy Efficiency).

————— End —————



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CIE Division 4

Lighting and Signalling for Transport

(no report received)



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Canadian Division Members' Reports

CNC/CIE 54th Annual Meeting

CIE Division 5

Exterior Lighting and Other Applications

CIE - 5

ACTIVITY REPORT

APRIL 2009

Director: Nigel Pollard

Editor: Mary Crawford

Secretary: Tom Lemons



Freshmen's Castle of the
Lorand Eötvös University

CIE MID-TERM & DIVISIONAL MEETING BUDAPEST, HUNGARY

24 May – 3 June 2009

Our host is **CIE-Hungary**, the **Hungarian National Committee of CIE** who together with the **Lighting Society of Hungary** and the **University of Pannonia** have also sponsored a major Conference entitled:

Light and Lighting Conference with Special Emphasis on LEDs and Solid State Lighting

for which all information can be obtained from their web site:

<http://www.diamond-congress.hu/cie2009/00home/00home.htm>

The venue for both the Conference and the TC and Divisional Meetings is the "Freshmen's Castle of the Lorand Eötvös University, Budapest. The building was erected at the beginning of the 20th Century and was the main lecture hall for the freshmen, from this the original of its name. The building has been recently re-furbished and serves as one of the lecture halls of the university. The university itself got its name from the

Hungarian physicist baron Loránd Eötvös, the inventor of the Eötvös pendulum, by the help of which Eötvös was able to determine the equivalence of gravitation and inertial mass.

We have 8 TC's meeting plus one pre-meeting (see following pages) and it would be helpful if you would contact the TC Chair to confirm which meetings you will be able to attend and whether you would like copies of the latest drafts to comment on.

Joint activities are as follows:

Monday 1 June part morning - D 4& 5 pre meeting
 Wednesday 3 June Morning - Divisional Meeting

• **TC and Meeting Schedule – Monday - Wednesday 1- 3 June 2009**

| | | |
|---------|--|------------|
| TC 5.18 | <u>Practical design guidelines for the lighting of exterior work areas</u> Chairman: Kelvin Austin (UK) | TUESDAY PM |
| TC 5.20 | <u>Sports Lighting Guide</u> Chairman: Tom Lemons (US) | MONDAY AM |
| TC 5.21 | <u>Urban Masterplanning</u> Chairwomen Mujgan Serefhanoglu (TU) | TUESDAY AM |
| TC 5-22 | <u>Beam Patterns for Exterior Floodlighting Luminaires</u> Chairman: Tom Lemons (US) | MONDAY PM |
| TC 5.23 | <u>Guidelines for the use of different Illuminance parameters in Outdoor Applications</u> Chairman: Patrick Rombauts (BE) | MONDAY PM |
| TC 5.24 | <u>Architectural and Decorative Lighting</u> Chairwomen: Mujgan Serefhanoglu (TU) | TUESDAY PM |
| TC 5-27 | <u>Lighting Effects on the Natural Environment</u> Chairman: Peter Strasser (US) | MONDAY AM |
| TC 5-28 | <u>Guide on Limiting Obtrusive Light (Review of Doc. I50)</u> Chairman: Nigel Pollard (UK) | MONDAY PM |

- **From the Director**

I hope that you all have not been too badly affected by the global downturn and that hopefully it has allowed for some new, unforeseen opportunities. Maybe you will more time for CIE work?

At CIE Board level and on a limited number of TC's we are running trials on an Internet tool (Colltool) that will allow all TC's to work more efficiently and in line with other bodies like ISO and IEC. While, as most of us know there is no way better than to meet up in person, this should help speed up TC work between our annual meetings.

As you will have seen from the TC Schedule above, we are still short of working Chairs and members and I would still welcome some help from those of you with expertise in the respective fields to take these forward, or maybe introduce some of your colleagues.

- **News on TCs.**

TC 5.18 Practical design guidelines for the lighting of exterior work areas
Chairman Kelvin Austin (UK) will be holding a meeting of this re-convened committee that now contains security lighting. This is an important TC that many of you voted for **but do not support** – more members please!

TC 5.20 Sports Lighting
Chairman Tom Lemons (US) Thirteenth draft to be worked on at Budapest meeting.

TC 5.21 Urban Masterplanning
New TC member Andre Tammas had added some valuable practical insight this document and Mary Crawford has done a great editing job on the whole document to get it ready for our final run through and TC vote in Budapest.

TC 5-22 Beam Patterns for Exterior Floodlighting Luminaires
Chairman Tom Lemons (US) will hold the forth meeting of this committee in Budapest at which a new draft taking in more of the ideas from the IESNA's TM 15.07 has been proposed.

- TC 5.23 Guidelines for the use of different Illuminance parameters in Outdoor Applications
Chairman Patrick Rombauts (BE) will hold the forth meeting of this committee in Budapest.
- TC 5.24 Guide for Architectural and Decorative Lighting
Chairwomen Mujgan Serefhanoglu (TU) will hold its first main meeting in Budapest working on a 1st draft taken from the work of TC 5.21
- TC 5-25 Guide for the Photometric Specification and Measurement of Sports Lighting Installations.
Awaiting Chair and membership
- TC 5-26 Guide for the Lighting of Sports Events for Colour TV and Film Systems
Awaiting Chair and membership
- TC 5-27 Artificial Lighting and its impact on the Natural Environment
Chairman Pete Stressar (US) will hold the second meeting of this committee in Budapest.
- TC 5-28 Guide on Obtrusive Light (Review of Document CIE 150:2003
Chairman Nigel Pollard (UK) will hold the first meeting of this committee in Budapest.

- **Date of future Meetings**

? 2010 ?
July 2011 Sun City, South Africa



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
INTERNATIONAL COMMISSION ON ILLUMINATION
INTERNATIONALE BELEUCHTUNGSKOMMISSION

Canadian National Committee Comité National Canadien



Canadian Division Members' Reports

CNC/CIE 54th Annual Meeting

CIE Division 6

Photobiology and Photochemistry

DIVISION 6

PHOTOBIOLOGY AND PHOTOCHEMISTRY

Report to the Canadian National Committee October 15, 2009

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Introduction.

The Division 6 Annual Meeting took place on May 30, 2009 in Budapest, Hungary at Lisys Lighting Systems PLC, in conjunction with the CIE Midterm Meeting on May 24 to 26, and the Light and Lighting Conference May 27 to 29. The meeting gathered 23 participants from 14 countries.

Terms of Reference of Division 6: To study and evaluate the effects of optical radiation on biological and photochemical systems (exclusive of vision). The list of TCs, their terms of reference and current status is available on the Division web page: <http://www.cie.co.at/div6/tcs.htm>

Division Officers.

Director: Dr. Ann R. Webb (UK)
Associate Director, Photobiological Standards:
Dr. Kohtaro Kohmoto (JP)
Associate Director, Photobiological Measurements and Dosimetry:
Dr. Karl Schulmeister (AT)
Associate Director, Photodermatology:
Vacant
Secretary: Dr. Andrew Smedley (UK)
Editor: Dr. John O'Hagan (UK)

Report from the Director.

Dr. Webb discussed a number of items arising from the Board of Administration (BA) meeting (May 24 to 26, 2009).

1- New guidelines shall be adopted by all new TCs and should be implemented by existing TCs as far as possible to speed up TC work.

To that effect:

- i. Annual membership review should be submitted with the TC annual update to the Division. A member list and contribution should be kept by the TC Chair (TCC). Authors of reports will include true contributors, others may be acknowledged. The annual report should be submitted by the TCC with the list of active members to Division Director (DD) and Division Secretary (DS) including an updated timetable of TC work, with target dates for first and final drafts, comments, balloting and final editing.

- ii. The TCC shall write to an inactive member requesting involvement (with a copy to the DD and the Division member and NC of the country from which the TC member comes). If necessary a TCC, on the authority of the DD, may revoke the appointment of an inactive member. If the member was appointed by the NC, the NC must be informed.
 - iii. Anyone wishing to join a TC must write to the TCC, copied to DD and DS, giving a clear commitment to actively participate in the TC work and stating: (a) what expertise one has in the technical area covered by the Terms of Reference of the TC, including a list of any relevant publications, and (b) which specific aspects of the work of the TC one feels best able to contribute to.
 - iv. If the TCC feels the application valuable for the TC work, he should write a formal letter of appointment, copied to the DD and DS, setting out a specific work plan and timetable for the work of the TC highlighting where the new TC Member is expected to contribute.
 - v. TCs that are still inactive by 2011 will be closed. If a subject is really important to a Division then a new TC with active membership can be opened on the same subject at a future date.
- 2- New process flow charts for TC reports and standards approval have been agreed on and will be placed on the Division website.
Action: DS/DD
- 3- Current standards should be reviewed every 5 years. TC reports should also be regularly reviewed. Standards and reports that need updating or are obsolete should be removed from the current publications list, and should be mentioned to the DD or DS. Comments: Dr. Sliney heard from Dr. Seidl, Vice-President Standards, that standards should be reviewed after a period of 3 years, and then subsequently every 5 years. Dr. Veitch enquired about obsolete reports removal process since this is to be up to the Division. Dr. Bergman indicated that no real standards and reports review mechanism existed since TCs would have been dissolved at publication completion time, and would have to be reopened to review the subject. DD committed to discuss this point with Teresa Goodman, Vice-President Publications.
Action: DD
- 4- The CIE Lighting Quality & Energy Efficiency conference will be held in Vienna from 14 to 17 March, 2010. This will be a CIE showcase aimed at stakeholders, industry, policy makers, and scientists. DD pointed out that this is the occasion for D1 - Vision and D6 - Photobiology to lead the way, as the two Divisions are the primary reasons for using lighting and controlling its quality. Therefore papers and attendance from D6 members are actively encouraged.
- 5- A book on LED lighting is to be produced by CIE. This will be similar to the Colorimetry book, and will lay out the state of the art in each Division's subject area. It is to be produced quickly (printed and available in 2011, if not by 2010), with Dr. Schanda, Vice-President Technical, editing the whole publication. Suggestions and volunteers for a dedicated author to write the D6 chapter are to be sent to the DD.
- 6- DD asked for ideas on cross divisional matters, upcoming important issues in light or anything else that people feel CIE should do. These will be sent to the Board, via DD or any Board member.

Report from the Secretary.

Dr. Smedley noted that there were a number of administrative items to be dealt with.

- 1- The Division contacts list is now fairly up to date, although a few people remain outstanding. An email will be circulated to the Division shortly to try and address this. This should assist with tracing copies of TC documents in the future and speeding up and concluding the work of currently inactive TCs.
- 2- The Division's TC membership lists, on the other hand, are often many years out of date. Despite a recent request both from Central Bureau and DS, information has only been received from a small number of TCs. All TC chairs who have not yet done so are urged to review their membership lists and send them to the DS and Central Bureau. The DS reiterated that these lists should be reviewed annually in any event and submitted along with the TC's annual update and work plan.

Action: TCCs

- 3- The Division has also had some updates of National Committee members during the past year and the only country without a D6 representative is New Zealand. All National Committees were requested to check the D6 website and inform the DS if their details require updating.

Action: NCs

- 4- Central Bureau has also been developing some online tools to assist with Division and TC work. These are Webex (a meeting tool) and the Collaboration tool enabling TC members to edit online documents simultaneously. TC6-59 has been testing the latter for D6 and it understood to be successful as the tool will

shortly be rolled out to all TCs. Webex will be used by D8 to host their annual meeting. Dr. Sliney expressed concerns that the online tools struggled with large files, especially on slow connections. DD noted that both tools require a commitment from all participants to work to a sufficient standard. Dr. Sliney suggested that before attempting a full meeting via Webex people should test the system. DD concurred.

Arm Haffar, CIE Office Assistant, and Peter Zwick, CIE Technical Manager, were available to give brief introductions to both these tools during a proceedings break and were also available in Budapest the following week (1 to 3 June 2009) for further training sessions. Those not able to attend these sessions who wished to learn more should contact Central Bureau or the DS for more information.

5- It was indicated that the D6 website is still controlled by DS and would be updated as soon as he would be informed of progress and news from the Division. Central Bureau is developing a new website to homogenise CB and Divisions styles. Divisions will retain control over content when the switchover occurs.

Report from the Editor.

Dr. O'Hagan indicated that the TC6-24 report on UV-A Protection and Sunscreens had passed the BA and Division ballot. The TC6-59 report on UVC Photocarcinogenesis Risks from Germicidal Lamps has also been edited. Comments were to TCC for consideration. It is expected this will soon go out to ballot.

Progress Reports from Technical Committee Chairs.

Updates compiled by the Division officers when TCCs were absent. TCs that have not submitted a report will be considered inactive and will be closed in 2011 unless definite progress is made.

6-08 Guidelines for Obtaining Action Spectra.

TCC: David Sliney (USA).

Chair indicated that a report was very close to being completed. DS/DD to chase at monthly intervals until a report is produced.

Action: DS/TCC

6-15 A Computerized Approach to Reflection, Transmission and Absorption Characteristics of the Human Eye.

TCC: David Jack Lund (USA).

Dr. Sliney indicated he had reviewed this substantial (20/30 pages) close to completion document in its template form. TCC is not sure of TC members. DS to contact previous DS Wengraitis to track down a members list.

Action: DS

6-20 Phototoxicity in Domestic and Industrial Environments.

TCC: Neil Gibbs (UK).

TCC to chair a session on Drug Phototoxicity at the Inter. Congress of Photobiology in June and to recruit TC members prior to meeting with the Brit. Photoderm Group. DD will speak to TCC regarding any further progress.

Action: DD

6-21 Cataractogenesis by Low-Level Exposure to Ambient Ultraviolet Radiation.

TCC: David Sliney (USA).

TCC reported that he was waiting for the DE to edit. DE commented that he had not received confirmation that TC members were happy with latest version. TCC will send report to DE.

Action: DE/TCC

6-25 Spectral Weighting of Solar Ultraviolet Radiation.

TCC: Stephen Wengraitis (USA)

TCC has provided an update including the CIE previtamin D3 action spectrum. DD to check contents.

Action: DD

6-28 Standardization of Sunscreen Testing: Method of UV-A Sunscreen Testing.

TCC: Uli Osterwalder (Switzerland) (New).

Dr. Osterwalder to be official chair as Jean-Pierre Césarini (FR) has now retired – agreed by Division. New TCC will provide an updated title to DD so that both chair and title can be passed for Board for approval simultaneously. Now that TC6-24 “Sunscreen and UVA” report is completed, TCC indicated the final document would be a report and not a standard.

Action: TCC/DD

TCC gave a short presentation on the subject. Then Dr. Irina Terenetskaya (Ukraine) gave a presentation entitled "Mismatch between the in vivo and in vitro vitamin D synthesis action spectra: cause-and-effect relation" to bring attention to the necessity to remeasure the in vivo action spectrum of vitamin D synthesis.

6-33 Photoimmunological Effects Mediated through the Skin.

TCC: Edward C. de Fabo (USA).

TCC wanted to update this document. DD will contact TCC for copy of document and move forward.

Action DD

6-36 UVR Protective Materials Used in Shading.

TCC: Natasha van Tonder (South Africa).

DS reported he had not heard any progress from this TC. To be finished or to be closed under 2011 new clause.

Action: DS

6-37 Light and Retinal Disease.

TCC: David Sliney (USA).

TCC indicated that this report was almost completed. DS to chase monthly until concluded.

Action: DS/TCC

6-39 UV Radiation in Lighted Environments.

TCC: Kohtaro Kohmoto (Japan).

DD to contact TCC to acquire draft or to close under 2011 new clause.

Action: DD

6-42 Lighting Aspects for Plant Growth in Controlled Environments.

TCC: Mojtaba Navvab (USA).

New TCC has been collecting TC members and undertaking literature search. TCC indicated that some measurements were being undertaken and planned to circulate this information to the interested groups by the end of the summer. He hoped to have some feedback by early fall. TCC requested copies of any earlier versions of documents and notes for TC.

Action: DS

6-44 Illuminators for Treatment of Infant Hyperbilirubinemia.

TCC: Vacant ().

DD indicated she had not received any documents from this TC. TC was suggested as a closure candidate. If this was important then a new TC could open when necessary. Dr. Lucia Ronchi (Italy) has contact details for Prof. Riccardo Pratesi (Italy) and should get in touch with him, and then pass details to DD. DD commented that this was the last attempt for this TCC. TC will be closed by March 2010 if no success. Dr. Sliney had copy of TCC report, will pass it on to DE/DS. If simply a matter of language then can be dealt with in editing.

Action: DD/Sliney

6-45 Optical Radiation Hazard Measurements in the Work Space.

TCC: Robert Angelo (GER).

CEN produced a report on this subject. CIE agreed that the science was solid, but that the report needed language editing. Only Parts 1 and 2 would be required. DD will speak to Dr. Sliney on this matter and will contact TCC, Dr. Harald Siekmann (D), and Dr. Karl Schulmeister (AT) to reach agreement.

Action: DD/Sliney

6-48 Typical Minimal Erythema Doses.

TCC: Janusz Z. Beer (USA)/ Sharon Miller, co-chair (USA).

Tania Cestani is an additional member. DD reported that effort is progressing and that most of a draft exists.

6-50 Photodegradation of Pharmaceuticals.

TCC: Hanne Hjorth Tønnesen (NOR) (New).

TCC has collected new members and prepared a draft manuscript on the subject. Preliminary experimental studies begun to assist the development of guidelines. DS expressed concern that some US/industry bias, but that it might be inevitable given subject matter. DD commented that as a report rather a standard the guidelines are less strict, therefore an additional member is probably not necessary.

6-53 Personal Dosimetry for UV Radiation.

New TCC: Vacant ().

Dr. Elizabeth Thieden was contacted as a possible new chair by DD. DS reported that Thieden is unable to take up the position as not supported by her department. TC to be closed if no chair is found.

6-55 Light Emitting Diodes.

TCC: Werner Horak (GER).

TCC indicated that work is progressing well and TC would meet after this D6 meeting.

6-57 Standardization of Terms and Action Spectra for Blue Light and Retinal Thermal Hazard Functions.

TCC: K. Kohmoto (Japan)

DD to contact TCC Kohmoto regarding progress or closure.

Action: DD

6-58 A Recommendation on Lower Limits for UV Exposure.

TCC: Wim Passchier (NL).

DD reported that this TC should soon be completed.

6-60 Spectral Weighting of UVR from Solar Surrogate Sources.

TCC: P. Donald Forbes (USA).

TCC has already explained that there were problems with manufacturers who were unwilling to supply "typical" lamp spectra, and hence whether the TC can proceed. DD to chase TCC regarding progress.

Action: DD

6-61 Measurement of Radiation Using the Phytometric System for Plant Applications.

TCC: Gilberto J.C. da Costa (Brazil)

TC member Cuello was in attendance. He reported that Part 1 (theoretical work) is completed and the TC has moved on to Part 2 concerned with developing a prototype and making measurements. It is hoped that this will be completed by 2010. The DS asked whether Dr. Robert Levin (USA) was unsure about the new concept and is still part of TC. Cuello reported that he is still involved. Both sides are therefore represented.

6-62 Action Spectra and Dosimetric Quantities for Circadian and Related Neurobiological Effects.

TCC: Howard Cooper (France)

Dr. Sliney indicated that TC6-15 report will assist with the completion of this TC work, that there was a symposium in Philadelphia during July 2009 on this subject, and that TCC was hoping to have a preliminary report completed by 2010.

6-64 Optical Safety of Infrared Eye Trackers Applied for Extended-Durations.

TCC: David Sliney (USA).

TCC indicated TC is making good progress.

Joint TCs.

The Division also has two joint TCs with D1 and D8:

TC 1-67 The effect of dynamic and stereo visual images on human health

TCC: Hiroyasu Ujike (Japan)

TC 8-XX Vertical illuminance and spectral output of domestic imaging appliances

but no progress has been heard from either.

The other two TCs proposed last year require further clarifying of their titles and terms of reference. DD to chase Dr. Sliney on this point.

Action: DD/Sliney

Reportership

R6-37 Definition of UV wavebands.

Reporter: Masako Sasaki (China)

Dr. Sliney indicated that industry had hoped to change the definition of UV wavebands. It was hoped that the outcome of this report would agree with the status quo. DD to contact Reporter to get draft.

Action: DD

R6-38 UV absorbing clothing additives and changes with laundering.

Reporter: Uli Osterwalder (Switzerland)

Reporter commented that this reportership should be closed. DS to inform CB.

Action: DS

R6-40 A survey of action spectra in the scientific literature: 19XX – 200X.

Reporter: Alois Schmalweisser (Austria).

DD stated that reporter was working on a COST action final report, and then would put it into CIE format. DD to contact reporter.

Action: DD

New TCs and Reporterships Proposals.

Medical benefit of light sources - János Schanda (HU) Vice-President Technical, has approached DD about unjustified claims of medical benefit of light sources. It was noted that while some claims have justification, others do not. A reportership was considered with a public facing aim to state which medical claims have a scientific rationale and which have not yet been scientifically proven. Dr. Sliney expressed concern that this could be controversial as many light sources could provide stimulation on a cellular level, but that this would not necessarily lead to an overall medical benefit. It would thus be a complex problem. Dr. Veitch noted that it might be too much for a single committee, but that a reporter could collate the information. Suggestions and input to be sent to DD and DS. No reportership to be formed at present.

Vitamin D kinetics - Dr. Sliney noted that Dr. Irina Terenetskaya's presentation would make a good subject for a reportership. Dr. Terenetskaya will develop this further under the title "The issues of vitamin D kinetics" and publish a review in PCPB; she would welcome supportive letters from CIE / FP7 to assist with this work.

Technical Committee that met at the occasion of the Division Meeting.

TC 6-55 Photobiological Safety of LED's
Chair: Werner Horak (Ger).

Division Officers

Dr. Webb stated that she would have to stand down as DD6 in 2011, now that she is President-Elect to CIE. The Division will therefore need to decide on a new director by the next D6 meeting so that Board Approval can be sought in advance of the next Quadrennial meeting. Dr. O'Hagan is prepared to take up the position of DD6. DD asked for any other nominations to be sent to her.

Liaisons with ICNIRP, CEN, WHO, IEC and ISO

Dr. Sliney is D6 liaison for IEC TC 76, but no longer holds the position for ICNIRP.

Dr. Osterwalder is involved with ISO TC 217 and WG 7 and could act as liaison, but at this stage would only be unofficially. DD to enquire how to get this made an official position.

Action: DD

Dr. Horak commented there was already a standard on the optical output of machinery (EN12198), and CEN TC 169 was working on classifying non-electrical sources. He received correspondence from the latter. These are not in competition with CIE, but there should be harmonization with regard to CIE S009. DD to contact Dr. Siekmann (D) concerning this matter.

Action: DD

Future Division Meeting.

2009 - D8 is testing out Webex for their meeting this year.

2010 - Depending on the outcome D6 may also attempt an online meeting in.

2010 - ASP meeting is to be held in Rhode Island, USA. Dr. Sliney suggested it may provide a good opportunity for a D6 meeting. Webex could then be used to enable more people to participate, but would require a good audio-visual set-up to be tested beforehand.

2011 - The next Quadrennial meeting will be held in Sun City, South Africa in July.

AOB

The ILV is in final vote, with Dr. Webb and Dr. Sliney having voting rights from D6.

DD thanked Lysis Lighting as hosts, and the attendees, and the meeting was concluded.

Canadian members and chairs of D6 Technical Committees.

TC 6-11 J.A. Veitch (Chair)

TC 6-49 A.P. Cullen

TC 6-55 J.D.Y. Deslauriers

TC 6-62 M. Dumont



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CIE Division 8

Image Technology

The CIE Division 8 “Image Technology” and its Activities in 2008/2009

Report to the CNC-CIE, 15-16 October, 2009

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1- Highlights

The CIE Division 8 Image Technology held its division meeting during the IS&T/SID Color Imaging Conference in Portland, Oregon, 11 Nov. 2008. It was attended by 18 persons with only 8 countries represented. The Secretary reported a draft of a new Division 8 web site, which has since been implemented and linked from the top level. The Editor had received no document for publication. Reports were received by TC chairs, and some details are given in Paragraph 3 below. A question was made about possibly going into camera and display characterization beyond color quality, such as MTF determination guidelines. It was noted that any camera work might overlap TC-42 and display characterization might be too device specific and overlap TC-159 visual display requirements. There was discussion between balancing applied research with more technology independent more fundamental research.

A draft report “Methods for Deriving Colour Differences in Images” was recently produced by TC8-02 and is currently under Division 8 internal ballot.

2- Organization

Terms of Reference:

To study procedures and prepare guides and standards for the optical, visual and metrological aspects of the communication, processing, and reproduction of images, using all types of analogue and digital imaging devices, storage media and imaging media.

Domaine d'activité:

Etudier les méthodes et préparer des recommandations et des normes, relative aux aspects optiques, visuels et métrologiques de la communication, du traitement et de la reproduction des images, applicables à tous les types de dispositifs d'acquisition, de conservation et de restitution, aussi bien analogiques que numériques.

Web site: <http://www.cie.co.at/div8/>

A moderated Divisional email list exist and is intended to reach all those who actively participate in Division 8 of the CIE: Division officers, Division members, and TC members. It can be reached by mailing to ciedivision8-L@vivid.colour.org.

2.1 Division Officers

Director of Division Sabine Susstrunk
Secretary of Division Nathan Moroney
Editor of Division Ann McCarthy

2.2 Official Division Members

Canadian Member: Réjean Baribeau

2.3 Liaisons

CIE Division 8 has liaisons with the following organizations and liaison officers:

ISC/TC42: Photography (Mike Pointer)
ISO/TC130: Graphic Technology(Danny Rich)
ISO/IEC/JTAG2:Joint Technical Advisory Group (JTAG) 2 for Imagery(J. Schanda)
ICC -- International Colour Consortium (Cacant)
IEC/TC100 Multimedia Equipment and (Danny Rich)
ASTM/E12 Color and Appearance (Mike Pointer)

2.4 Publications and Technical Reports from Division 8

CIE 156-2004, Guidelines for the Evaluation of Gamut Mapping Algorithms (TC8-03)
CIE 159:2004, A Colour Appearance Model for Colour Management Systems:
CIECAM02. (TC8-01)
CIE 162:2004, Chromatic Adaptation Under Mixed Illumination Condition When
Comparing Softcopy and Hardcopy Images (TC8-04)
CIE 163-2004, The Effects of Fluorescence in the Characterization of Imaging Media (R8-05)
CIE 168:2005, Criteria for the evaluation of extended-gamut colour encodings (TC8-05)
The work of TC8-06, Vocabulary, has become part of the revision of CIE Publication 17, International
Lighting Vocabulary.

2.5 Technical Committees

TC8-02: Colour Difference Evaluation in Images
TC8-07: Multispectral Imaging
TC8-08: Spatial Appearance Models for High dynamic range Images
TC8-09: Image Archiving
TC8-10: Office Illumination for Imaging
TC8-11: CIECAM02 Mathematics
TC8-12: Video Compression Assessment

2.6 Reporterships

R8-05 Reportership on Image Appearance (M. Fairchild) – closed
R8-07 Reportership on an alternative chromatic adaptation transform for CIECAM02 (Sabine Susstrunk)
–closed
R8-08 Image Appearance Model Framework (M. Fairchild) – New

3- Technical Committees work in progress

TC8-02: Colour Difference Evaluation in Images

Terms of Reference:

To study, develop and standardize methods to derive colour differences for images.

Chair: Ronnier Luo

Web site: <http://www.colour.org/tc8-02/>

This TC's technical draft report "Methods for Deriving Colour Differences in Images" has reached the stage of country ballot and is to be closed at the next meeting. The Summary/Résumé are:

SUMMARY

This technical report is concerned only with the evaluation of colour differences between two nominally similar images where the output media and the output viewing conditions are similar for both images. It is based on previously published work by CIE and other experts in this field. The report begins by reviewing the factors affecting the evaluation of these colour differences. Various methodologies are described to evaluate colour differences using both visual and instrumental methods. A series of reference colour digital images are presented. A method for statistically analyzing average colour-differences is described. All the activities of this TC are finally summarized and recommendations are made to apply either CIELAB(2:1) or CIEDE2000(2:1) for evaluating colour differences for a pair images displayed in the same medium side by side under the same illumination conditions. A worked example with optional optical filters is also given to supplement the described recommendations.

RÉSUMÉ

Ce rapport technique décrit les facteurs influant sur l'évaluation des différences de couleur entre deux images nommément semblables, entre une scène originale et une reproduction de cette scène, ou au sein d'une image. Il est fondé sur des travaux déjà publiés par la CIE et par d'autres experts dans cette discipline. On décrit différentes procédures pour évaluer les différences de couleur en recourant aussi bien à des méthodes visuelles qu'à des techniques instrumentales. Une série d'images numériques en couleur sont présentées. On décrit une méthode d'analyse statistique des différences de couleur moyennes ainsi que le calcul d'une série d'indices de reproduction des couleurs. Des exemples avec solution sont donnés pour compléter les procédures décrites.

TC8-07: Multispectral Imaging

Proposed Terms of Reference:

To study, develop, and recommend encoding techniques and data formats for the exchange of multispectral images, and to provide test procedures for the evaluation of multispectral imaging systems..

Chair: Dr. Markku Hauta-Kasari
in replacement of Dr. Jussi Parkinen

This TC was formed in 2002 and was to cover the following subjects:

1. Spectral test sets
 - 1.1 data sets for simulation and testing,
 - 1.2 definition and fabrication of an experimental spectral test chart,
 - 1.3 test chart of pairs of metameric colors.
2. Definition of sets of color matching functions of typical human observers to be used in multispectral imaging systems for the definition of observer metamerism.
3. Encoding of multispectral image data
 - 3.1 linear encoding and quantization,
 - 3.2 nonlinear encoding and quantization,
 - 3.3 mixed spectral and spatial encoding.
4. Definition of data formats for the exchange of multispectral image data.
5. Recommendations for the definition of quality of a multispectral system and test procedures.

The following status update was presented during the Division meeting. First were the requirements for a spectral data format. Two candidates were presented, Natural Vision Format and MUSP. The Matlab code, an image database and a Java tool for reading and writing spectral image formats was to be published on web site and presented at the in Multi-Spectral Color meeting in Oslo, Norway in 2009. The goal was to propose a multi-spectral data format in 2009. The TC was set to deliver on one of five items in the terms of reference so additional discussion will be necessary to determine the focus of any future efforts.

TC8-08: Spatial Appearance Models for High dynamic range

Terms of Reference:

To study high-dynamic range imaging and to provide methods and examples for evaluating spatial appearance models for such images. The priorities are to provide the community with techniques for testing and improving existing algorithms, as well as providing a repository for hosting HDR images and tone-mapped versions (as well as experimental results) of said images.

Chair: Garrett Johnson

The TC had previously recognized the following priorities:

- Define the vocabulary, in particular, define “perceptible contrast ratio” and which tone curve to use for this definition.
- Methods for testing HDR scenes.
 - Preference scaling: Techniques for scaling preference without an original.
 - Accuracy scaling: Comparing tone-mapping algorithms against an "original" scene.
 - Accuracy scaling: Using and HDR display as the original...is it the same or equivalent to real scene.
 - Visibility/Perceptibility scaling: Techniques for measuring scientific usefulness of HDR rendering.
- Defining a "standard" scene for testing algorithm performance
 - Built out of common items.
 - Blueprint for construction of identical scene in a variety of locations.
 - Providing measurement (3D geometry, BRDF, spectral, luminance, colorimetric, and appearance scaling data).
 - Providing HDR images of standard scene.
- Providing a repository for unprocessed HDR scenes.
- Providing experimental tone mapped images and results for future comparisons.
- Providing guidelines for testing new algorithms against existing results.

Dr. Johnson reported during the Division meeting that nothing had happened since January 2008, but that TC8-08 was looking at using the IEC web tool. The committee also remained committed to developing a color appearance vocabulary and corresponding test methods. The chair anticipated a draft technical report for August 2009.

TC8-09: Image Archiving

Proposed Terms of Reference:

To recommend a set of techniques for the accurate capture, encoding and long-term preservation of colour descriptions of digital images that are either born digital or the result of digitizing 2D static physical objects, including documents, maps, photographic materials and paintings.

Chair: Robert Buckley

There has been a possibility for this TC to collaborate with the Federal Digitization Guidelines Initiative, by the Library of Congress and other organizations.

TC8-10: Office lighting for imaging

Terms of Reference:

To report on the spectral power distribution and illuminations levels used to view images in office lighting conditions. The report is to be based on empirical research.

Chair: Dr. Yasuki Yamauchi
in replacement of Dr. Todd Newman

The TC has so far

- developed guidelines for the experiment,
- developed a questionnaire to use with each measurement set,
- conducted a pilot study to test the methodology
- revised methodology based on pilot study
- held workshop at CIE Session to start the worldwide study.

The TC has been using a reference lighting box to investigate office lighting conditions. They have developed guidelines for use, written a questionnaire, conducted a pilot study, prepared a revised methodology, and given a workshop at the CIE Session in Beijing. The TC is halfway through their worldwide study. Upcoming effort will focus on an analysis of the current data and first draft of a technical report.

TC8-11: CIECAM02 Mathematics

Terms of Reference:

To improve CIECAM02 model to avoid the mathematical inconsistencies; to enable CIECAM02 to work in colour management applications.

Chair: Changjun Li (GB).

It was believed that if CAT02 failure could be corrected, that may correct the CIECAM02 failure problem. So much work has been done with improving the CAT02 problem, but with no satisfactory result.

The following problems with CIECAM02 have now been identified:

- 1-Mathematical failure; (J becomes complex for certain input)
- 2- CIECAM02 domain is smaller than the domain of ICC-PCS;
- 3- CIECAM02 domain is illuminant dependent. There is a need to find out the domain under each of the illuminants;
- 4- Q function problem

The TC will try to expand the domain without breaking (or changing) anything that is currently working well. It will first we check for which illuminant CIECAM02 works, and at what illuminance levels. An action item should be made to specify the domain that is desired.

TC8-12: HVS-based quality assessment for video imaging Video Compression Assessment

Terms of Reference:

To establish and report on the display and viewing conditions and materials for video compression quality evaluation in different applications including, but not limited to, web, mobile phones, HDTV, home cinema and digital cinema.

Chair: Christine Fernandez-Maloigne (FR).

The addressed domains of this TC are small devices like mobile phones, www multimedia content, HD television, digital cinema.

It is proposed to study the role of human perception in the task of quality assessment, to define assessment protocols adapted to different media and different viewing conditions, and to provide quality assessment databases that allow to study the correlation of developed metrics.

Liaison has been established with SC29/WG1. New liaison was recommended with IEC TC100 TA11. The TC may also need liaisons with I3A CPIQ and MIPC, if cell phones / mobile devices are included.

Presentation have been given at international meetings, and a call for participation has been submitted to international image experts

4- Reporterships

R8-05 Reportership on Image Appearance.

Prof.. M. Fairchild

The terms of reference would be:

To investigate and report on research extending colour appearance models to include properties of spatial vision for static images and scenes with particular focus on

- 1 Spatial filtering of image difference metrics
- 2 Spatial adaptation for image rendering
- 3 Potential interaction between 1 and 2

Dr. Fairchild presented an update on this reportership formed in 2003, on image appearance. He felt it might be appropriate to revisit his terms of reference and perhaps form a new technical committee. The emphasis would be a summary of what exists and not an investigation of any new topics. It was unanimously agreed that R8-05 be closed and that Dr. Fairchild start reportership R8-08 Image Appearance Model Framework.

R 8-07 Color adaptation transforms in CIECAM02

Sabine Susstrunk

Terms of reference:

Investigate and report on alternate chromatic adaptation transforms for CIECAM02 that do not create computational problems in boundary conditions.

This reportership is now closed.

R8-08 Image Appearance Model Framework (new)

Prof.. M. Fairchild

5- Canadian Participation

Byron Jordan
J. A. Veitch

TC8-10
TC8-10