



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

Canadian National Committee Comité National Canadien



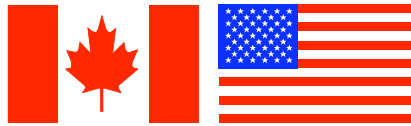
CNC/CIE Annual Report 2003

CNC/CIE and CIE/USA

Technical Conference and Joint Meeting

2003–October–22 to 24

- Program
- Minutes of CNC/CIE 48th Annual Meeting
- CNC/CIE Division Members' Reports



**The CNC/CIE and USNC/CIE
invite you to the
2003 Annual Technical Conference
and
Joint Meeting**

**OCTOBER 22 – 24, 2003
Montreal, Quebec, Canada**

Hotel Venue:

**Pointe-Claire Holiday Inn
6700 Route Transcanadienne
Pointe-Claire, Quebec H9R 1C2**

Telephone: 1-514-697-7110 Toll Free: 1-800-375-2680
Fax: 1-514-697-4145

Excellent rates with the hotel have been arranged as follows (Canadian Dollars):
October 22, 23 and 24, 2003: \$125.00 Canadian Dollars per Night plus tax

Reserve now and ask for the "CIE Canada" or "CIE USA" rate. The cutoff for reservations is **Friday, September 26, 2003**. Additional hotel information may be found at:

Conference Venue:

Paprican Conference Centre
570 Blvd. St. Jean
Pointe-Claire, QC H9R 3J9
Tel: 514-630-4100
Fax: 514-630-4134
Email: info@paprican.ca
Contact: Dr. Byron Jordan (Ext. 2274)

Program Highlights:

- Annual Technical Conference – 12 Sessions
- Annual Conference Banquet
- Reports from the CIE Quadrennial meetings
- CIE Division Activity Reports
- Technical Update
- CNC & USNC Business Meetings

Schedule:

Wednesday, October 22

Afternoon Arrivals

12:30 PM Registration Opens

7:30 PM – 9:30 PM Wine and Cheese Reception – All Invited (At Hotel)

Thursday, October 23

7:30 AM – 8:00 AM Registration Opens – Coffee, Juice, Muffins

8:00 AM – 8:05 AM Opening Remarks

8:05 AM – 8:45 AM **Session #1** - The Pressing Need for Educational Outreach about Lighting, ***Mr. D. Crawford***, International Dark Sky Association, Tucson

8:45 AM – 9:20 AM **Session #2** - The Light-Switch Wizard: Daylight Simulations for Initial Design Investigations, ***Dr. C. Reinhart***, National Research Council of Canada, Ottawa

9:20 AM -10:00 AM **Session #3** – Looking for an Indoor Illuminant for Paper Color Imagery – ***Dr. Byron Jordan***, Paprican, Montreal

10:00 AM - 10:10 AM Coffee, Juice Break

10:10 AM - 10:45 AM **Session #4** - Light Dimming Control with the Illuminance Ratio Prediction Method for Daylighting Systems, ***Mr. K.-W. Park***, Concordia U., Montreal

10:45 AM – 11:20 AM **Session #5** - Light Exposure & the Work Environment: A Circadian Rhythms Perspective – ***Dr. M. Dumont***, Sacre-Cœur Hospital/U. of Montréal

11:20 AM – 12:00 PM **Session #6** - Circadian Rhythm and Human Health, ***Dr. J. Roberts***, Fordham University, New York

12:00 PM – 1:00 PM Lunch at Paprican Cafeteria

1:00 PM – 1:40 PM **Session #7** - Photobiological Hazard Evaluation Of Lamps, ***Dr. R. Bergman***, Rolf Bergman Consulting, Cleveland

1:40 PM – 2:15 PM **Session #8** - Cost Effective Core Daylighting By Means Of Functional Hybridization, ***Dr. L. Whitehead***, University Of British Columbia

2:15 PM – 2:55 PM **Session #9** – The Effect of Open Plan Office Design on Workstation Lighting, ***Dr. Jennifer Veitch***, National Research Council of Canada, Ottawa

2:55 PM – 3:05 PM Coffee, Beverage, Cookies Break

3:05 PM – 3:40 PM **Session #10** - LED Lighting for Third World Application, ***Dr. D. Irwine-Halliday***, Light Up the World Foundation and Univ. of Calgary

3:40 PM – 4:20 PM **Session #11** - Applied Retroreflectivity: Steps Toward Driver's Safety", ***Mr. Justin Rennilson***, Rennilson Consulting Services, La Mesa, CA

4:20 PM – 5:00 PM **Session #12** - New Directions in North American Lighting Research, ***Mr. T. McGowan***, Executive Director, Lighting Research Office, the Electric Power Research Institute

6:30 PM Refreshments – All Invited (At Hotel)

7:30 PM Conference Banquet – All Invited (At Hotel)

Friday, October 24

7:30 AM - 8:00 AM	Registration Opens – Coffee, Juice, Muffins
8:00 AM – 8:45 AM	CIE Quadrennial Meeting Review (Joint Session)
8:45 AM – 9:10 AM	CIE Division 1 Report (Joint Session)
9:10 AM – 9:35 AM	CIE Division 2 Report (Joint Session)
9:35 AM – 10:00 AM	CIE Division 3 Report (Joint Session)
10:00 AM – 10:15 AM	Coffee, Juice Break
10:15 AM – 10:40 AM	CIE Division 4 Report (Joint Session)
10:40 AM – 11:05 AM	CIE Division 5 Report (Joint Session)
11:05 AM – 11:30 AM	CIE Division 6 Report (Joint Session)
11:30 AM – 12:00 AM	CIE Division 8 Report (Joint Session)
12:00 PM – 1:00 PM	Lunch at Paprican Cafeteria
1:00 PM – 4:00 PM	Business Meetings of the CNC/CIE and USNC/CIE (Separate Meetings)
4:00 PM – 4:15 PM	Coffee, Beverage, Cookies Break
4:15 PM – 5:00 PM	General Session & Conclusion (Joint Session)

Conference Committee:

Chairman

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MAP OF POINTE-CLAIRE AREA:



REGISTRATION FORM
2003 JOINT CNC/CIE AND USNC/CIE ANNUAL CONFERENCE

To register, fill out the form and send it with your cheque (in either US or Canadian Funds) to:

Dr. Byron Jordan, Treasurer & Registration
570 Blvd. St. Jean
Pointe-Claire, QC H9R 3J9
Tel: 514-630-4100 (Ext. 2274)
Fax: 514-630-4134
Email: info@paprican.ca

You may also fax your registration and pay at the conference.

Name: _____

Address: _____

City: _____ State/Province: _____ ZIP/Postal Code: _____

Telephone: _____ Email: _____

Accompanying Person's Name: _____

Full Conference Registration: \$170 US - \$240 CDN _____
(Includes Wednesday Welcome Reception, Business and Technical Sessions
on Thursday and Friday, Breaks, Luncheons and Banquet on Thursday night)

Full Accompanying Person Registration:	\$ 45 US - \$ 65 CDN	_____
Wednesday Evening Reception:	\$ 13 US - \$ 20 CDN	_____
Thursday Technical Sessions Only:	\$ 70 US - \$100 CDN	_____
Thursday Luncheon:	\$ 10 US - \$ 15 CDN	_____
Thursday Night Banquet:	\$ 35 US - \$ 50 CDN	_____
Friday Registration Only:	\$ 35 US - \$ 50 CDN	_____
Friday Luncheon:	\$ 10 US - \$ 15 CDN	_____

Total Amt: (Cheque) _____ \$US or _____ \$CDN Enclosed: _____

MAKE CHEQUES PAYABLE TO: CNC/CIE

2003-10-17



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

Canadian National Committee Comité National Canadien



MINUTES OF THE 48TH ANNUAL CNC/CIE MEETING

2003-October-24

The 48th annual meeting of the Canadian National Committee of the Commission Internationale de l'Éclairage (CNC/CIE) was held on Friday, October 24, 2003 in the Paprican Conference Centre, 570!Blvd.!St.!Jean, Pointe-Claire, Québec H9R!3J9. The meeting was part of the 2003 CNC/CIE and CIE/USA Joint Technical Conference and Annual Meetings held at Paprican on October!22–24, 2003.

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

CIE	Commission Internationale de l'Éclairage
CNC/CIE	Canadian National Committee of the CIE
CIE/USA	US National Committee of the CIE
CIE-BA	CIE Board of Administration
CIE-CB	CIE Central Bureau
NC	CIE National Committee
TC	CIE Technical Committee
CIE-DD	CIE Division Director
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
DRDC	Defence Research and Development Canada
IESNA	Illuminating Engineering Society of North America
M/AM	Members/Advisory Members

Division Member reports were presented jointly with the CIE/USA on Friday morning, October!24, 2003. 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 48th annual meeting of the Canadian National Committee of the Commission Internationale de l'Éclairage (CNC/CIE) was called to order at 13:00 on Friday, October 24, 2003 by S.M.!McFadden, President.

Fourteen Members and Advisory Members, and three guests, were in attendance. The list of all attendees is given in Appendix!A.

The President indicated that another agenda item–11.0!Division Members–should be added. Moved by J.A.!Veitch, seconded by J.A.!Love, that the agenda, as circulated by mail and amended (Appendix!B), be approved. Passed.

2. Election of Reporter for the Lighting Press:

M.K.!Timmings indicated that there is very little ‘lighting press’ in Canada. Discussion followed on various means to publicize the CNC/CIE and CIE activities in Canada. J.A.!Veitch noted that the media office in NRC-Corporate Services might be able to disseminate some of our material. J.A.!Love suggested a CNC/CIE web-site, but several members suggested that this was a larger undertaking than we could consider at this time. I.C.!Pasini suggested that we make contact with IESNA sections who operate websites, and who might consider including some CIE material on their site. M.K.!Timmings agreed to be the CNC/CIE liaison with the IESNA, and S.M.!McFadden volunteered to send M.K.!Timmings some background information concerning the CNC/CIE that he could use for this purpose.

3. Minutes of the 47th CNC/CIE Annual Meeting:

The secretary indicated that a hard copy of the Minutes of the 47th Annual Meeting had been mailed to all Members and Advisory Members. It was moved by R.A.!Smith, seconded by J.A.!Veitch, that the Minutes be accepted as distributed. Passed.

The action items from the 47th Annual Meeting (Appendix C) were considered. Action Item 1 (AI-1) was discussed in Minutes Item 2 above. Re AI-2, A.A.!Gaertner reported that he had contacted E.!Szamosi of CSA, and that E.!Szamosi had indicated that he could continue to be the CNC/CIE contact to CSA. Re AI-3, J.A.!Love reported that at present Ontario Hydro was not active in lighting. Re AI-4, A.A.!Gaertner indicated that he had not yet polled Advisory Members concerning their continued interest in the CNC/CIE and CIE. All the remaining Action Items (AI-5 to AI-18) had been acted upon. Re AI-13, A.R.!Robertson indicated that he had discussed the structure of CNC/CIE Membership with the Director-General of INMS. The results of this discussion would be further discussed in Minutes Item 12 below.

4. President’s Report:

S.M. McFadden presented her report, which is attached as Appendix!D. She briefly discussed each item in the report. She indicated that she would obtain information concerning the new CIE awards, and forward this to the Secretary for circulation to the CNC/CIE. She also confirmed her intention to step-down as President of the CNC/CIE. It was moved by J.A. Veitch, seconded by K.F.!Lin, that her report be accepted. Passed.

5. Secretary’s Report:

A.A. Gaertner presented his report, which is attached as Appendix!E. He briefly discussed each item in the report. With respect to the participation of Canadians on CIE TCs, several corrections were suggested by attendees, and these are corrected in Appendix!E. In order to keep this list up-to-date, the Secretary asked all CNC/CIE members to keep him and the relevant Canadian Division Member aware of their participation in CIE work. B.!Jordan indicated that he had expressed an interest in participating in one of the TCs of Division 8 (see Minutes of 47th Annual Meeting), but this did not appear to have been acted upon. S.M.!McFadden volunteered to contact the Canadian Division 8 member and/or the CIE Division 8 Director. It was moved by M.K.!Timmings, seconded by J.A.!Veitch, that the report be accepted. Passed.

6. Financial and Publications Report:

K.F.!Lin presented his report (Appendix F), noting that there are two parts to the report: the CIE Publication Stock List, and the CIE Publication – Canada Financial Report. He briefly discussed the first few pages of the Financial Report. It was moved by J.A.!Veitch, seconded by R.A.!Smith, that these reports be accepted. Passed.

7. CIE Policy on the Pricing and sales of CIE Publications:

S.M.!McFadden presented the basic ideas of the new CIE Policy (Appendix G) that is to come into effect on 2004-January-01. Concern was expressed about the disposition of the current CNC/CIE stock of CIE publications. It was also noted that the new policy would have the CIE-CB handling most of the transactions, which would reduce the workload of our volunteer Publications Officer. After discussion, it was decided that the President and the Secretary were to consider the present CNC/CIE stock list, and contact the CIE-CB concerning the possibility that they would compensate us for the negative financial impact of their change in policy, noting that we would be redirecting Canadian requests for CIE publications to the CIE-CB.

8. Requests for Financial Support:

As a result of the CNC/CIE adoption of the new *CNC/CIE Policy for the Reimbursement of Expenses* (see the Secretary's Report above), any requests for funding should be received before the annual meeting, and discussed and approved at the annual meeting. The Secretary reported that he had not received any requests. The President asked whether there were any requests to be submitted at this time. There were none.

9. NRC-IRO 2003 Assessment of the CNC/CIE

A.R.!Robertson presented some background information concerning the partnership agreement between NRC Corporate Services and the NRC-INMS concerning the support of Canada's affiliation with the CIE, and the operation of the CNC/CIE. This agreement is scheduled for renewal. However, prior to the renewal of the agreement, an assessment will be carried out to monitor the efficiency of the partnership and to ensure that maximum benefits are derived by the Canadian S&T community from the NRC affiliation with CIE. Further information concerning this assessment may also be found in the Secretary's Report above.

Discussion followed concerning the input of information for this report, which had already been submitted to the NRC-IRO since it was past the required deadline. In case there are problems in receiving a positive assessment, several suggestions for further support were considered.

J.A.!Veitch suggested that we might request letters of support from other CIE country members that would indicate the high level of CIE activity by Canadians. Another suggestion was to solicit letters of support from Canadians working in the lighting community.

In order to indicate to the CNC/CIE members the type of involvement expected of the CNC/CIE, and the information required from the CNC/CIE, it was decided that the Secretary should email a copy of the latest NRC-IRO assessment form to all CNC/CIE Members and to the attendees at the last three CNC/CIE annual meetings. It was also recommended that the Secretary inform all CNC/CIE Advisory Members about the existence of this report and that they could obtain a copy if they are interested.

10. CIE 25th Session (San Diego 2003 June) issues:

S.M.!McFadden expanded upon four of the issues noted in her report (see the President's Report above) to the NRC-IRO concerning the meetings of the CIE General Assembly and Board of Administration at the CIE Session:

- i. CIE Supportive Memberships: The CIE has restructured these memberships and lowered their cost to increase participation from potential members. Every NC has been requested to suggest to the CIE-CB five companies in their country who might be interested in becoming CIE Supportive Members. When further information is available from the CIE-CB, the Secretary will communicate this to the CNC/CIE Members and Advisory Members. If any of us know of potentially interested companies, we should forward their

names to S.M.!McFadden, who will pass this information to the CIE-CB, who can approach these companies with the full information concerning the various forms of Supportive Membership.

- ii. CIE Awards: The CIE has created a new system of awards to recognize outstanding contributions to the work of the CIE. The first awards are expected to be presented at the next CIE quadrennial Session. S.M.!McFadden will obtain information concerning these awards, to be distributed to the CNC/CIE for our consideration in suggesting possible recipients.
- iii. NC (National Committee) participation on CIE Standards: The CIE President has noted that there is poor participation by NCs in commenting on CIE Draft Standards. S.M.!McFadden pointed out that this is one of the responsibilities of CNC/CIE Members. She also indicated that even if we do not have specific expertise in the subject of the Draft Standard, we should try to evaluate whether the standard is understandable and useable by the user community. We should also consider obtaining help in the evaluation of these standards from other Canadians who might have some relevant expertise.
- iv. CIE Young Scientist Award: The CIE is considering an award to a young scientist (less than 35 years old) selected from those presenting papers at one of the CIE Sessions. All members are encouraged to bring a young scientist with them to the CIE Sessions. It was also recommended that we encourage young Canadian scientists to attend/present papers at the joint CNC/CIE-CIE/USA technical meetings.

11. Nominations and Appointments (CNC/CIE):

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

11.0 Division Members:

As requested at the last CNC/CIE Annual Meeting, S.M.!McFadden has approached several Advisory Members to consider acting as assistants to the Division Members, particularly for Divisions 3, 4, and 5: R.A.!Smith (Division 3), J.!Bastianpillai (Division 4), and M.K.!Timmings (Division 5), have indicated their willingness to serve. The Secretary is asked to indicate these positions on our M/AM list (Appendix H).

During this past year, W.K.!Adrian (Division 4 Member) and J.B.!Roberge (Division 5 Member) have both indicated that they wish to step down from their responsibilities as Canadian Division Members.

The President opened nominations for the position of Canadian Division member for Division 4. J.!Bastianpillai was nominated by J.A.!Veitch, seconded by S.M.!McFadden. There were no further nominations. J.!Bastianpillai was asked to leave the room during the discussion and vote concerning his appointment. The appointment of J.!Bastianpillai as Canadian voting Member to CIE Division 4 was approved.

The President opened nominations for the position of Canadian Division member for Division 5. M.K.!Timmings was nominated by J.A.!Love, seconded by J.B.!Roberge. There were no further nominations. M.K.!Timmings was asked to leave the room during the discussion and vote concerning his appointment. The appointment of M.K.!Timmings as Canadian voting Member to CIE Division 5 was approved.

The Secretary was asked to send the results of these appointments to the CIE-CB and the relevant CIE Division Directors. S.M.!McFadden commented on various aspects of their responsibilities as laid down in the CNC/CIE Code of Procedure. It was noted that a CIE code of procedures for CIE Divisions and CIE TCs is available on the CIE website.

11.1 Report of Nominations Committee:

S.M.!McFadden reported on the activities of the Nominations Committee set up last year consisting of S.M.!McFadden, J.B.!Roberge, and A.R.!Robertson. It was moved by S.M.!McFadden, seconded by A.R.!Robertson, that the CNC/CIE recommend to the Director-General (DG) of the NRC-INMS the appointment of J.A.!Love to the position of CNC/CIE President, and the appointment of J.C.!Zwinkels to the position of CNC/CIE Vice-President. The President opened the floor for further nominations to each position. There were no further nominations.

J.A.!Love was asked to leave the room during the discussion and vote concerning the recommendation of his appointment. The recommendation of the CNC/CIE to the DG of the NRC-INMS that J.A.!Love be appointed President of the CNC/CIE was approved.

J.C.!Zwinkels was asked to leave the room during the discussion and vote concerning the recommendation of her appointment. The recommendation of the CNC/CIE to the DG of the NRC-INMS that J.C.!Zwinkels be reappointed Vice-President of the CNC/CIE was approved.

11.2 Members and Advisory Members:

11.2.1 CNC/CIE Members:

The President noted that the terms of four of the CNC/CIE Members expired this year at the end of December: W.K.!Adrian, J.D.!Yvon!Deslauriers, S.M.!McFadden, and J.B.!Roberge. W.K.!Adrian and J.B.!Roberge have indicated that they wish to step down as CNC/CIE Members, and that they are willing to continue as CNC/CIE Advisory Members. J.D.!Yvon!Deslauriers and S.M.!McFadden have indicated that they are willing to continue as CNC/CIE Members. It was moved by R.A.!Smith, seconded by K.F.!Lin, that the CNC/CIE recommend to the DG of the NRC-INMS that J.!Bastianpillai and M.K.!Timmings be appointed as new CNC/CIE Members, and that J.D.!Yvon!Deslauriers and S.M.!McFadden be reappointed as CNC/CIE Members. Passed.

11.2.2 CNC/CIE Advisory Members:

The Secretary presented the names of eight Canadians who had been recommended by several CNC/CIE Members/Advisory Members. He had contacted them and they had expressed an interest in becoming CNC/CIE Advisory Members (see the Secretary's Report, Appendix E). After discussion, it was moved by R.A.!Smith, seconded by M.K.!Timmings, that the following eight people be appointed to CNC/CIE Advisory Membership. Passed.

Mr. Nolie Agellon, P.!Eng., Ministry of Transportation, St. Catharines, Ontario

Mr. Chrisnel Blot, Spectra Lux Industries Inc., Ville St-Laurent, Québec

Dr. Marie Dumont, Hôpital du Sacré-Coeur de Montréal, Montréal, Québec

Mr. Kurt Ising, P.!Eng., MacInnis Engineering Associates Inc., Richmond, B.C.

Mr. Denis Lavoie, Lumec Inc., Boisbriand, Québec

Ms Dyonis Smith, Metalumen Manufacturing Inc., Guelph, Ontario

Dr. Cristian Suvagau, P.!Eng., B.C. Hydro, Burnaby, B.C.

Mr. Roy Williams, Duha Color Services, Winnipeg, Manitoba

It was recommended that the Secretary contact P.!Gabriel and D.!Irwine-Halliday concerning their interest in CNC/CIE Advisory Membership.

It was noted that some of the Advisory Members on our list may no longer be active in the field of lighting. It was recommended that S.M.!McFadden and A.A. Gaertner poll the Advisory Members on our list to determine their continued interest in the CNC/CIE.

12. Code of Procedure:

A.R. Robertson reported on his discussions with the Interim NRC-INMS-DG (Dr. T. LeFeuvre) concerning the possibility of increasing the number of CNC/CIE Members from the current limit of 12. It was recommended that there be a maximum number of approximately 18. He then presented a draft version of an amended Code of Procedure for consideration (Appendix I). Since there was not enough time for full consideration at this meeting, he was only requesting guidance for a few items at this time—particularly the recommended maximum number of Members, and the quorum which would be required for various items. After some discussion, it was recommended that we suggest 19 Members as a maximum, and a quorum of 50% be required. It was suggested that the use of proxies be considered. A.R. Robertson requested that the CNC/CIE think about the directives for Members and Advisory Members which we might wish to include, and forward these suggestions to him. It was also discussed and suggested that CNC/CIE Members and Advisory Members should be resident in Canada. A.R. Robertson indicated that he would rework this draft version of the Code of Procedure and try to submit it to the members for comment within a month.

13. Other Business:

13.1 Correspondence:

There was none to report.

13.2 Date and Place of next Year's Meeting:

After some discussion, it was decided that the next annual meeting should be held in late October of 2004, in Toronto. S.M. McFadden agreed to look into hosting the meeting at her workplace at DRDC.

13.3 Other Business:

It was moved by J.A. Love, seconded by A.R. Robertson, that the CNC/CIE express its appreciation and thanks to S.M. McFadden for her extensive contributions to the CNC/CIE during her four-year tenure as CNC/CIE President. Passed unanimously.

14. Adjournment

At approximately 16:15, it was moved by J.A. Love, seconded by S.M. McFadden, that the meeting be adjourned.

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2003-November-17

CNC/CIE 48th Annual Meeting

2003-October-24

Action Items

Action Item Number (AI#)	48th Minutes Item Number	Responsible	Action
1	2	M.K.!Timmings, S.M.!McFadden	contact IESNA sections re including CNC/CIE material on their website
2	4	S.M.!McFadden	obtain info re CIE awards and send to Secretary
3	5	S.M.!McFadden	contact CIE Division 8 Member/Director re B.!Jordan
4	7	S.M.!McFadden, A.A.!Gaertner	contact CIE-CB re compensation for CNC/CIE stock of CIE publications
5	9	A.A.!Gaertner	email NRC-IRO assessment form to CNC/CIE Members and Annual Meeting attendees. Inform Advisory Members of report.
6	10i	all	send names of potential CIE Supportive Members to S.M. McFadden
7	10ii	S.M.!McFadden	obtain info re new CIE awards
8	11.0	A.A.!Gaertner	indicate Division Member Assistants on M/AM list
9	11.0	A.A.!Gaertner	inform CIE-CB, CIE-DDs re new Cdn Div Members
10	11.1	A.A.!Gaertner	forward recommendations re CNC/CIE President and Vice-President to NRC-INMS-DG
11	11.2.1	A.A.!Gaertner	forward recommendations re 4 CNC/CIE Members to NRC-INMS-DG
12	11.2.2	A.A.!Gaertner	welcome 8 new Advisory Members
13	11.2.2	A.A.!Gaertner	contact 2 potential new Advisory Members
14	11.2.2	A.A.!Gaertner, S.M.!McFadden	poll Advisory Members re interest in CNC/CIE
15	12	A.R.!Robertson	draft amended version of Code of Procedure
16	13.2	S.M.!McFadden	arrange 49 th Annual Meeting: 2004 October

LIST OF APPENDICES

- APPENDIX A: Attendees to the 48th CNC/CIE Annual Meeting 2003-October-24
- APPENDIX B: Amended Agenda for the 48th CNC/CIE Annual Meeting 2003-October-24
- APPENDIX C: Action Items from the 47th CNC/CIE Annual Meeting 2002-October-05
- APPENDIX D: President's Report
- APPENDIX E: Secretary's Report
- APPENDIX F: Financial and Publications Report
- APPENDIX G: CIE Policy on the Pricing and Sales of CIE Publications
- APPENDIX H: CNC/CIE Members and Advisory Members
- APPENDIX I: Code of Procedure Draft 2003-10-17

Attachments: Canadian Division Member reports

APPENDIX A

CNC/CIE 48th Annual Meeting

2003-October-24

Attendees

Joe Bastianpillai	Lumentech Engineers Inc.
Arnold Gaertner	National Research Council (INMS)
Byron Jordan	PAPRICAN
K. Frank Lin	Lighting Sciences Canada Ltd.
James Love	University of Calgary
Sharon McFadden	DRDC Toronto
Keith Niall	DRDC Toronto
Ivan Pasini	Public Works and Government Services Canada
Jacques Roberge	self
Alan Robertson	National Research Council (INMS)
Dyoni Smith†	Metalumen Manufacturing Inc.
Ralph Smith	Ralph Smith Engineering Inc.
Cristian Suvagau†	B.C. Hydro
Martyn Timmings	Canlyte Inc.
Jennifer Veitch	National Research Council (IRC)
Roy Williams†	Duha Color Services
Joanne Zwinkels	National Research Council (INMS)

† guest

Regrets

Werner Adrian	Professor Emeritus, University of Waterloo
Réjean Baribeau	National Research Council (INMS)
Yvon Deslauriers	Health Canada (RPB)
André Laperrière	Hydro-Québec
Mankajee Shrestha	self
Andrew Silbiger	Andrew Silbiger Management Inc.
Lorne Whitehead	University of British Columbia

APPENDIX B
CNC/CIE 48th Annual Meeting
Amended Agenda

DATE: 2003-October-24, Friday

TIME: 13:00 to 16:00

LOCATION: Paprican Conference Centre
570 Blvd. St. Jean, Pointe-Claire, Québec H9R 3J9

PROPOSED AGENDA:

Note: The Division Members' reports will be presented jointly with the CIE/USA on Friday morning, 2003-October-24.

- | | |
|---|----------------|
| 1. Call to Order and Approval of Agenda | S.M. McFadden |
| 2. Election of reporter for the lighting press | |
| 3. Minutes of the 47 th Annual CNC/CIE meeting | |
| - Action items | |
| - Matters arising? | |
| 4. President's report | S.M. McFadden |
| 5. Secretary's report | A.A. Gaertner |
| 6. Financial and Publications Report | K.F. Lin |
| 7. CIE policy on the Pricing and Sales of CIE Publications | S.M. McFadden |
| 8. Requests for Financial Support | S.M. McFadden |
| 9. NRC-IRO Assessment of CNC/CIE | S.M. McFadden |
| 10. CIE 25 th Session (San Diego 2003 June) issues | S.M. McFadden |
| 11. Nominations and Appointments (CNC/CIE) | S.M. McFadden |
| 11.0 Division Members | |
| 11.1 Report of Nominations Committee | |
| 11.2 Members and Advisory Members | |
| 12. Code of Procedure | A.R. Robertson |
| 13. Other Business | S.M. McFadden |
| 13.1 Correspondence | |
| 13.2 Date and Place for next year's meeting | |
| 13.3 Any other business | |
| 14. Adjournment | |

APPENDIX C

CNC/CIE 48th Annual Meeting

Action items from CNC/CIE 47th Annual Meeting

Action Item Number (AI#)	47th Minutes Item Number	Responsible	Action
1	2	M.K. Timmings	distribute CNC/CIE information to the lighting press
2	3	A.A. Gaertner	contact E. Szamosi at CSA re possible Advisory Members
3	3	J.A. Love	check Ontario Hydro contacts re possible Advisory Membership
4	3	A.A. Gaertner	poll Advisory Members for their continuing interest in CNC/CIE and CIE
5	3	all	consider 2003 replacement for J. Roberge (Division 5 Member)
6	3	Pres,VP,Sec,Treas.	develop proposed criteria for use of CNC/CIE funds
7	5	A.A. Gaertner	mail out info re journal <i>Lighting Research and Technology</i>
8	7	A.A. Gaertner	contact CIE-CB re availability of CIE S009
9	6a	J.A. Veitch, J.C. Zwinkels	prepare a 2 nd draft of CNC/CIE Policy on Reimbursement of Expenses
10	6a	A.A. Gaertner	email above draft to M/AM for COMMENTS, then hard-copy ballot
11	8.1	S.M. McFadden	approach possible AM to serve as Division Member advisors and helpers
12	8.1	Division Members	implement group of helpers/advisors
13	8.1	A.R. Robertson	approach NRC re changing structure of CNC/CIE Membership
14	8.1	A.A. Gaertner	Member nominations for W.K. Adrian, I.C. Pasini, R. Baribeau, J.A. Love and J.C. Zwinkels
15	8.2	A.A. Gaertner	Advisory Member appointments for W.T. Delpero, J.W. Harron, and K. Pero
16	8.3	S.M. McFadden, J. Roberge, A.R. Robertson	prepare nominations for CNC/CIE President
17	10.2	S.M. McFadden	invite CIE/USA to next year's joint meeting in Montréal
18	10.3	B. Jordan, J.A. Love, R.A. Smith	organize 2003 joint meeting with CIE/USA



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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APPENDIX D

CNC/CIE 48th Annual Meeting

2003-October-24

President's Report



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
INTERNATIONAL COMMISSION ON ILLUMINATION
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PRESIDENT'S REPORT TO THE CNC/CIE 48TH ANNUAL MEETING

2003-October-24

This year, we have the pleasure of hosting the biennial joint meeting with our colleagues in the CIE/USA. It gives us an opportunity to return the hospitality they provided at the last joint meeting and during the 25th Session of the CIE in San Diego. The Organizing Committee has worked very hard to produce an interesting workshop and meeting plus social events with time to meet with our colleagues. I would like to extend my personal thanks for all their efforts.

The main event for the CIE this past year was the 25th Session of the CIE, hosted by CIE/USA. The meeting was very successful with many excellent presentations, posters, and workshops. Our CIE/USA colleagues are to be congratulated. Several new initiatives were discussed at the General Assembly and the meeting of the Board of Directors. The highlights of these meetings are discussed in my report to NRC/INMS (attached).

Again this year, at the request of the Director General of INMS, I represented the CNC/CIE at the CNC/NRC partners meeting that was held as part of the annual meeting of the Committee on International Science, Engineering and Technology (CISET). This meeting is held to exchange information on matters of importance to the Canadian National Committees of the 29 International Organizations that NRC is an adhering member. The meeting included a seminar on access to publicly funded scientific data. The objective of the seminar, organized by the Canadian National Committee for CODATA, was to explore the status of Canadian efforts in ensuring accessibility of publicly funded natural sciences research data and, if a deficiency were determined, to develop actionable plans to address that deficiency. The key recommendation that emerged from the seminar was that there is a need to examine the issue of "access to publicly funded scientific data" from the perspectives of the Canadian natural science, technical and medical communities. A steering committee has been set up to act on the recommendation. If anyone is interested in this issue, I would be happy to provide additional information.

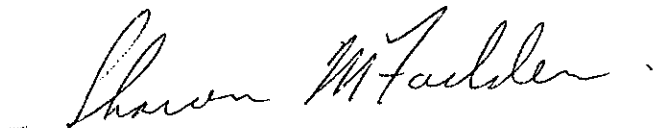
Unfortunately, two of our most experienced members, Dr. Werner Adrian and Mr. Jacques Roberge have decided that they are no longer able to commit the same level of effort to the CIE and the CNC/CIE that they have in previous years. Their dedication and hard work will be sorely missed. We sincerely thank them for their efforts on behalf of the CNC/CIE and hope that they will continue to keep in touch with us so that we can call on their experience from time to time.



This will be my last meeting as President of the CNC/CIE. I have enjoyed my past four years in office and I would like to thank all of the members for their tremendous support and their ongoing dedication to the work of the CNC/CIE. I have always enjoyed being a member of this organization because of the talented and dedicated people that participate in it. It has been an honour to be your President.

In closing, I would once again like to thank all the members and advisory members for their support of the work of the CIE through their participation in Technical Committees and in the operation of the CNC/CIE and by keeping Canadians in the lighting field informed about the work of the CIE.

Respectfully submitted

A handwritten signature in cursive script, reading "Sharon McFadden".

Sharon McFadden

President, CNC/CIE

Defence Research and Development Canada - Toronto

P.O. Box 2000, Toronto, Ontario M3M 3B9

Phone: (416) 635-2189

Fax: (416) 635-2013

email: sharon.mcfadden@drdc-rddc.gc.ca

**Report on the CIE General Assembly Meeting
San Diego, CA, USA
25 June 2003**

Sharon McFadden
President CNC/CIE

The General Assembly, chaired by the president of the CIE, H. A. Löfberg, Sweden, was attended by representatives from 28 nations. S. McFadden attended as the Canadian delegate and Dr. J. Zwinkels attended part of the meeting as the alternative Canadian delegate. Dr. A. Robertson, NRC/INMS member of the CNC/CIE, and Dr. J. Love, a member of the CNC/CIE also attended as non-voting advisors.

The President, in his report, announced the creation of a new set of awards to recognize outstanding contributions to the work of the CIE as well as to acknowledge the effort of those who have contributed their technical expertise to the development of reports and standards. He noted that the financial situation of the CIE was currently very good due to several successful workshops and seminars over the past four years. He also commented positively on the output of the various divisions with 41 publications being produced over the past four years. However, he felt there was room for improvement especially from the National Committees and Division members. Despite efforts by the Central Bureau to simplify and clarify the process, there was a relatively low response to requests to review and vote on reports and standards. He encouraged more participation by National Committees in this process. The CIE has established agreements with ISO and CEN for the joint publication of standards. This increases the visibility and impact of CIE Standards and making it important to show that they are acceptable to member nations.

The Technical Vice-President provided greater detail on the production and sale of publications over the past four years. He also announced plans for future symposia that, if successful, will provide the CIE with additional funds to support research and a more effective Central Bureau. He thanked the National Committees for the technical expertise that had been provided and encouraged them to solicit experts willing to participate actively in current and future committees.

To encourage the sale of publications, the CIE halved the price it charges on publications. It also plans to move towards web-based sale of publications. To support this decision, a new uniform pricing policy for publications that will meet the needs of all member nations is being developed. It will be circulated to National Committees in late August for comment. It is anticipated that the long-term effect of this policy will be the increased visibility and relevance of the CIE since it will be easier for customers to purchase reports. Higher sales will also help maintain the financial stability of the CIE. As well, the CIE is soliciting proposals from various companies that provide web-based publication sales for organizations.

The CIE has also made a strong effort to market itself over the past four years. The goal is to improve the image of the CIE as the recognized authority in the field of light, lighting, and image technology. Such recognition should support both the sale of publications and the success of seminars and workshops. It should also increase the recognition of the technical experts who support the work of the CIE making it easier to attract more experts who in turn will improve the quality of CIE guidance.

At the last Quadrennial, the CIE set up a supportive membership system to provide a different source of financial support. However, it has not proved very successful due in part to the economic downturn. As a result, it was decided to modify the system to make it more attractive to would-be members. Consequently, the costs have been lowered and the benefits increased. To

promulgate this new supportive membership system, each National Committee was asked to provide the names of five potential supportive members in their country.

The report of the General Secretary focused on the transition from paper-based to electronic communication. Currently over 80% of correspondence is via email and most circulars, draft reports etc. are sent electronically. The Central Bureau also offers authoring tools for technical reports and space for Technical Committees to store and exchange information securely. To support an efficient flow of information, they requested that National Committees keep the Central Bureau updated on the status of their organization.

As noted in the financial reports distributed prior to the meeting, the financial position of the CIE is currently very good. As a result it will not be necessary to raise fees in 2004 or 2005. Based on current projections, a fee increase of approximately 3% may be anticipated in 2006 and 2007 to cover the cost of new initiatives to improve the long-term viability of the CIE.

The interim meeting in 2005 will be held in Leon, Spain with the General Assembly planned for the 14th of May. The Quadrennial in 2007 will be hosted by the Chinese Illuminating Engineering Committee in Beijing, China, 27 June to 4 July.

The slate of officers for the next four years was chosen at the interim meeting in 2001 in Istanbul Turkey. The incoming President is W. van Bommel of the Netherlands. A new slate of Division Directors was approved at the Board of Administration meeting on 24 July, 2003. In four of the Divisions, 2, 3, 4, and 8, the Directors agreed to serve a second term. New Directors were appointed in Division 1 – S. McFadden (CA), Division 5 - Nigel Pollard (GB), and Division 6 – Ann Webb (GB). With the appointment of S. McFadden, Canada will have a member on the Board of Administration for the next four years.

During the closing ceremonies, J. Roberge, past president of the CNC/CIE, was presented with a CIE award in recognition of his service as President of the CNC/CIE, Canadian member for Division 5 and a member of the CIE Finance Committee. Unfortunately, he was unable to attend the meeting in San Diego. S. McFadden accepted the award on his behalf. A formal presentation will be made at the CNC/CIE meeting this fall.

The new Board of Administration commenced its term at the Board of Administration meeting held on 3 July, 2003. The members of the new board are as follows:

President:	W. van Bommel	Netherlands
Past President:	H. A. Löfberg	Sweden
Vice-President Publications:	F. Hengstberger	South Africa
Vice-President Technical:	W. Julian	Australia
Vice-President :	J. Bastie	France
Vice-President :	H. S. Mamak	India
Vice-President :	K. Sagawa	Japan
Vice-President :	D. Sliney	USA
Secretary:	J. Schanda	Hungary
Treasurer:	M. Seidl	Germany
Director, Division 1:	S. McFadden	Canada
Director, Division 2:	T. Goodman	Great Britain
Director, Division 3:	Marc Fontoynt	France
Director, Division 4:	P. Hautala	Finland
Director, Division 5:	N. Pollard	Great Britain
Director, Division 6:	A. Webb	Great Britain
Director, Division 8:	T. Newman	USA



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APPENDIX E

CNC/CIE 48th Annual Meeting

2003-October-24

Secretary's Report



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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CNC/CIE SECRETARY'S REPORT TO THE 48TH ANNUAL MEETING

2003-October-24

The following acronyms are used in this report:

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
NC: National Committee
NRC: National Research Council of Canada
NRC-IRO: NRC International Relations Office
NRC-INMS: NRC Institute for National Measurement Standards
NRC-IRC: NRC Institute for Research in Construction

This report covers the period from 2002-October-05 to 2003-October-23.

CIE MATTERS:

1. Annual Membership Fee:

The annual membership fee for the CNC/CIE as a member of the CIE for 2003 is 6,604 EUROS which was approximately \$10,632 Cdn. The NRC-International Relations Office has continued to make these payments on our behalf.

2. CIE Associate Membership of Greece:

A CNC/CIE ballot was sent to all CNC/CIE Members and Associate Members concerning the application of Greece to join the CIE as an Associate National Committee. Fifty-four ballots were mailed, 25 were returned, all of which were in favor. The approval of the CNC/CIE was sent to the CIE-CB. All NC ballots returned to the CIE-CB were in favor, resulting in the Hellenic Illumination Committee being admitted as Associate National Committee of CIE.

3. 25th Session of the CIE, 2003-June-25 to July-02, San Diego, California USA:

In preparation for the General Assembly meeting associated with this Session, many reports of officers of the CIE were received and circulated to NRC-IRO who finance our CNC/CIE membership in the CIE, to A.R. Robertson who is the designated representative for NRC-INMS, and to S.M. McFadden and J.C. Zwinkels who were appointed by NRC-IRO as our official delegates to this GA meeting.

The participation of Canadians in this Session was extensive:

Fifteen Canadians attended the meetings in San Diego:

Mr. Nolie Agellon, P.Eng.	Dr. Alan R. Robertson
Dr. Yvon Deslauriers	Dr. Cristian Suvagau
Mr. Kurt W. Ising, M.A.Sc., P.Eng.	Dr. Rados Topalova
Dr. Byron Jordan	Dr. Jennifer Veitch
Dr. James Love	Dr. Lorne Whitehead
Mrs. Sharon McFadden	Mr. Roy Williams
Mr. Tim Moggridge	Dr. Joanne Zwinkels
Dr. Keith Niall	

Papers were presented by two Canadians:

- i.) *Illuminant Choice for the Colorimetry of Fluorescent White Papers*, B. Jordan, and
- ii.) *New Efficient Tubular Daylighting System for Multi-Floor Buildings*, L.A. Whitehead et al.

A workshop on Lighting Research was co-chaired by Dr. J.A. Veitch.

S.M. McFadden was elected to Director of CIE Division 1 (Vision and Colour).



A CIE Certificate was awarded to J.B. Roberge in recognition his dedicated service as President of the CNC/CIE, Canadian member for CIE Division 5 (Exterior and Other Lighting Applications), and a long-term member of the CIE Finance Committee.

4. CIE Draft Standards:

CIE DS 010.3/E:2002 *Photometry—The CIE System of Physical Photometry*. After evaluation of the comments received on CIE DS 010.2/E-2001 from NCs, this version of the draft standard was sent to all NCs for final ballot. Copies were mailed to the 13 CNC/CIE Members. Eight replies were received: 6 in favor, 1 against, and 1 abstention. Comments were received concerning the definition of radiance. The CNC/CIE vote in favor of the standard, together with the comments received, were forwarded to the CIE-CB.

CIE DS 011.3/E:2002 *Spatial Distribution of Daylight—CIE Standard General Sky*. This CIE Draft Standard was sent to NCs for final ballot. The standard was approved by CIE NCs and published as a CIE Standard. It was then offered for joint publication with ISO.

CIE DS 012.2/E:2002 *Standard Method of Assessing the Spectral Quality of Daylight Simulators for Visual Appraisal and Measurement of Colour*. This CIE Draft Standard has passed the CIE-BA and Divisional ballots. It was sent to the NCs for comments. All CNC/CIE Members, Advisory Members, and ‘general interest’ parties were notified that copies of these documents could be made available for their comments. Copies were mailed to each of the 13 CNC/CIE Members. Two replies were received and the comments were forwarded to the CIE-CB.

CIE DS 013.2/E:2002 *International Standard Global UV Index*. This CIE Draft Standard has passed the CIE-BA and Divisional ballots. It was sent to the NCs for comments. All CNC/CIE Members, Advisory Members, and ‘general interest’ parties were notified that copies of these documents could be made available for their comments. Copies were mailed to each of the 13 CNC/CIE Members. One reply was received and the comments were forwarded to the CIE-CB.

CIE DS 013.3/E:2003 *International Standard Global UV Index*. The comments received from all NCs on the previous draft of this CIE draft standard (see above) were considered, and this version was sent to all NCs for final ballot. Copies were mailed to the 13 CNC/CIE Members. Four were returned, all in favor. The CNC/CIE vote in favor of this draft standard was sent to the CIE-CB. The standard was approved by the CIE NCs.

CIE DS 015/E:2002 *Lighting of Work Places—Outdoor work places*. This CIE Draft Standard was submitted to NCs for comments in anticipation of its approval as a CIE/ISO/CEN document. Copies were sent to the 13 Members and 3 Advisory Members. Two replies were received with comments and these were forwarded to the CIE-CB.

5. Mailings:

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

CIE NEWS Number 63, September 2002

CIE NEWS Number 64, December 2002

CIE NEWS Number 65, March 2003

CIE NEWS Number 66, June 2003

CIE Press Releases:

Publication CIE 149:2002: *The use of tungsten filament lamps as secondary standard sources*.

Publication CIE 150:2003: *Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations*.

Publication CIE 151:2003: *Spectral Weighting of Solar Ultraviolet Radiation*.

Publication CIE 153:2003: *Report on an Intercomparison of Measurements of the Luminous Flux of High-Pressure Sodium Lamps*.

Publication CIE x024:2002: *Proceedings of the CIE/ARUP Symposium on Visual Environment*.

Publication CIE x025:2003: *Proceedings of the CIE Symposium’02 on Temporal and Spatial Aspects of Light and Colour Perception and Measurement*.

Publication CIE Draft Standard DS 015/E:2002 *Lighting of Work Places – Outdoor Work Places*

CIE Standard CIE S 011/E:2003: *Spatial Distribution of Daylight – CIE Standard General Sky*.

CIE Standard S013/E:2003 *International Standard Global Solar UV Index*.

ISO/CIE joint standards:

ISO 8995:2002/CIE S008/E:2001 *Lighting of Indoor Work Places*

CNC/CIE MATTERS:

1. CNC/CIE 2003 Annual Meeting:

This meeting has been held in conjunction with a Technical Conference hosted by the CNC/CIE and prepared jointly by the CNC/CIE and the CIE/USA. We extend our thanks to the Conference Chairman Ralph Smith for his

careful oversight of this successful conference, to Byron Jordan for arranging the excellent location, and to James Love (CNC/CIE) and Rolf Bergman (CIE/USA) for assembling the interesting technical sessions.

2. **CNC/CIE Policy for Reimbursement of Expenses:**

At the CNC/CIE 47th Annual Meeting held on 2002-October-05, Drs J.A. Veitch and J.C. Zwinkels were requested to present a first draft of a *CNC/CIE Policy for the Reimbursement of Expenses*. Their first draft was discussed during the meeting and they were requested to prepare another draft that could be emailed, with a request for Comments, to all CNC/CIE Members and Advisory Members on the email list maintained by the Secretary. A final version incorporating any desired changes would then be “hard-copy” mailed with a voting ballot to all CNC/CIE Members and Advisory Members.

The draft for emailing was completed by 2002-October-30, and on 2003-February-04 the Secretary emailed Draft13 to the CNC/CIE Members and Advisory Members, with the request that Comments be returned before 2003-February-28.

The comments received were sent to Drs J.A. Veitch and J.C. Zwinkels. They produced a 2003-May-23 Draft for Ballot that was mailed, together with a CNC/CIE Letter Ballot, to all CNC/CIE Members and Advisory Members on 2003-June-12. The deadline for response was given as 2003-July-30. Fifty-six ballots were mailed and there were 19 responses: 17 in favor, 1 abstention, and 1 negative vote. The negative vote expressed concern at the length of lead-time required to submit an application, to submission of the request to the CNC/CIE Secretary, and the lack of a hard-copy version of the governmental allowances.

These results indicate that the 2003-May-23 Draft for Ballot becomes the 2003-July-30 official CNC/CIE policy. A copy is attached to this report.

3. **NRC-IRO 2003 Assessment of the CNC/CIE:**

A Partnership Agreement in support of Canada’s affiliation with the CIE was signed in 1998 between NRC Corporate Services and NRC-INMS. This agreement is scheduled for renewal this year. However, prior to the renewal of the agreement an assessment will be carried out to monitor the efficiency of the partnership and to ensure that maximum benefits are derived by the Canadian S&T community from the NRC affiliation with CIE. The members of the advisory Committee on International Science, Engineering and Technology (CISSET) will review the outcome of this assessment. Depending on the CISSET recommendations, NRC will consider the renewal of the partnership agreement.

As part of this process, an assessment form has been sent to the CNC/CIE, and most of the CNC/CIE executive, with help from A.R. Robertson and J.A. Veitch, have recently been working on this 13-page document which was due at NRC-IRO on 2003-October-15. This document requested detailed information concerning:

1. CNC/CIE annual dues to the CIE,
2. description of the set-up of the CNC/CIE and its operation within the NRC-INMS,
3. collection of the views of the Canadian lighting community and dissemination of CIE information to the Canadian community,
4. Canadian involvement in the CIE, such as participation in Divisions, TCs, international CIE events, election of Canadians to the CIE executive, and the number of members in the CNC/CIE,
5. attraction and staging of international events of value to the Canadian community,
6. reporting of CNC/CIE activity to the NRC-IRO (annual activity reports and reports from the CIE General Assemblies), and
7. management issues between the CNC/CIE and the NRC-IRO.

The initial version of this form was sent to us by NRC-IRO and indicated that they had accessed much information from our previous reports to them. This assessment is important in that the NRC-IRO is presently responsible for paying our dues to the CIE.

4. **Canadian Participation on CIE TCs:**

Although it has been requested that each Division Member include a list of Canadian members of TCs within the Division (it is part of our Code of Procedure), the above evaluation of our activities increases the importance of knowing our level of involvement in CIE affairs. It has not always been easy to determine this information. However, as an attempt to obtain this information more easily, I have started with some information that I have gleaned from past Division Member reports, and this is also attached to this report. I hope that the Division Members will be able to keep me informed of further activity in this respect, and that CNC/CIE members keep both myself and their Division Member apprised of their participation.

5. **Mailing Lists:**

- 5.1 At present I maintain 3 mailing lists: Members (13), Advisory Members (43), General Interest (21). 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 more CNC information such as various ballots, and the Minutes of the annual meeting and related information.

5.2 Electronic Mail: I have sent more 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 can now receive more information from the CIE-CB, such as Press Releases, in electronic format. I often receive announcements of meetings in electronic format, and I will forward these electronically rather than sending a large paper mailing. At present my email mailing lists are: Members (13), Advisory Members (32), General Interest (5). Please keep me updated on your email address.

6. 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.

6.1. Members:

At last year's annual meeting five Member appointments were recommended by the CNC/CIE. Letters of appointment were sent to these people by Dr. T. LeFeuvre, Interim Director-General of INMS. Most have accepted. They are:

Dr. W.K. Adrian for a one-year term until 2003-December-31
Mr. I.C. Pasini for a three-year term until 2005-December-31
Dr. Réjean Baribeau for a four-year term until 2006-December-31
Dr. J.A. Love for a four-year term until 2006-December-31
Dr. J.C. Zwinkels for a four-year term until 2006-December-31, and for a one-year term as Vice-President until 2003-December-31

6.2. Advisory Members:

As a result of the actions taken at our last annual meeting, the following people have been added to our Advisory Membership:

Dr. Walter T. Delpiero of the University of Ottawa
Mr. John W. Harron of Spectral Applied Research Inc.
Ms Karen Pero of Public Works and Government Services Canada
Dr. William A. Simpson, DRDC Toronto, member of CIE TC 1-60 (automatic Advisory Member)

The following people have been suggested for Advisory membership and have expressed interest in the CNC/CIE:

Mr. Nolie Agellon, P.Eng., Ministry of Transportation, St. Catharines, Ontario
Mr. Chrisnel Blot, Spectra Lux Industries Inc., Ville St-Laurent, Québec
Dr. Marie Dumont, Hôpital du Sacré-Coeur de Montréal, Montréal, Québec
Mr. Kurt Ising, P.Eng., MacInnis Engineering Associates Inc., Richmond, B.C.
Mr. Denis Lavoie, Lumec Inc., Boisbriand, Québec
Ms Dyon Smith, Metalumen Manufacturing Inc., Guelph, Ontario
Dr. Cristian Suvagau, P.Eng., B.C. Hydro, Burnaby, B.C.
Mr. Roy Williams, Duha Color Services, Winnipeg, Manitoba

I have sent information letters, requesting an expression of interest, to the following (but have not received any reply to date):

Dr. Francis H. Glorieux, M.D., Ph.D., Shriners Hospital for Children, Montréal, Québec (TC 6-54?)
Mr. Tim Moggridge, Instrument Systems Canada, Ottawa, Ontario

Respectfully submitted,

A.A. Gaertner
Secretary, CNC/CIE
Institute for National Measurement Standards
Building M-36
National Research Council of Canada
1200 Montreal Road
Ottawa, Ontario K1A 0R6
Tel: (613) 993-9344
Fax: (613) 952-1394
Email: arnold.gaertner@nrc-cnrc.gc.ca

Attachments:

1. CNC/CIE Policy for Reimbursement of Expenses, 2003-July-30
2. Canadian Participation on CIE Technical Committees, 2003-October-24



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

Canadian National Committee Comité National Canadien



CNC/CIE Policy for Reimbursement of Expenses

2003-July-30

General Policy:

The CNC/CIE does not, in general, provide financial support for members for their CIE-related activities. In special circumstances, when warranted (see funding criteria below), 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, comprised of the President, Vice-President, Secretary and Treasurer.

Eligible Applicants:

- i. An official CNC/CIE-designated Canadian representative to CIE business meetings.
- ii. A CNC/CIE Member or Advisory Member who is responsible for organizing official CIE business meetings in Canada (e.g. a Technical Committee or Division meeting).

Funding Criteria:

- i. Availability of CNC/CIE funds.
- ii. The lack of alternate funding, e.g. from NRC International Relations Office (IRO) or member's employer. It should be noted that the level of contribution available from the NRC IRO to the CNC/CIE is determined annually and that it: (1)!will contribute to the travel costs of University-based Canadian delegates to the CIE general assemblies; and (2)!will not pay for government employees, including NRC employees.
- iii. The benefit of this requested activity in supporting CNC/CIE goals.
- iv. Reciprocity for hospitality received from other CIE national committees.

Application for Funding:

The request for funding must be submitted in writing to the CNC/CIE Secretary and received in advance of the event. Normally, the request shall be received in advance of the CNC/CIE annual meeting that precedes the event. The application must include a detailed budget, a justification for CNC/CIE funding, and other sources and amounts of funding (e.g. from NRC International Relations Office, employer, or other agency or company).

Eligible Expenses:

The maximum eligible reimbursement for travel and allowable expenses is established by the Federal Government Travel Guidelines (http://www.tbs-sct.gc.ca/hr-rh/gtla-vgcl/index_e.asp). The eligible reimbursement for hospitality is limited to direct support for the CIE meeting, such as



meeting room rental fees, rental of audio-visual equipment, or refreshment breaks. The maximum eligible expenses will be reduced by other monies received, such as:

- 1.) funding received from NRC International Relations Office,
- 2.) funding received from any other agency or company.

Review and Approval of Requests for Funding:

All requests for CNC/CIE funding are to be approved in advance of the event by the CNC/CIE members or Executive. It is preferred that these approvals take place at the annual CNC/CIE meeting. The Secretary will report at the annual CNC/CIE meeting on all requests for CNC/CIE funding received during the reporting year. These requests will be reviewed and voted upon by the CNC/CIE Members and Advisory Members in attendance. The maximum agreed upon reimbursement amount (CAP) shall be recorded in the Minutes of the meeting. Under unusual circumstances, such as funding required before the next annual meeting, the CNC/CIE Executive will review the request, and notify the applicant in writing of the maximum amount approved. These requests shall also be reviewed and recorded, as above, at the next CNC/CIE annual meeting.

Filing Requests for Reimbursement:

A written request for reimbursement of approved expenses shall be submitted to the CNC/CIE Secretary within six (6) weeks of completion of the event. The request is to include a detailed list of expenses and original receipts. The Secretary will review this reimbursement request and ensure that all original receipts are included and that the amount requested is not in excess of the CAP amount approved at the Annual meeting or by the Executive Committee. If the claim is in full conformance, the Secretary will approve the amount to be reimbursed, and forward the Request for Reimbursement of Approved Expenses, with attachments, to the Treasurer for payment. The Treasurer will sign and date the Request for Reimbursement of Approved Expenses to indicate that payment has been made. In cases of non-conformance, this matter will be referred to the CNC/CIE Executive for further action.

CNC/CIE Request for Funding

Applicant's Name: _____

Address: _____

Activity for which funding is requested: _____

Justification for CNC/CIE Funding (refer to General Policy for criteria):

Detailed Budget

Item	Description	Amount

Other Sources of Funding and Amounts:

Name	Amount

Return to:

A.A. Gaertner
Secretary, CNC/CIE
Institute for National Measurement Standards
M-36, Room 115
National Research Council of Canada
1200 Montreal Road
Ottawa, Ontario K1A 0R6

Tel: (613) 993-9344 Fax: (613) 952-1394
Email: arnold.gaertner@nrc-cnrc.gc.ca

CNC/CIE
Request for Reimbursement of Approved Expenses

Applicant's Name: _____

Address: _____

Activity for which reimbursement is requested: _____

Description of items and expenses to be reimbursed:

Item	Date	Description	Amount

Total: \$ _____

Attach original receipts for expenditures in excess of \$20.00

Make cheque Payable to: _____

Mail cheque to address: _____

I certify that all expenses are legitimate expenses made for and on behalf of the CNC/CIE and are in accordance with CNC/CIE policy for reimbursement of approved expenses.

Requester: _____ Date: _____

For approval: _____ Date: _____

Secretary

For payment: _____ Date: _____

Treasurer

Mail request form to:

A.A. Gaertner
Secretary, CNC/CIE
Institute for National Measurement Standards
M-36, Room 115
National Research Council of Canada
1200 Montreal Road
Ottawa, Ontario K1A 0R6

Tel: (613) 993-9344 Fax: (613) 952-1394

Email: arnold.gaertner@nrc-cnrc.gc.ca

Canadian Participation on CIE Technical Committees

Division 1 Vision and Colour

W.K. Adrian TC!1-51
I. Ashdown TC!1-62
W.B. Cowan TC!1-37
S.M. McFadden TC!1-42, TC!1-60, TC!1-64 (Chairman)
A.R. Robertson TC!1-27, TC!1-38, TC!1-48, TC!1-55, TC!1-56, TC!1-57(Chairman), TC!1-59
W.A. Simpson TC!1-60
R. Topalova TC!1-46, TC!1-54
J.C. Zwinkels TC!1-38, TC!1-44, TC!1-53, TC!1-57

Reporterships:

Liaisons:

J.C. Zwinkels ISO TC6/WG3

Division 2 Physical Measurement of Light and Radiation

R. Baribeau TC!2-42
L.P. Boivin TC!2-47, TC!2-48
A.A. Gaertner TC!2-04, TC!2-43
B. Jordan TC!2-39
J.B. McArthur TC!2-47, TC!2-48
S.M. McFadden TC!2-42
A.R. Robertson TC!2-16, TC!2-28, TC!2-35, TC!2-57 (Chairman)
J.C. Zwinkels TC!2-25(Chairman), TC!2-28, TC!2-39, TC!2-57

Reporterships:

Keith Niall R!2-33

Liaisons:

J.C. Zwinkels ISO TC6/WG3

Division 3 Interior Environment and Lighting Design

I. Ashdown TC!3-11
P. Gabriel TC!3-22
J.A. Love TC!3-19, TC!3-25
C. Reinhardt TC!3-33
R. Topalova TC!3-34, TC!3-39
J.A. Veitch TC!3-34(Chairman)
L.A. Whitehead TC!3-30(Chairman), TC!3-38

Reporterships:

R. Topalova R!3-17

Liaisons:

I.C. Pasini IESNA

Division 4 Lighting and Signalling for Transport

W.K. Adrian TC!4-35, TC!4-36

Reporterships:

Liaisons:

Division 5 Exterior and Other Lighting Applications

J.B. Roberge TC!5-08, TC!5-12, TC!5-13, TC!5-14, TC!5-15, TC!5-16, TC!5-19, TC!5-20

Reporterships:

Liaisons:

Division 6 Photobiology and Photochemistry

J.A. Veitch TC!6-11(Chairman)

Reporterships:

Liaisons:

Division 8 Image Technology

Reporterships:

Liaisons:



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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APPENDIX F

CNC/CIE 48th Annual Meeting

2003-October-24

Financial and Publications Report

**CIE PUBLICATION - CANADA
FINANCIAL REPORT
AS OF
SEPTEMBER 30, 2003**

Income Statement	Page 1
Balance Sheeet	Page 2
Bank Account Balance as of September 30, 2003	Page 3
Publication Sale: October 1, 2002 - September 30, 2003	Page 4-5
Publication Purchase from Central Bureau of CIE: October 1, 2002 - September 30, 2003	Page 6

CIE PUBLICATION - CANADA
FINANCIAL REPORT

INCOME STATEMENT 01/October/2002 - 30/September/2003

Revenue

Publication sale [year 2002-2003]	\$ 2,739.00
Other income - bank entry error	<u>\$ 0.50</u>

Total Revenue **\$ 2,739.50**

Expense

Bank charges [Sep/2002 - Sep/2003: 13 months @\$3.95]	\$ 51.35
A/P - due to Central Bureau of CIE (Euro\$660.40) [publication purchase in year 2002-2003]	\$ 1,450.90
A/P - due to Lighting Sciences Canada Ltd. [mailing expense]	<u>\$ 20.50</u>

Total Expense **\$ 1,522.75**

Net Income (Loss) **\$ 1,216.75**

**CIE PUBLICATION - CANADA
FINANCIAL REPORT**

BALANCE SHEET 01/October/2002 - 30/September/2003

Assets

Bank/Cash	\$ 14,165.34
Accounts Receivable from year 2001-2002 [Coutts Library (inv #2034) & MacInnis Engineering (inv #2036)]	\$ (162.00)
	<hr/>

Total Assets **\$ 14,003.34**

Liabilities

Accounts Payable-Central Bureau of CIE [publications purchase]	\$ 1,450.90
Accounts Payable-Lighting Sciences Canada [mailing expense]	\$ 20.50
	<hr/>

Total Liabilities **\$ 1,471.40**

Equity

Balance, beginning @ 30/September/2002	\$ 11,315.19
Current Income	\$ 1,216.75
	<hr/>

Total Equity **\$ 12,531.94**

Liability & Equity **\$ 14,003.34**

	CIE PUBLICATIONS BANK ACCOUNT - CANADA					
	Financial Report - Bank Account					
CIE Publications Bank Account	30/Sep/2002 - 30/Sep/2003		(Canada)			
Date		Sales	Other Income	Payments to CB	Other Expenses	Balance
30-Sep-2002	Balance brought forward					\$11,315.19
30-Sep-2002	Bank entry error \$0.50		\$ 0.50			\$11,315.69
30-Sep-2002	Bank charges (September 2002)				\$3.95	\$11,311.74
31-Oct-2002	Bank charges (October 2002)				\$3.95	\$11,307.79
30-Nov-2002	Bank charges (November 2002)				\$3.95	\$11,303.84
13-Dec-2002	Deposit: Publication sale [inv.#2034,2036, 2038,2039,2040,2041,2042]	\$1,043.00				\$12,346.84
31-Dec-2002	Bank charges (December 2002)				\$3.95	\$12,342.89
31-Jan-2003	Bank charges (January 2003)				\$3.95	\$12,338.94
28-Feb-2003	Bank charges (February 2003)				\$3.95	\$12,334.99
31-Mar-2003	Bank charges (March 2003)				\$3.95	\$12,331.04
14-Apr-2003	Deposit: Publication sale [inv.#2043,2044,2045, 2046,2047]]	\$656.00				\$12,987.04
30-Apr-2003	Bank charges (April 2003)				\$3.95	\$12,983.09
31-May-2003	Bank charges (May 2003)				\$3.95	\$12,979.14
30-Jun-2003	Bank charges (June 2003)				\$3.95	\$12,975.19
21-Jul-2003	Deposit: Publication sale [inv.#2048,2049,2050, 2051,2052,2053,2055]	\$834.00				\$13,809.19
31-Jul-2003	Bank charges (July 2003)				\$3.95	\$13,805.24
22-Aug-2003	Deposit: Publication sale [inv.#2054]	\$66.00				\$13,871.24
22-Aug-2003	Deposit: Publication sale [inv.#2056]	\$148.00				\$14,019.24
30-Aug-2003	Bank charges (August 2003)				\$3.95	\$14,015.29
30-Sep-2003	Deposit: Publication sale [inv.#2057]	\$68.00				\$14,083.29
30-Sep-2003	Deposit: Publication sale [inv.#2058]	\$86.00				\$14,169.29
30-Sep-2003	Bank charges (September 2003)				\$3.95	\$14,165.34

CIE PUBLICATION SALE - CANADA

CIE Publication Sale: 01/October/2002 - 30/September/2003

Date/Inv. #	Description/Title of Publication	Qty	Sale	Expense	Net Amount
2-Oct-2002 #2038	Institut de Recherche d'Hydro-Quebec CIE-X022-2001: Proc. of 2nd Symp. on LED Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1	\$ 88.00	\$ -	\$ 88.00
9-Oct-2002 #2039	Institut de Recherche d'Hydro-Quebec CIE-127-1997: Measurement of LEDs Shipping cost - Regular mail (postage paid by LSC)	1	\$ 66.00	(no receipt) \$ -	\$ 66.00
9-Oct-2002 #2040	National Research Council Canada CIE-51-1981: Daylight Simulators for Colorimetry CIE-87-1990: Self-Luminous Displays CIE-109-1994: Corresponding Colours CIE-125-1997: Standard Erythema Dose CIE-131-1998: CIECAM97S Colour Appearance CIE-S007-1997: Erythema Action Spectrum CIE-X013-1997: Proc.LED Symp. '97 Shipping cost - N/A (already in possession)	1 1 1 1 1 1 1	\$ 618.00	\$ -	\$ 618.00
30-Oct-2002 #2041	Optotek Ltd. CIE-127-1997: Measurement of LEDs Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1	\$ 66.00	\$ -	\$ 66.00
5-Nov-2002 #2042	Government of Canada CIE-S007-1999: Erythema reference action spectrum and....(French) Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1	\$ 43.00	\$ -	\$ 43.00
3-Jan-2003 #2043	Enbridge Pipelines CIE-72-1987: Guide to the Properties and Uses of Retroreflectors at night Shipping cost - Regular mail	1	\$ 91.00	\$ 1.60	\$ 89.40
18-Feb-2003 #2044	Edmonton Public Schools CIE-S008-2001: Lighting of Indoor Work Places Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1	\$ 66.00	\$ -	\$ 66.00
13-Mar-2003 #2045	H.H. Angus & Associates Ltd. CIE-S008-2001: Lighting of Indoor Work Places Shipping cost - Regular mail	1	\$ 68.00	\$ 1.40	\$ 66.60
19-Mar-2003 #2046	byHeart Consultants Ltd. CIE-S011-E:2003: Spatial distribution of Daylight-CIE Std.General Sky Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1	\$ 43.00	\$ -	\$ 43.00
21-Mar-2003 #2047	PWGSC CIE-S008-2001: Lighting of Indoor Work Places CIE-150-2003: Guide on..Obtrusive Light from Outdoor Ltg. Installation CIE-S011-E:2003: Spatial distribution of Daylight-CIE Std.General Sky CIE-x024:2002: Proc..of CIE/ARUP Symposium on Visual Environment CIE-DS 015/E:2002: Lighting of Work Places-Outdoor Work Places Shipping cost - Canada Post mail	1 1 1 1 1	\$ 388.00	\$ 6.90	\$ 381.10
29-Apr-2003 #2048	BPR Groupe-conseil Inc. CIE-121-1996: Photometry and Goniophotometry of Luminaires CIE-127-1997: Measurement of LEDs Shipping cost - N/A (postage paid by LSC and Central Bureau of CIE)	1 1	\$ 154.00	(no receipt) \$ -	\$ 154.00
29-Apr-2003 #2049	Instruments Systems 3054705 Canada Inc. CIE-15.2-1986: Colorimetry, 2nd Edition CIE-63-1984: Spectroradiometric Measurement of Light Sources Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1 1	\$ 190.00	\$ -	\$ 190.00
30-Apr-2003	Balance carried forward/continued...		\$ 1,881.00	\$ 9.90	\$ 1,871.10

CIE Publication Sale: 01/October/2002 - 30/September/2003

Date/Inv. #	Description/Title of Publication	Qty	Sale	Expense	Net Amount
30-Apr-2003	Balance brought forward		\$ 1,881.00	\$ 9.90	\$ 1,871.10
13-May-2003 #2050	Nray Services Inc. CIE-121-1996: Photometry and Goniophotometry of Luminaires CIE-127-1997: Measurement of LEDs Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1 1	\$ 154.00	\$ 1.60	\$ 152.40
14-May-2003 #2051	Autosystems CIE-15.2-1986: Colorimetry, 2nd Edition Shipping cost - Regular mail	1	\$ 98.00	\$ 2.10	\$ 95.90
15-May-2003 #2052	Werner Adrian CIE Symposium Toronto 2000 - Hydro-Quebec's order Shipping cost - Regular mail (postage paid by Dr. Adrian)	1	\$ 10.00	\$ -	\$ 10.00
21-May-2003 #2053	Graxx Inc. CIE-18.2-1983: The Basis of Physical Photometry CIE-122-1996: Rela.betw Digital&Colorimetric Data for Computer.... Shipping cost - Regular mail	1 1	\$ 148.00	\$ 2.10	\$ 145.90
8-Jul-2003 #2054	Paprican CIE-D001-1988: Disc version of CIE Photometric& Colorimetric Data Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1	\$ 66.00	\$ -	\$ 66.00
13-Jul-2003 #2055	Andrew Silbiger Management Inc. CIE-150-2003: Guide on the Limitation of the Effects of Obtrusive Light... Shipping cost - Regular mail	1	\$ 80.00	\$ 1.60	\$ 78.40
25-Jul-2003 #2056	Lighting Sciences Canada Ltd. CIE-69-1987: Methods of Char. Illuminnace Meters & Luminance Meters CIE-127-1997: Measurement of LEDs Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1 1	\$ 148.00	\$ -	\$ 148.00
28-Aug-2003 #2057	University of Prince Edward Island CIE-S 008/E:2001: Lighting of Indoor Work Places Shipping cost - Regular mail	1	\$ 68.00	\$ 1.60	\$ 66.40
25-Sep-2003 #2058	Samecca Test Systems CIE-85-1989: Solar Spectra Irradiance Shipping cost - N/A (directly shipped from Central Bureau of CIE)	1	\$ 86.00	\$ 1.60	\$ 84.40
30-Sep-2003	Total		\$ 2,739.00	\$ 20.50	\$ 2,718.50

CIE PUBLICATION PURCHASE - CANADA
Financial Report - Purchase

Publication purchases from Central Bureau, 01/October/2002 - 30/September/2003 (CANADA)

Date	CIE Inv.	CIE Code	Title of Publication	Qty	Unit Cost	Total Cost	Discount	Running Total	Payment
					(Euro)	(Euro)	(Euro)	(Euro)	(Euro)
30-Sep-2002	Forward				\$ -	\$ -	\$ -	\$ -	\$ -
23-Oct-2002	362/NC	x022	CIE Symposium 2001 "LED Measurement"	1	\$ 40.00	\$ 40.00	(\$14.00)	\$ 26.00	
30-Oct-2002	373/NC	149	Tungsten Filam. Lamps as Second.Std.Sources	2	\$ 22.00	\$ 44.00	(\$15.40)	\$ 28.60	
6-Nov-2002	395/NC	127	Measurement of LEDs	2	\$ 22.00	\$ 44.00	(\$15.40)	\$ 28.60	
"	"	S007	Standard Erythema Dose	2	\$ 14.00	\$ 28.00	(\$9.80)	\$ 18.20	
26-Feb-2003	047/NC	150	Guide on Limit.of Effects of Obtrusive Light	2	\$ 26.00	\$ 52.00	(\$18.20)	\$ 33.80	
3-Mar-2003	070/NC	S008	Lighting of Indoor Work Places	2	\$ 22.00	\$ 44.00	(\$15.40)	\$ 28.60	
26-Mar-2003	092/NC	S011	Spatial Distrib.of Daylight-CIE Std.General Sky	3	\$ 14.00	\$ 42.00	(\$14.70)	\$ 27.30	
"	"	S008	Lighting of Indoor Work Places	1	\$ 22.00	\$ 22.00	(\$7.70)	\$ 14.30	
"	"	DS015	Lighting of Work Places-Outdoor Work Places	1	\$ 10.00	\$ 10.00	(\$3.50)	\$ 6.50	
26-Mar-2003	097/NC	x024	Proc.of ARUP/CIE Symp.on Visual Environment	1	\$ 54.00	\$ 54.00	(\$18.90)	\$ 35.10	
2-Apr-2003	106/NC	151	Spectral Weighting of Solar UV Radiation	2	\$ 24.00	\$ 48.00	(\$16.80)	\$ 31.20	
28-Apr-2003	149/NC	15.2	Colorimetry	2	\$ 32.00	\$ 64.00	(\$22.40)	\$ 41.60	
5-May-2003	155/NC	121	Photometry&Goniophotometry of Luminaires	3	\$ 28.00	\$ 84.00	(\$29.40)	\$ 54.60	
"	"	15.2	Colorimetry	2	\$ 32.00	\$ 64.00	(\$22.40)	\$ 41.60	
"	"	63	Spectroradiometry of Light Sources	2	\$ 30.00	\$ 60.00	(\$21.00)	\$ 39.00	
20-May-2003	183/NC	127	Measurement of LEDs	4	\$ 22.00	\$ 88.00	(\$30.80)	\$ 57.20	
25-Jun-2003	228/NC	69	Illuminance and Luminance Meters	3	\$ 26.00	\$ 78.00	(\$27.30)	\$ 50.70	
28-Jul-2003	250/NC	D001	CIE Colorimetric Data	1	\$ 22.00	\$ 22.00	(\$7.70)	\$ 14.30	
29-Aug-2003	301/NC	S008	Lighting of Indoor Work Places	2	\$ 22.00	\$ 44.00	(\$15.40)	\$ 28.60	
3-Sep-2003	278/NC	153	Report on Luminous Flux of HPS Lamps	2	\$ 14.00	\$ 28.00	(\$9.80)	\$ 18.20	
29-Sep-2003	331	85	Solar Spectral Irradiance	2	\$ 28.00	\$ 56.00	(\$19.60)	\$ 36.40	
			Total to date as of 30-September-2003			\$ 1,016.00	\$ (355.60)	\$ 660.40	
			Payment to CB @ 30-September-2003						\$ -
			Balance due as of 30-September-2003					\$ 660.40	(Euro)

30-September-2003

CIE No.	Title	Year	Price	Price	Sales							Purchase				Current Stock	CB X	Note Page#	
			Code	Cd\$	97-98	98-99	99-00	2001	2002	2003	99-00	2001	2002	2003					
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													4	X	51		
13.3	Colour rendering properties	1995	I	109		1		1							0		16		
15.2	Colorimetry	1986	H	98	1	3	1	3		2		1		4	2		77		
16	Daylight	1970	I	109											5		79		
17.4	International lighting vocabulary	1987	X	433				1							0		365		
18.2	Physical photometry	1983	E	80	1	1				1					0		37		
19/2.1	Visual performance - volume I	1981	K	137											4		124		
19/2.2	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 ltg	1973	I	109											5	X	80		
27	Luminaire photometry(street ltg)	1973													4	X	71		
28	Sports ltg 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 ltg (French)	1977	C	68											4		32		
33B	Deprec.&install.road ltg(English)	1977	C	68											5		24		
34	Road lighting installation data	1977	E	80											3		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											5		23		
46	Material reflection stanadards	1979	J	122											4		99		
47	Road lighting for wet conditlon	1979	I	109											4		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							2				2		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:Defi & Measure.	2001	G	91					1			2			1		54		
55	Discomfort glare (interior)	1983	F	86											3		43		
30-September-2003			CIE-CANADA PUBLICATION STOCK LIST															1 of 5	

[illegible]

CIE	Title	Year	Price	Price			Sales				Purchase			Current	CB	Note	
No.			Code	Cd\$	97-98	98-99	99-00	2001	2002	2003	99-00	2001	2002	2003	Stock	X	Page#
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		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		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	189											0		
120	Proceeding of New Delhi Vol.2	1996	K	137											0	X	
121	Gonophotometry of luminaires	1996	F	86		1			1	2				3	1		43
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	CD	83	1										0		
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			4	4	2		21
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 refl.& trans.	1998	G	91			1								1		63
131	CIECAM97s colour appearance	1998	B	57					1						1		14
132	Design methods for lgt of roads	1999	F	86											2		52
133	Proc.24th Ses.CIE,Warsaw	1999	X	335											0		
133CD	Proc.24th Ses.CIE,Warsaw	1999	CD	114											0		
134	Collection in Photobi&Photochem	1999	F	86			1								1		53
135	Vision and colour	1999	H	98							2				2		80
136	Guide to the lgt of urban areas	2000	D	74				1	1		2		1		1		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		
140	Road lighting calculations	2000	D	74				1			2				1		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
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
146/7	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 Outdo	2003	E	80						2				2	0		
151	Spectral weighting of Solar UV	2003	D	74										2	2		30
153	Interc.of Luminous Flux of HPS	2003	A	43										2	2		8
	CIE Discs:																
D001	Phot. & colorimetric data	1988	C	68	1		1			1	1			1	0		
D002	Colorimetric&colour rend. data	1991	J	122											0		
D003	CIE Roster		-												0		
D004	CIE Publications	1993	J	122											0	X	
D005	Daylight simulators	1994	A	43											0		
D006	Daylight AQC	1994	-												0	X	
D007	Corresponding colours	1994	F	86											0		
D008	Colour rendering Index	1995	X	53				2				2			1		disk
	30-September-2003			CIE-CANADA PUBLICATION STOCK LIST													3 of 5

CIE	Title	Year	Price	Price			Sales					Purchase		Current	CB	Note		
No.			Code	Cd\$	97-98	98-99	99-00	2001	2002	2003	99-00	2001	2002	2003	Stock	X	Page#	
	Standards and Draft Standards:																	
ISO10526	Standard Illuminants	1991	B	57			1							1		9		
ISO10527	Colorimetric observers	1991	G	91			1							2		25		
S003	Spatial distribution of daylight	1996	A	43	1									0	X			
S004	Colours of light signals	2001	B	57										0				
S005	Illuminants for colorim	1998	B	57										2		12		
16508/S006	Road traffic light	1998	A	43	1									1		5		
17166/S007	Erythema action spectrum	1999	A	43			1		2				2	1		4	NRC	
8995/S008	Lighting of Indoor Work Places	2001	C	68				3		4		3		5	1		19	
S009	Photobio.safety of lamp&system	2002	D	74										0				
S011	Spatial distribution of daylight	2003	A	43					2					3	1			
S013/E	Int'l Stand.Global Solar UV Index	2003	A	43										0				
DS004.2	Signal colours	1996	X											0	X			
DS007.4	Erythema action spectrum	1998	X	-	1									0	X			
DS008.2	Ltg. of indoor work places	2000	X	31										0	X			
DS009.1	Photobiological safety of lamps	2000	X	31										0	X			
DS010.2/3	CIE Sys.of Physical Photometry	2001	X	31				2				2		0				
DS011.2/E	CIE Standard General Sky	2002	X	31										0	X			
DS012.2/E	Spectral quality of daylight simu.	2002	X	31										0				
DS013.2	Int'l Standard Global UV Index	2002	X	31										0	X			
DS015/E	Ltg.of Work Places-outdoor work	2002	X	31						1				1	0			
	Special Publications:																	
X001	SLG-Div.5 Symposium	1989	B	57										0	X			
X002	SLG-Div.4 Symposium	1989	-											0	X			
X003	Daylight & solar radiation meas..	1989	J	122										1		354		
X004	Symp.Light & Radiation	1981	A	43		1								0				
X005	Proc.Seminar Computer program	1992	J	122										0				
X006	Japan CIE/PRAKASH91	1991	B	57										0				
X007	Proc. Symposium Colorimetry	1993	X	125	1	1								0		117	LSC	
X008	Urban Sky Glow	1994	E	80										1		41		
X009	Proc.Symposium Photometry	1995	L	166										2		205		
X010	Proc.Symposium Image Tech.	1996	L	166										0				
X011	Proc. 95 late papres	1996	F	86										0				
X012	Proc.NPL-UK Conf.-Visual Scale	1997	I	109										0				
X013	Proc. LED Symp. '97	1997	I	109	1	1		1	1			1		0			NRC	
X014	Proc.Symposium'97-Colour std.	1997	K	137										0				
X015	Proc. Symp. Lighting Quality	1998	H	98										0				
X016	Meas.of optical radiation haz.	1998	X	98										0				
X017	Special 24th CIE, Warsaw 1999	2000	G	91										0				
X018	Proc.of CIE Sym.'99-75 yrs.	1999	L	166										0				
X018CD	Proc.of CIE Sym.'99-75 yrs.	1999	CD	83										0				
X019	Proc.of 3 Workshops-Road Ltg.	2001	J	122										0				
X020	Proc.of CIE Symp. 2001	2001	I	109				1				1		0				
X021	Proc.of CIE Symp. 2000	2001	I	109										0				
X022	Proc. of 2nd Symp. on LED	2001	J	122				2	1			2	1	0				
X023	Proc.of two CIE Workshops	2002	J	122										0				
X024	Proc.ofCIE/ARUPSym.on Visual	2002	L	166						1				1	0			
X024CD	Proc.ofCIE/ARUPSym.on Visual	2002	CD	92										0				
X025	Temporal & Spatial Apects of Ligt	2003	L	166										0				
X025CD	Temporal & Spatial Apects of Ligt	2003	CD	92										0				
AIC1AB	AIC Proc. 93 A+B	1993												0				
AIC1AC	AIC Proc. 93 A+C	1993												0				
IC1ABC	AIC Proc. 93 A+B+C	1993												0				
Misc.	CIE Symposium Toronto 2000	2000		10						1				0			W. Adrian	
	Total				19	21	14	28	24	25	14	24	16	35	293			
	30-September-2003		CIE-CANADA PUBLICATION STOCK LIST															4 of 5

		30-September-2003
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COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
INTERNATIONAL COMMISSION ON ILLUMINATION
INTERNATIONALE BELEUCHTUNGSKOMMISSION

Canadian National Committee Comité National Canadien



APPENDIX G

CNC/CIE 48th Annual Meeting

2003-October-24

CIE Policy on the Pricing and Sales of CIE Publications



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

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Central Bureau
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CIRCULAR TO NATIONAL COMMITTEES ABOUT CIE PUBLICATIONS

May I inform you on the following CIE Board decision taken at the San Diego Session:

"Following a decision by the CIE Board in June 2002, the list price of CIE publications was reduced by 50% with effect from 1 July 2002. The main aims of the price reduction were to make the CIE publications available to National Committee members at a significantly lower price as well as to increase the number of publications sold, thus increasing their use in the international lighting community. Unfortunately, these reduced prices have not yet been passed on to many National Committee members, particularly in countries, which depend on the income from publication sales for a significant part of their budgets.

At the 2003 General Assembly in San Diego, the Vice-President (Publications) presented an analysis of current CIE publication sales and proposals for improving these. His proposals involve

- a uniform system of publications pricing for sales to members and non-members by all National Committees (NCs) and the CIE Central Bureau (CIE CB),
- the parallel sale of publications by the CIE CB and by NCs, thus effectively ending the current bilateral sales arrangements between 18 NCs and the CIE CB,
- a system of crediting NCs with the profit from sales through the CIE CB and
- the eventual creation of a web-based CIE shop for the sale of both paper and electronic versions of the CIE publications.

The above proposals also took into account feedback received from dissatisfied customers and potential customers about the complicated route they had to follow to purchase CIE publications.

Members of the CIE General Assembly in principle welcomed the proposals, but some pointed out that their income from publication sales needed to be protected in any new system, so that their ability to pay their CIE dues would not be impaired.

Taking these concerns into account, the Vice-President (Publications) - still during the quadrennial session in San Diego - did a preliminary survey of the publications pricing policies in the 18 CIE NCs, which currently have bilateral sales arrangements with the CIE CB. For the specific countries with major concerns for their income from publication sales he then modelled their projected publications income under a variety of possible uniform pricing

policies. From these calculations he selected an option that gave the optimum overall results and discussed this option with representatives of the abovementioned NCs. Their reaction to the proposal was generally positive and they undertook to communicate these discussions and explanations to their NCs.

The proposal of the Vice-President (Publications) was accepted at the CIE Board meeting on 3 July 2003 in San Diego. Taking into account that the **current official CIE list price** is _ of the CIE list price before 1 July 2002, the Board decided to implement the following uniform CIE pricing and sales policy for publications from 1 January 2004:

- a) NC member price of CIE publications worldwide = **Current official CIE list price** = (CIE price to NC)/0.65 = (CIE price to NC)*1.54.
- b) Non-member price of CIE publications worldwide = **2*(Current official CIE list price)**.
- c) The CIE Central Bureau gives notice of its intention to terminate all its existing bilateral sales arrangements for publications with NCs by 31 December 2003 and sales can thereafter be made either through the CIE CB or the NCs, at exactly the same price [as indicated under a) and b) above].
- d) Profit from CIE CB sales (difference between price to buyer and CIE price to NC) is credited to NCs as if they had made the sale themselves.
- e) NC credits earned through CIE CB sales can be offset against dues, used for publications purchases from the CIE CB or the balance can be transferred once a year, at the discretion of the NC.

Please note that the current discount to NCs relative to the official list price (35%) remains exactly the same under the above proposal, where – according to a) – “CIE price to NC” = 0.65*”Current official CIE list price”.

Graphically, the situation under the old, the current and the new system of publication sales is depicted in Figure 1.

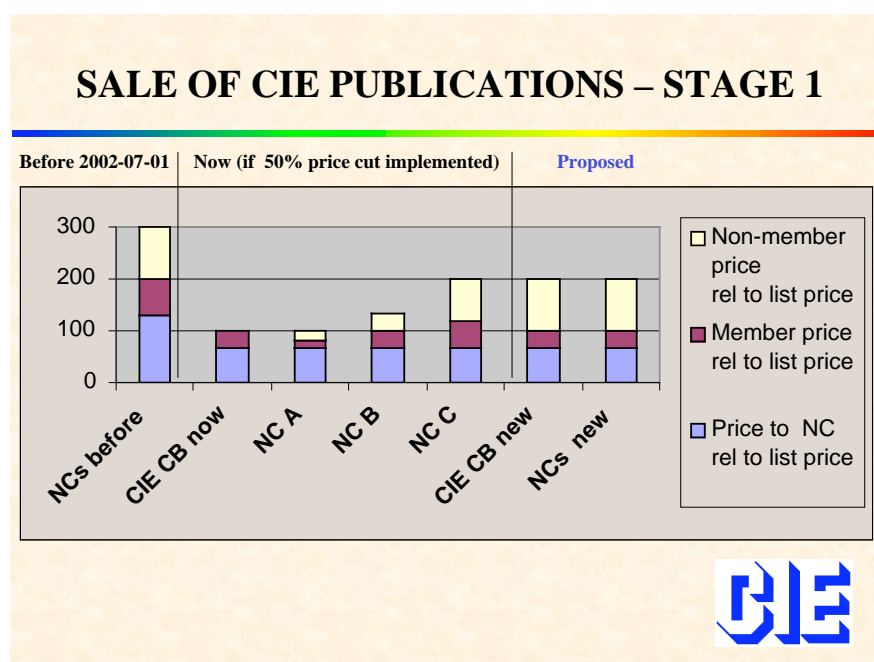


Figure 1: Past, present and new CIE publication sales pricing

Fig. 1 illustrates that both NC members and non-members will pay lower prices for publications under the new system than they did before 1 July 2002. NC members will pay on average half the previous price and non-members will pay on average 2/3 of the previous price.

For NCs concerned about their publications income, projections as depicted in Figure 2 were performed to allay concerns about the impact of the new system on their budgets. An interesting fact that emerged during the preliminary survey was that about twice as many publications seem to be sold by NCs to non-members than to members.

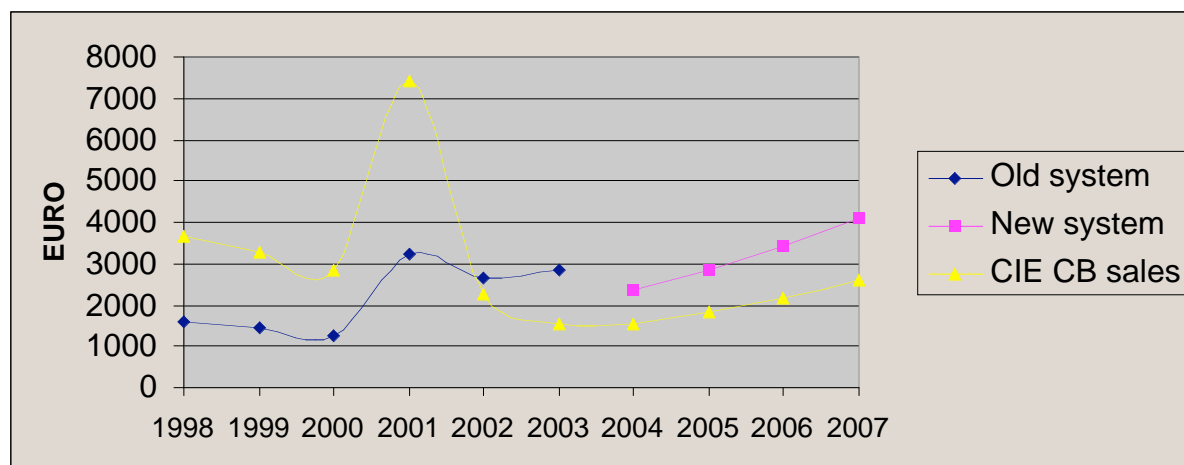


Figure 2: Sample publication sales analysis for NC of country X

While the exact trends differ from NC to NC, depending on their current publications pricing, it is quite apparent from the analyses done that no NC will suffer a significant drop in publications income under the new system, compared to the old system. For this conclusion it should also be taken into account that sales profits by certain NCs are currently higher than normal (see NC old system sales line in Fig 2 crossing over CIE CB sales line for 2002 and 2003) due to the fact that they have not yet passed on the lower CIE CB prices to their customers. It is projected that NCs can in future expect a significant increase in income from publication sales, particularly once sales volumes start to increase due to the lowered publications prices and the easier multi-channel sales system.

Buyers can claim the 50% member's discount by ordering publications either through their own NC as before or by supplying a membership code obtained from their NC to the CIE CB. The CIE CB will supply membership codes to NCs at least once a year for use by their members when ordering via the CIE CB. Non-members (2/3 of customers) can order from either their NC or the CIE CB at the non-member's price without such an additional formality.

Membership codes may be issued by NCs only to members of their own NC as these codes identify the NC to be credited by the CIE CB with the sales profit. It is anticipated, however, that most NC members will continue to order their publications via their own NC, while non-members will mostly use the CIE CB. One advantage of ordering through the CIE CB for both members and non-members alike is that the CIE CB already accepts orders against credit cards. Both NCs and the CIE CB will be entitled to charge actual transport and/or mailing costs to customers. Such charges should be shown as a separate line on the invoice to customers so as not to mask the fact of common worldwide CIE publications prices for NC

members and non-members. As a further measure to safeguard the worldwide price uniformity, NCs should quote the publications prices in Euro and / or convert them into their own currency at the exchange rate applicable at the time of the transaction. Exchange rates should neither be used as a means to ensure a higher publications income for the NC nor to give an additional discount to members.

Under the new sales system NCs should only sell to customers within their own country and should refer enquiries from customers outside their country to the CIE CB.

The CIE CB will have the sole right to sell to and negotiate all sales agreements with resellers of CIE publications to make sure that they do not jeopardize the uniform publications pricing system or diminish the publication sales incomes of any NC. The CIE CB will also ensure that such resellers (like potentially Amazon or TechStreet, most of which would sell internationally and directly via the Internet) have a system in place, which will allow the CIE CB to credit sales profits for each individual sale via the reseller to the correct NC. Each such potential agreement will be dealt with on a case-by-case basis, but it is envisaged that sales through publications resellers will always be at prices higher than the NC price for non-members due to the reseller's own profit margin.

The rules for translated versions of CIE publications will remain the same as at present. The only implications of the new system on completely translated publications are that the price to non-members should be twice the price to members and that the CIE CB will be allowed to sell them at the same price as the NC. The NC will still determine the price of translated publications (as it does now) and the CIE CB will continue to receive 20% of the translated publication's selling price.

The major benefits of the new system (stage 1) are:

- NC members benefit from 30 – 60 % lower publications prices (excluding transportation and / or mailing costs) compared to before 1 July 2002,
- All NCs begin to earn income from publication sales, previously only 18 NCs had this benefit,
- Sales credits from the CIE CB can be used at the discretion of the NC,
- Publication price discount for NC members increases to 50%, thus making it even more attractive for new members to join an NC,
- NCs begin to earn relatively more from publications sales than the CIE CB (see the projected new NC sales line in Fig.2 lying above the projected CB sales line), thus making it increasingly easier for NCs to pay their dues,
- Most of the increased income from publication sales comes from outside the current CIE membership (sales to non-members)
- Even the CIE CB sales income should return to levels before the 50% price cut once the full benefits of the new system have filtered through to end users and sales volumes increase in line with lower prices and greater ease of ordering.

Once stage 1 is implemented by 1 January 2004, there will be worldwide uniformity in the pricing and sale of the paper and CD versions of CIE publications and a multi-channel sales system will be in place (NCs and CIE CB sell in parallel at exactly the same prices, apart from possible additional transport and mailing costs). The Vice-President (Publications) will then prepare detailed proposals for the establishment of a web-based CIE shop for the sale of paper copies, CD ROMs and electronic (PDF) versions of CIE publications, the latter for immediate download. The proposals for stage 2 will be presented to the CIE Board at its meeting in June 2004.

National Committees are invited to direct any enquiries in regard to the new common pricing policy for CIE publications to the Vice-President (Publications)

Dr Franz Hengstberger
CSIR-NML
P O Box 395
Pretoria 0001
South Africa
e-mail fhengstb@csir.co.za
fax +27 12 841-3382
tel +27 12 841-4352

NCs are also kindly requested to complete the attached questionnaire and e-mail or fax the page to the Vice-President (Publications) as soon as possible. This will enable him to complete his full publication sales analysis. On application and based on the completed questionnaire, the Vice-President (Publications) will supply NCs with an EXCEL spreadsheet (preferably by e-mail) showing their actual profits from past and projected profits from future publication sales, including a graph similar to Fig. 2

Before the implementation of the new publication sales system on January 1, 2004 the CIE CB will compile a Code of Procedure for Publication Sales, incorporating the principles described in this circular."

Christine Hermann
General Secretary
CIE Central Bureau



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

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APPENDIX H

CNC/CIE 48th Annual Meeting

2003-October-24

CNC/CIE Members and Advisory Members



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

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CNC/CIE MEMBERS

CNC/CIE			TERM (expiry)	CIE
President	S.M. McFadden	Ontario	2003-12-31	Division 1
Vice President	J.C. Zwinkels	Ontario	2006-12-31	Division 2
Secretary/Treasurer	A.A. Gaertner	Ontario	2005-12-31	
Publications	K.F. Lin	Ontario	2004-12-31	
	W.K. Adrian	Ontario	2003-12-31	Division 4
	R. Baribeau	Ontario	2006-12-31	Division 8
	(J.A. Love	Alberta	2002-12-31)	
	I.C. Pasini	Québec	2005-12-31	Division 3
	J.D. Yvon Deslauriers	Ontario	2003-12-31	Division 6
	J.B. Roberge	Québec	2003-12-31	Division 5, Finance Com.
	Ralph A. Smith	New Brunswick	2005-12-31	
	Lorne A. Whitehead	British Columbia	2004-12-31	
<i>ex officio</i>	A.R. Robertson	Ontario		NRC-INMS Member

() = has not returned letter of acceptance.

CNC/CIE ADVISORY MEMBERS

(Nolie Agellon	Ontario)	J. Bruce McArthur	Ontario
Eduard Alf	Ontario	Donald B. McIntyre	Ontario
Ian Ashdown	British Columbia	S.W. McKnight	Ontario
M.G. Bassett	Ontario	Arthur H. Mendel	Québec
J.(Joe) Bastianpillai	Ontario	Guy Newsham	Ontario
(Chrisnel Blot	Québec)	Keith Niall	Ontario
Mario Bucci	Ontario	T. Nilsson	P.E.I.
J. Allyson Chrysler	Ontario	Karen Pero	Québec
Vince Cimino	Ontario	Pascale Reinhardt	Ontario
W.B. Cowan	Ontario	Tim M. Richardson	Ontario
Biman Das	Nova Scotia	Mankajee Shrestha	Ontario
R.V. Day	Ontario	Andrew D. Silbiger	Ontario
Walter T. Delpero	Ontario	William A. Simpson	Ontario
(Marie Dumont	Québec)	(Dyon Smith	Ontario)
John W. Harron	Ontario	Nikolay Stoev	Ontario
(Kurt Ising	British Columbia)	(Cristian Suvagau	British Columbia)
Byron Jordan	Québec	Eli Szamosi	Ontario
S.M. Kaye	Manitoba	B.W. Tansley	Ontario
A. Ketvirtis	Ontario	M.K. Timmings	Ontario
Barbara Kolesnik	Ontario	R. Topalova	Ontario
Jacques Lacasse	Québec	J.A. Veitch	Ontario
R. Lakowski	British Columbia	James G. White	Ontario
André Laperrière	Québec	R.W. White	Québec
(Denis Lavoie	Québec)	(Roy Williams	Manitoba)
Ken Loach	Ontario	Ernest Wotton	Ontario
P. Manning	Nova Scotia		

() = require CNC/CIE appointment at annual meeting of 2003-October-24.

2003-October-24





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

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APPENDIX I

CNC/CIE 48th Annual Meeting

2003-October-24

CNC/CIE Code of Procedure

(Draft 2003-October-17)

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 lighting. The national adhering body for Canada is the National Research Council (NRC). NRC International Affairs determines the level of adherence and (subject to the level of the annual Treasury Board grant for international affiliation dues and consultation with the NRC Advisory Committee on International Science, Engineering and Technology) pays Canada's annual subscription to the CIE.

Under an agreement signed in 1993 and renewed in 1998, the NRC Institute for National Measurement Standards (INMS) is responsible for setting up the Canadian National Committee (CNC) to deal with all other matters.

2. Objectives of CIE

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

- (a) to provide an international forum for the discussion of all matters relating to the science, technology and art of lighting and for the interchange of information in these fields between countries;
- (b) to develop basic standards and procedures of metrology in the fields of light and lighting;
- (c) to provide guidance in the application of principles and procedures in the development of international standards in the fields of light and lighting;
- (d) 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; and
- (e) 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.

~~"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 usages of light, indoors and out, including environmental and aesthetic effects, as well as means~~

~~for production and control of light and radiation.~~ It is important to note that in these objectives light and lighting embraces such fundamental subjects as vision, photometry and colorimetry, involving natural and man-made radiations over the UV, the visible and 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 the 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 analogous 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:

- (a) to collect and reconcile the many views of the Canadian lighting community on relevant issues;
- (b) to identify, represent and promote the capabilities and distinctive competence of its Canadian lighting community internationally;
- (c) 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;
- (d) to establish the mechanisms for communicating to the Canadian lighting community the views of the CIE and information about activities of the CIE;
- (e) to distribute appropriate documentation, including the newsletter of the CIE;
- (f) to attract and stage international events of value to the Canadian lighting community.

The CNC reports to the Director General of INMS.

4. Secretariat

The Secretariat of the CNC is located at INMS.

5. Members

The CNC consists of the Canadian Members of each CIE Division and a maximum of ~~twelve~~ ten additional Members. Members are appointed by the Director General of INMS. Terms of office are normally four years and are staggered to provide continuity. It is expected that the Membership will be distributed with regards to geography, linguistics and, ~~whenever possible,~~ 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. In making appointments, the Director General takes account of the recommendations of the CNC.

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

- (a) the Director-General of INMS or his/her delegate, and

(b) any Canadian who is an Officer of the CIE or a Director or Associate Director of a CIE Division.

The duties of members are:

(to be written)

Members must be Canadian Citizens or have permanent residency status in Canada.

6. Officers

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

(a) a President who is responsible for conducting the affairs of the CNC, calling and chairing its meetings, and reporting to NRC on its activities;

(b) a Vice-President, who is responsible for performing the duties of the President whenever the President is unable to perform them;

(c) a Secretary, who is responsible for keeping the records of the CNC 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;

(d) ~~if necessary,~~ 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; ~~and~~

(e) a Publications Officer, who is responsible for the purchase of CIE Publications and their sale in Canada; and

~~(e)~~ any other Officers that the CNC deems necessary.

All Officers must give a written report of their activities to the CNC 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.

7. Advisory Members

The CNC may appoint any number of Advisory Members to assist it in its duties and to assure adequate representation of all interests. Advisory Members 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 be written)

8. Observers

A representative of NRC International Affairs is an observer of the CNC.

9. 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.

10. Meetings

The President may call a meeting of the CNC 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 meeting.

11. Quorum

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

12. Voting

In dealing with routine 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.

13. Letter Ballots

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

The passage of any motion thus submitted requires:

- (a) a simple majority of those Members and Advisory Members who vote,
- (b) that the number of Members who vote constitute a quorum, and
- (c) 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 ~~should~~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.

14. Delegates to CIE General Assemblies

When a CIE General Assembly is to be held, the CNC recommends to the Director General of INMS the nomination of two delegates (one voting, the other non-voting) for appointment by NRC International Affairs. The President of the CNC shall normally be the voting delegate. The delegates are expected to

present the policies of NRC International Affairs on issues relating to finances, Statutes and By-Laws, and of the CNC on other matters. The delegates must provide a written report to NRC International Affairs with a copy to the Director General of INMS and to the CNC.

15. Members of CIE Divisions

The CNC, whenever possible, appoints a voting member to each CIE Division. If the person appointed is not already a Member ~~or Advisory Member~~ of the CNC, he/she ~~automatically becomes an Advisory Member and is~~ shall be nominated to the Director General of INMS for appointment as a Member ~~at the next opportunity immediately.~~

The duties of the Division members are:

- (a) to ascertain the views prevailing in Canada and to express these views in the deliberations of the Division either by correspondence or at meetings;
- (b) to report in writing to the CNC, at its annual meeting, on the activities of the Division;
- (c) to advise the CNC on matters pertaining to the Division and its associated Technical Committees; ~~and~~
- (d) to encourage Canadian experts to be active members of Technical Committees within the Division; and
- (e) 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, the President may appoint a substitute voting member. The substitute member must present a report of his/her actions to the regular member after the meeting.

The Member's annual report to the CNC should include the latest Activity Report of the Division ~~(if available)~~, a summary of issues of particular importance to Canada, and a list of Canadian members of Technical Committees within the Division.

16. Members of CIE Technical Committees

Members of CIE Technical Committees are appointed by the Technical Committee Chair. The CNC, 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 CIE Technical Committee Chair or nominated by the CNC, who is not already a Member or Advisory Member of the CNC, automatically becomes an Advisory Member.

17. 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.

18. CIE Publications

The CNC purchases CIE Publications from the Central Bureau and sells them in Canada with an appropriate mark-up. Proceeds from these sales, after deduction of costs, are used to support activities of the CNC.

~~A Publication Officer may be appointed by the CNC to handle the purchase and sale of CIE Publications. This Officer must give a written report to the CNC at its annual meeting.~~

19. 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, comprised of the President, Vice-President, Secretary and Treasurer. The CNC/CIE shall maintain a written policy outlining the criteria for such reimbursement of expenses.

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

1920. 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 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. Adoption of the amended Code requires the approval of the Director General of INMS.



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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Canadian Division Members' Reports

CNC/CIE 48th Annual Meeting

2003-October-24

CIE Division 1

Vision and Colour

Division 1: Vision and Colour
Report to CNC/CIE 48th Annual Meeting

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The annual meeting of Division 1 was held July first in San Diego, CA, USA as part of the Quadrennial meeting of the CIE. Sixteen nations were represented at the Division 1 meeting (fifteen with voting rights) and there were a total of 47 attendees. S. McFadden was the official Canadian representative. The meeting was also attended by A. Robertson, J. Zwinkels and R. Williams from Canada. Eight Technical Committees (TC) met in conjunction with the Division 1 meeting: TC1-42 Colour appearance in peripheral vision (M. Ayama), TC1-44 Practical daylight sources for colorimetry (R. Hirschler), TC1-48 Revision of CIE Document 15.2 Colorimetry (J. Schanda), TC1-55 Uniform color space for industrial colour difference evaluation (J. Nobbs), TC1-57 Standards in colorimetry (A. Robertson), TC1-59 Standard photometric 10° observer (J. Schanda), TC1-61 Categorical colour identification (T. Ishida) and TC1-62 Colour rendering of white LED sources (P. Bodrogi).

Highlights

One TC, TC1-26, and three Reporterships, R1-24, R1-28, and R1-30, were closed. Two other Reporterships, R1-11 and R1-23, will be closed on publication of their final reports. R1-15 will be closed when balloting is complete. Three TCs, TC1-63, TC1-64, and TC1-65 and three Reporterships, R1-32, R1-33, and R1-34, were initiated (see summary below for a description on these).

The following changes in Division 1 membership occurred: Mr. Goldin was appointed representative for Israel. Dr. Kim was appointed representative for Korea. Dr. Datta was appointed representative for India. Division 1 now has members representing 39 countries.

Summary of Progress of Technical Committees and Reporterships

The following summaries of activities in the various Technical Committees of Division 1 are based on the minutes and our notes from the 2003 Division 1 meeting. Additional information on some of the TCs can be found in the Activity Report for 2003. It is available in PDF format on the Division 1 website <http://nml.csir.co.za/~cie1>. It includes the terms of reference and membership for all Technical Committees and Reporterships.

Progress in Vision Section (F. Viénot, Associate Director)

TC1-26: Individual Variations of Heterochromatic Brightness Matching (H Yaguchi)

Dr. Yaguchi requested to close this TC. The meeting voted to close the TC, and agreed unanimously. Some of the work carried out under this TC will be transferred to Dr. Yaguchi's Reportership R1-19, which will continue for at least another year.

TC1-30: Luminous Efficiency Functions (Y. Nakano)

Dr. Nakano has been working on a Chairman's report for this TC. It will specify the following 7 luminous efficiency functions ($V(\lambda)$, $V_m(\lambda)$, $V_{10}(\lambda)$, $V_{b,2}(\lambda)$, $V_{b,10}(\lambda)$, $V_{b,p}(\lambda)$, and $V'(\lambda)$) and explain how

to use them. There are 7 equivalent luminances that go with each of the 7 luminous efficiency functions. The luminous efficiency functions are defined from 400nm to 700nm at 10 nm intervals. A proposed section on interpolation in draft 4 will not be included. Instead, the report will refer to either the report from TC1-38 or the Sprague method for interpolation.

TC1-36: Fundamental Chromaticity Diagram with Physiologically Significant Axes (F Viénot)

This TC hopes to suggest a chromaticity diagram derived from fundamentals of the visual system. It would be an iso-illuminant chromaticity diagram. Dr. Viénot reported that the committee had a difficult time in reaching consensus in all areas so they decided to vote chapter by chapter.. Consensus has been achieved among TC members in some chapters and the TC continues to try to achieve consensus in the remaining chapters.

TC1-37: Supplementary Systems of Photometry (K Sagawa)

Dr. Sagawa reported that the TC has developed a model based on the results of TC1-21 that includes a photopic luminance channel, a scotopic luminance channel, and a chromatic channel. He will start drafting a report.

TC1-41: Extension of $V_m(\lambda)$ beyond 830 nm (P Walraven)

Dr. Viénot reported that TC1-36 has decided to use $V_{10}(\lambda)$ as the photometric system for the 10° field, and to transform it to the 2° field system. It is now a matter of application of the results in TC1-36. The technical report is supposed to be completed and it should be ready for voting shortly.

TC1-42: Colour Appearance in Peripheral Vision (M Ayama)

Dr. Ayama reported that the TC met in San Diego. The results of a new experiment using colour chips that were shown to observers using different luminance levels were presented. The general pattern of the results was consistent with previous data collected with self-luminous sources. There was some discussion about the methodology, the choice of stimuli and the response measures used. Also there was some discussion about how to present the data from the various studies. All of these studies are monocular and the results are presented relative to the centre of one eye and show the change in colour perception relative to this point in the nasal and temporal direction. Some of the studies used the right eye and some the left. The chair plans to draft a report over the next year.

TC1-46: Concept and Application of Equivalent Luminance (Y Nakano)

Dr. Nakano reported that he is now struggling with how to explain the concept in the draft report. He showed an example of how equivalent luminance works in mesopic photometry and how it will cause misunderstanding. The report will describe such examples to prevent the misunderstanding. He hopes to finish the 2nd draft within the year.

TC1-51: Visual Acuity (H J Schmidt Clausen)

This TC was reopened at Vésprem. However, there has been no progress reported since that time and the Chair did not attend the Division 1 meeting. It was agreed that the Associate Director would inform the Chair that they needed to see a draft report soon or the TC would be disbanded again – permanently.

TC1-54: Age-Related Change of Visual Responses (K Sagawa)

Dr. Sagawa has collected aging data from both young and old. He reported experimental data concerning the contrast sensitivity functions using Landolt's C and visual acuity using letters. He is preparing to write a report. He noted that the colour category areas of older people are smaller than those of younger people. There was a suggestion that the TC should look at the aging function of the eye from TC1-36 to see if it fits the TC1-54 data.

TC1-58: Visual Performance in the Mesopic Range (J Taylor)

Dr. Viénot reported that Liisa Halonen (FI) succeeded the chair from Julie Taylor (GB). She is responsible for a European project in this area. The Division approved Dr. Halonen as a new Chair unanimously.

TC1-59: Standard Photometric 10° Observer (J Schanda)

Dr. Schanda reported that the TC met in San Diego. Currently there is a disagreement between two members of the TC over the content of Section 2. A small subcommittee will review the correspondence of these two members and try to resolve the dispute. Another important issue discussed was how to express the units of measurement for $V_{10}(\lambda)$. It was proposed that the CIE adopt $V_{10}(\lambda)$ as a standard and then ask the Comité Consultatif de Photométrie et Radiométrie (CCPR) to adopt it as a standard of the SI. Draft 5 will be completed after the disagreement over Section 2 has been resolved. That draft will also be sent to the editor.

TC1-60: Contrast Sensitivity Function (CSF) for Detection and Discrimination (E Martinez-Uriegas)

Ms. McFadden reported that the TC members have engaged in an active discussion over the past year in an effort to reach consensus on the conditions under which the CSF will be specified. The results of that discussion have been posted to the Division 1 website. There has been agreement on the detection function. Over-all consensus is slowly being achieved. V. Klassen is investigating a formula for transforming data from Gabor patches to make it compatible with sine-wave data. The members are also looking at the equations for the CSF developed by P. Barten.

R1-16: Visual Adaptation to Complex Luminance Distribution (H Shinoda)

Dr. Viénot reported that though there was no new report, the Reportership will stay active to survey this area because work is still being done. The Reporter has issued a request to the members of Division 1 to send him any papers on this topic.

R1-19: Specification on Individual Variation in Heterochromatic Matching (H Yaguchi)

Some of the work carried out under TC1-26 will be transferred to this Reportership. The Reportership will continue for at least one more year.

R1-23: Guidelines on Planning a Mesopic Photometry Investigation (P Trezona)

Dr. Viénot reported that Dr. Trezona had submitted an eight page report that has to be edited and published in the CIE collection. The Division agreed unanimously to close this Reportership after the publication was finalised.

R1-27: Measurement of Pupil Diameter (P Trezona)

Dr. Viénot reported that Dr. Trezona had sent a report that dealt with work going on at City University in London.

R1-28: Visibility of a Flash of Light (D Couzin)

Dr. Viénot reported that a document had been sent to the editor, and it had been attached to the Activity Report 2003. It can be downloaded from the website. The report on the website is included as an appendix to the Activity Report 2003. A note of the report will also be put in CIE News. The Reporter found that no new work was being conducted in this area. Thus there would be no advantage in setting up a TC. The Division agreed on closing this Reportership unanimously.

Progress in Colour Section (M. Pointer, Associate Director)

TC1-27: Specification of Colour Appearance for Reflective Media and Self-Luminous Display Comparison (P J Alessi)

Ms. Alessi reported that she would write a report, hopefully by the end of the year, and that pending problems were transferred to TC8-01.

TC1-38: Compatibility of Tabular Data for Computational Purposes (C McCamy)

Dr. Pointer reported that agreement had finally been reached on an interpolation method. Since the Chair of this TC has tendered his resignation, the Editor will get the latest draft of the final report and the Editor and Associate Director will complete it.

TC1-44: Practical Daylight Sources for Colorimetry (R Hirschler)

Dr. Hirschler reported that the TC met in San Diego. The Chair hopes to write a final report this year. The general conclusion is that acceptable booths using filtered tungsten and fluorescent fixtures are available. Results of studies reported previously confirm that CIE 51 gives correct ranking of light sources. It is possible to improve the overall rating of a booth by the appropriate mixing of UV and visible light but difficult to find commercially or maintain such a booth because of the cost and availability of photometers to measure the UV output of the light sources in the booths. At the moment there is very little data on the accuracy of booths for evaluating fluorescent samples. Probably the issue of the assessment of booths that allow the accurate evaluation of UV samples, especially coloured samples, is the task of another TC.

TC1-48: Revision of CIE Document 15.2 Colorimetry (J Schanda)

Dr. Schanda reported that the TC met in San Diego. The work of this TC is almost complete. Agreement has been reached on 3 of the 4 disputable points. Concern was expressed by ISO/TC6/3 about the wording on Illuminant C in the document. The wording was changed slightly in an effort to make it more acceptable. The one remaining issue was whether the wavelength of Illuminant A should be specified as measured in air or vacuum. The meeting also requested that the Division Director ask the Central Bureau to withdraw the ballot on this report that had been distributed in the spring. The Chair had not intended that a ballot be issued on that draft. The Chair has already prepared a further draft and he will complete a final draft and circulate it to all Division members for comment and ballot.

TC1-52: Chromatic Adaptation Transform (M R Luo)

Dr. Luo reported that the TC had approved the report. The report does not recommend one chromatic adaptation transform. The report states that four chromatic adaptation transforms (i.e modified CIECAT94, CMCCAT97, CMCCAT2000, and CMCCAT2000, excluding the McCann dataset) all perform about equally well. It should be ready to go to division ballot shortly. The Division agreed unanimously to close this TC after the report is published.

TC1-53: A Standard Method of Assessing the Quality of Daylight Simulators (C McCamy)

Dr. Pointer reported that the report was distributed for ballot, but there were a number of comments. This is extremely important work because, once approved, the report will become a standard. Since the Chair of this TC has tendered his resignation, the Associate Director will serve as acting chair and resolve the comments. The Division approved Dr. Pointer as acting chair unanimously.

TC1-55: Uniform Colour Space for Industrial Colour Difference Evaluation (J Nobbs)

Dr. Nobbs reported that the TC met in San Diego. The work of this TC relates only to two industrial samples butted up against each other in a D65 viewing cabinet. The TC members are looking at the

DIN 99, DCI-95 and the CIECAM02 colour spaces to see if they can be adapted to industrial colour difference evaluation and provide a new uniform color space.

TC1-56: Improved Colour Matching Functions (M Brill)

Dr. Pointer reported that the chair has new contact information and the work is continuing. Mark Fairchild is contributing to the work of this TC. Ronnie Luo may start doing some work for this TC.

TC1-57: Standards in Colorimetry (A Robertson)

Dr. Robertson reported that the TC met in San Diego. This is one standard with 6 parts: 1 and 2 are S001 and S002, 3 is calculation of XYZ tristimulus values, which is on draft 2, 4 is on the CIELAB uniform colour space, 5 is on the CIELUV uniform colour space, and 6 is on CIE DE2000. The standard on the CIELAB uniform colour space has been reviewed and the comments incorporated. It was decided to use Sève's formula for ΔH . After draft 3, this standard part should be ready to go to ISO. During the TC meeting, the discussion focused on the part covering the calculation of tristimulus variables. One decision was to use integer ratios to avoid rounding errors. The sixth CIEDE2000 part will wait for user feedback evaluation on use of CIEDE2000.

TC1-61: Categorical Colour Identification (T Ishida)

Dr. Ishida reported that the TC met in San Diego. Over the past year, the TC has been examining the representation of the data in different colour appearance models and colour spaces. If the colours are represented in CIECAM97s, they find that the colour boundaries are constant across illuminants. The plan is to map the data into CIECAM02 and see if this allows comparison across different data sets. The Chair was urged to begin preparation of a technical report and should think about how the results of this work might be used.

TC1-62 Colour rendering of LED light sources: (P Bodrogi)

Dr. Bodrogi reported that the TC met in San Diego. The TC is examining the colour rendering properties of clusters of LED lights. An annotated bibliography has been created and visual experiments are planned. It was recommended that the TC use CIECAM02 to evaluate colour differences since colour rendering is really about colour appearance. An alternative to visual experiments would be to analyse the power spectrum of the light sources and determine the problem mathematically. The ultimate goal is to answer the question of whether or not the present CIE CRI works with LED lights. If the answer is no, hopefully the TC will be able to recommend an improved CRI.

R1-11 Cognitive Aspects of Colour: (G Derefeldt)

Dr. Derefeldt reported that the report will be published in Color Research and Application. It is also planned to publish it as a CIE report in the CIE Collection. The Division agreed unanimously on closing this Reportership after publication.

R1-15 Lighting Terminology: (M R Pointer)

Dr. Pointer reported that he is still waiting for feedback from the Central Bureau on the results of the ballot. The plan is to close the Reportership and start up a new TC to maintain a current relevant terminology document for Division 1. The Division agreed unanimously on closing this Reportership after the ballot has been completed.

R1-24 Colour Appearance Models: (M Fairchild)

Following the publication of a Technical Report describing the new color appearance model, CIECAM02, as part of the work of Division 8, Dr. Pointer proposed to close this Reportership and to transfer the work to Division 8. The Division agreed unanimously on closing this Reportership.

R1-30 Softcopy - Hardcopy Comparison for Standard Office Conditions: (J Schanda)

Dr. Schanda reported that, after careful investigation, he concluded this issue was the responsibility of Division 8 and proposed to close this Reportership. The Division agreed unanimously on closing this Reportership.

R1-31 Smooth Changes in Color Difference between Large CIELAB Colour Differences and Threshold Colour Differences: (K Richter)

Dr. Richter reported that he would recommend a TC be formed to carry out this work. Thus, it was agreed to close this Reportership.

Proposals for New Technical Committees and Reporterships

Three TCs and three Reporterships were proposed.

TC1-63 Validity of the range of CIEDE2000 (Colour section)

Terms of reference: To investigate the application of the CIEDE2000 equation at threshold, and to CIELAB colour differences > 5. The Chairman is Klaus Richter DE. Current members are R Luo UK, J Nobbs UK, C Oleari IT, D Rich US, H Yaguchi JP. This TC was based on the Reportership R1-31.

TC 1-64 Terminology for vision, colour and appearance (Colour Section)

Terms of reference: To monitor the terminology requirements of Division 1 including revision of the present ILV terms, and the addition of new terms. The Chairman is Sharon McFadden CA. Current members are M Pointer UK, R Séve FR, Y Nakano JP, E Carter US. Similar TCs have been formed in D2 and D8. The chairs of the TCs in D2 and D8 will sit on this TC and the chair of this TC will sit on those TCs to ensure good communication.

TC1-65 Visual appearance measurement (Colour Section)

Terms of reference: To study develop and recommend a soft-metrology framework for measuring visual appearance. This should include potential measurement areas, psychophysical procedures and real applications. The Chairman is Mike Pointer GB. Current members are O Da Pos IT, K Sagawa JP, J Hutchings UK, F Viénot FR, J Schanda HU, J Nobbs UK, G Derefeldt SE, C Kim KO. This Technical Committee arose out of a workshop on this topic that was held during the CIE Symposium.

R1-32 Emotional aspects of colour and light (Colour Section)

The terms of reference are to review the literature on various non-image related effects of colour and light. The Reporter is Gunilla Derefeldt SE.

R1-33 Colour-difference evaluation (Colour section)

The terms of reference are to monitor the response to CIEDE2000, including receiving comments, reviewing relevant literature, and recommending future activity. The Reporter is Ronnier Luo GB.

R1-34 Indoor daylight (Colour section)

The terms of reference are to investigate the need for an indoor daylight source and/or illuminant. The Reporter is János Schanda HU.

Liaisons

Liaisons are currently established with:

- The Association International de la Couleur: Ms. Alessi reported that the next meeting “Color in Paint” would be held in Brazil in 2004 and the next quadrennial meeting would be held on 8-13 May 2005 in Granada Spain.
- Comité Consultatif de Photométrie et Radiométrie, BIPM: The BIPM database on calibration and measurement capabilities (CMCs), which can be accessed via <http://kcdb.bipm.fr/BIPM-KCDB/AppendixC/>, contains entries for 33 member states of the Meter Convention. These CMCs are mutually recognized by the signatories of the BIPM Mutual Recognition Arrangement (MRA). The technical basis for the MRA is the participation in key comparisons carried out by the Consultative Committees and the Regional Metrology Organizations. The CCPR continues via its working group on key comparisons to monitor the progress with these key comparisons. The most recent CCPR meeting took place at the BIPM from 17 to 19 June 2003.
- ISO/TC6/3: Dr. Zwinkels reported that the next meeting would be held in Tokyo in November 2003. She will send a list for normative standards for the activity report. There are several issues of concerns: 1) liaisons for TC1-57 and TC1-48 – the recommendation on standard illuminant and the recommendation on geometry, 2) proposal for an indoor illuminant.
- ISO/TC38/SC1: Dr. Nobbs reported that one section dealt with color difference and had asked for a method of color difference splitting. Work is in progress developing standards on relative and absolute whiteness, and another group is working on measurement behind glass. The next meeting will be held in Barcelona in July 2004.
- ISO/TC42 – Photography: Dr. Pointer reported that TC42 had met the previous week. He will update the table in the Division 1 Activity Report that lists the work items of this Group. Three standards are well underway that might be of relevance to D1 members
- ISO/TC130: Graphic Technology: A list of relevant work items under this group can be found in the 2003 Activity report.
- Steering Committee for Image Technology (SCIT): Dr. Schanda reported that this organization was more relevant to Division 8 than Division 1, and that the next meeting would be held in November 2004 in Genova, Italy.

Next Meeting

The 2004 meeting will be held jointly with Division 2 in Tokyo, Japan, in conjunction with an LED symposium. The LED symposium will be held on 7-8 June 2004 followed by Division meetings on 9-11 June 2004.

New Officers for Division 1

There was one change to the Officers of Division 1. S. McFadden of Canada replaced K. Sagawa of Japan as Director of Division 1.

Canadian Participation in Division 1

Based on the latest information available to me, Canada has representatives on 14 Technical Committees in Division 1. The Canadian representatives are W. Adrian on TC1-51, Ian Ashdown on TC1-62, W. Cowan on TC1-37, S. McFadden on TC1-42, TC1-60, and TC1-64, A. Robertson on TC1-27, TC1-38, TC1-48, TC1-56, TC1-57, and TC1-59, W. Simpson on TC1-60, and J. Zwinkels on TC1-38, TC1-44, TC1-53, and TC1-57. If anyone is interested in participating in one of the TCs, especially the newer ones, please contact Sharon McFadden.



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Canadian Division Members' Reports

CNC/CIE 48th Annual Meeting

2003-October-24

CIE Division 2

Physical Measurement of Light and Radiation

CIE DIVISION 2:
PHYSICAL MEASUREMENT OF LIGHT AND RADIATION
Report to Joint USNC-CNC/CIE Meeting
October 24, 2003

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The most recent CIE Division 2 General and TC meetings were held June 30 - July-2, 2003 in San Diego, USA, in conjunction with the CIE 25th Session. I represented Canada at this meeting and the following report is a summary of the meeting highlights. The detailed minutes of the meeting which were prepared by the D2 Secretary, Yoshi Ohno, can be found at the D2 web-site: <http://cie2.nist.gov>.

Administrative Matters

There was a proposal to change the D2 Editor from John Moore (UK) to Jim Gardner (Australia). There was no other proposed change in the D2 officers:
Division Director – T. Goodman (UK) ; Associate Directors: N. Johnson (USA), T. G. Sauter (Germany); G. Vandermeersch (Belgium); Secretary: Y. Ohno (USA). All officers were present at meeting except for the D2 Editor.

Secretary's Report

D2 has 36 country members, with a new country (Israel) added. There are 161 individuals on the D2 mailing list.

E-mail reflectors are in place for D2 circulars, for TCs (currently TC 2-45, 2-46 and 2-48) and for discussions on D2-wide issues (e.g. a very lively discussion on radiance definition in Dec. 2002).

Editor's Report

Radiance/luminance definition: CIE DS 010.3/E:2002 The CIE System of Physical Photometry went for NC ballot in December 2001 and received one negative vote. It was stated that the definition of radiance was in error and that the dF in the numerator should be a double differential. The DD set up an e-mail reflector that triggered a tremendous level of response. At the D2 meeting, the DD indicated that the opinions were evenly split so there will be no change in the ILV definition of radiance/luminance.

DS014-2 (from TC 2-33) – Revision of ISO/CIE Joint Standard: CIE Standard Illuminants for Colorimetry (1999). This revision was to correct the wavelength definitions to standard air for all illuminants. When this revised Standard went to D2 ballot, it received one negative vote from the US and one with comments from Canada, requesting explicit change to standard air. The D2 Editor (Moore) proposed that the values for the relative spectral power distribution of CIE Standard Illuminant A adopted in 1931 shall be taken to be for wavelengths in standard air. This proposal was voted on at the D2 meeting and received no objection. The Standard will be amended in accordance with Moore's proposal.

TC 2-04 *The Use of Tungsten Filament Lamps as Secondary Standard Sources* was published in Nov. 2002 as CIE Publication 149:2002.

TC 2-22 *Report on the Intercomparison of Measurements on HPS Lamps* went through D2 ballot and is now being prepared for publication in CIE Collection.

Technical Committee Work in Progress

TC 2-04	Secondary light sources (Moore, UK)	This TC report has been published as CIE Publication 149:2002.
TC 2-16	Characterization of the performance of tristimulus colorimeters (Rastello, Italy)	The 7 th draft of report has been sent to the TC editorial group in May 2001; after editing, it will go for TC ballot.
TC 2-17	Recommendation for integrated irradiance and spectral distribution of simulated solar radiation (G. Zerlaut, USA)	New TCC made short presentation at San Diego meeting on the status and plans for the TC.
TC 2-19	Measurement of spectral coefficient of retroreflection (N. Johnson, USA)	TCC and Editor have agreed on format of final document to be distributed for TC vote.
TC 2-23	Photometry of street-lighting luminaires (G. Vandermeersch, Belg.)	TC met in San Diego. It was confirmed that the TC report will cover photometric data, methods, uncertainties and tolerances and replace the old publication CIE 27.
TC 2-24	Users guide for the selection of illuminance and - luminance meters (K. Ganesha, India)	No report. This TC will be closed if contact with TCC cannot be re-established or new TCC found.

TC 2-25	Calibration methods and photoluminescent standards for total radiance factor measurements (J. Zwinkels, Canada)	TC met in San Diego, The TCC ballot on the 11 th draft of report was discussed. There were 4 approvals, and one approval with editorial change from TC members. Add'l comments were received from TC advisors. TC incorporated many of these comments in 12 th draft which will be sent to D2 Editor. and for D2 Ballot.
TC 2-28	Methods of characterizing spectrophotometers P.Clarke, UK)	Report given by DD. Final TC report should be ready shortly and sent for TC ballot.
TC 2-29	Measurement of detector linearity (T. Larason, USA)	TC met in San Diego. TC membership is re-established by new TCC. The 3 rd draft of report was discussed and will be re-written to add new measurement methods.
TC 2-32	Measuring retroreflectance of wet horizontal road markings (Hodson, USA)	The TC met in San Diego. There is only one section of report to be further reviewed. Next meeting will be with either D2 or D4.
TC 2-35	CIE Standard for $V(\lambda)$ and $V'(\lambda)$ (Mielenz, USA)	This TC report has been prepared as CIE DS 010.3/E:2002 – The CIE System of Physical Photometry. It went for D2 vote: received 1 negative requesting change in current form of radiance definition. This provoked considerable debate at D2 reflector. D2 Director decided current def'n will stay unchanged. After editing, the document will go for final publication.
TC 2-37	Photometry using $V(\lambda)$ -corrected detectors as transfer standards. (Ohno, USA)	The work of this TC is almost finished. TCC prepared 7 th draft; will be reviewed by new D2 editor before TC ballot in 2003.
TC 2-39	Geometric tolerances for colorimetry (D.Rich, USA)	TC met in San Diego. The 6 th draft of report was discussed. These comments will be incorporated in 7 th draft of report to be issued in the Fall 2003.
TC 2-40	CIE standard: characterizing the performance of luminance illuminance meters (Rattunde, Germany)	TCC plans to finish new draft within few weeks of San Diego meeting and discuss with TC members via e-mail.

TC 2-42	Colorimetry of visual displays. (C. Wall, U.K.)	No report.
TC 2-43	Determination of measurement uncertainties in photometry (Sauter, Germany)	TC met in San Diego. The main part of the document has been reviewed and accepted; the TC discussed publishing the document in 2 to 3 parts with examples of uncertainty provided in the form of CD ROM, including EXCEL sheets.
TC 2-44	Vocabulary Matters (J. Moore, UK)	This TC will be transferred to new D2 Editor. July 2004 is the deadline for submissions by all Divisions.
TC 2-45	Measurement of LEDs- Revision of CIE 127 (Muray, USA)	TC met in San Diego. It is working on 3 issues: 1) total/partial luminous flux ment; 2) evaluation of $V(\lambda)$ match; 3) conditions for spectral radiometric measurement. The issue of measurement of LEDs for photobiological safety, proposed by D6, should be handled by a separate TC.
TC 2-46	CIE/ISO standards on LED intensity measurements (Scarangelo, USA)	TC met in San Diego and discussed 5 th draft of report. TC agreed to have tolerances in appendix and agreed on various major issues <i>re</i> experimental conditions; terminologies and calibration issues still to be resolved.
TC 2-47	Characterization and Calibration Methods of UV Radiometers (G. Xu, Singapore)	No report received at San Diego meeting. Report later received by D2 Secretary. TCC has new responsibilities and will only continue as TC chair for 1 year and try to finish revising the report.
TC 2-48	Spectral responsivity measurement of detectors, radiometers, and photometers (Eppeldauer, USA)	TC met in San Diego and discussed 5 th draft of TC report. Over 75% of report has been written and reviewed.
TC 2-49	Photometry of Flashing Lights (Y. Ohno, USA)	TC last met in Veszprem in 2002. TC formed a Working Group to formulate the conditions for required visual experiments and to publicize the call for research.

TC 2-50	Measurement of the Optical properties of LED clusters and arrays (G.Sauter, Germany)	TC met in San Diego and discussed 1 st draft of report. Scope will be limited not to include displays but will cover combinations of structures of LEDs used for general illumination purposes.
TC 2-51	Calibration of diode-array spectrometers (R.Austin, USA)	TC met in San Diego. The title of document has changed to “Calibration, Characterization and Use of Array Spectroradiometers” with new TR (primary use is for the determination of colorimetric and photometric quantities).
TC 2-52	Addendum to CIE 121- for the photometry of 2003. This was approved and revised as the emergency lighting luminaires (G.Vandermeersch, Belg.).	TC met in San Diego and discussed draft 2b- final draft 3 which will go for TC ballot.
TC 2-53	Multi-Geometry Colour Measurements of Effect Materials (G. Roesler (Germany)	TC met during ASTM meetings in San Diego. TCC will prepare a draft framework and report for the TC work.
TC 2-55	Round Robin Investigation of Implementation of CIE Photobiological Safety Standard (K. Kohmoto, Japan)	TCC has resigned. IEC has decided not to publish CIE S009 as joint IEC/CIE Standard.. D2 agreed to close this TC and wait till TC .6-47 (which created the standard) comes up with some actions.

1 Reportership Closed:

R 2-05 Visual gloss (Mike Pointer, UK)

7 Reporterships in Progress:

R2-21 Use of Detectors as Absolute Transfer Standards for Spectroradiometry (N. Fox, NPL)

R2-23 ISO/CIE Standards for the Measurement of Reflectance and Transmittance (D. Rich, USA)

R2-27 Field Measurements for Traffic Signals (C. Andersen, USA)

R2-28 Evaluation of Colorimeter Spectral Responsivity (B. Kranicz, Hungary)

R2-29 Characterization of Imaging Luminance Measurement Devices (P. Blattner, Switzerland)

R2-30 Problems linked to Correct Measurement of TL5 Fluorescent Lamps with Existing Electronic Ballasts (G. Vandermeersch)

R2-31 Problems with the Spectroradiometric Measurement of Light Sources (D. Gibbs, UK)

*** Reports of Liaisons:**

ISO/ TC6 (J.Zwinkels, Canada)

The next meeting of TC6/WG3 (paper, pulp and boards – optical properties) will be held on 3 or 4 November, 2003, in conjunction with the ISO TC6 meeting in Tokyo, Japan.

The following ISO TC6/WG3 activities are relevant to the work of CIE D1 and D2.

Several ISO standards developed by this working group (WG) require a normative reference to the characteristics of the CIE illuminant C and to a CIE recommended measurement geometry of $d/0^\circ$. Thus, when the WG Chair (A. Bristow) became aware that Publication 15.3 Colorimetry, being prepared by CIE/TC 1-48, had declared illuminant C to be obsolete and that $d/0^\circ$ was not included as a recommended measurement geometry, there was considerable concern. This prompted the Chair and Secretary of ISO TC6, Mr. George Weiss and O. Tardiff, respectively, to visit Drs Robertson and Zwinkels at NRC to discuss how this issue might be resolved. Based on these discussions, a proposal was put forward by A. Robertson for changes to the latest draft of CIE Publication 15.3. Mr. Weiss also contacted the CIE CB and set up a meeting in Vienna for May 2003 to highlight the importance of this ISO issue with J. Makai and Christine Hermann. At the CIE meetings of TC 1-48 and TC 2-39 in San Diego, alternate wording was agreed to by TC members that maintained the status of Illuminant C for continuing applications, and kept specific reference to $d/0^\circ$ in the list of recommended measurement geometries.

ISO TC 6/WG3 has developed several recent standards that distinguish between optical properties determined for indoor (CIE Illuminant C) and outdoor (CIE Illuminant D65) illumination conditions (e.g. ISO 11476:2000 Paper and board – Determination of CIE whiteness, $C/2^\circ$ (indoor illumination conditions; ISO 11475:1999 Paper and board – Determination of CIE whiteness, $D65/10^\circ$ (outdoor daylight)). The CIE Illuminant C has been used by the paper industry to represent indoor illumination because it has a proportion of UV radiation more typical of indoor daylight conditions (where lower UV content is available due to filtering of daylight through window glass) and produces the same visual effect with the fluorescent whitening agents found in papers and boards. Since the CIE recommends that Illuminant C not be used for new applications, there is a need for CIE to recommend a daylight illuminant for indoor applications.

*** Proposals for 3 New Technical Committees:**

(1) CIE/ISO Standard on Retroreflection Measurements (approved as TC 2-56)

Cameron Miller (USA) as the Chairman

TR To prepare a CIE/ISO standard on the measurement of retroreflective material based on CIE Publication 54.2

(2) Revision of CIE S014-2 (approved as TC 2-57)

Proposed by J. Zwinkels (Canada).

Alan Robertson (Canada) as the Chairman

TR: To revise CIE Standard S014-2 (Colorimetry Part 2: CIE Standard Illuminants) to include Illuminant D50.

ML: includes: J. Zwinkels (CAN), D. Rich (USA)

(3) Measurement of LED radiance and illuminance (approved as TC 2-58)

K. Kohmoto (Japan) as the Chairman

TR: To prepare a CIE Technical Report setting out recommended measurement methods for the luminance and radiance of LEDs, taking particular account of the specific requirements of relevant photobiological safety standards

*** Proposal for 2 New Reporterships:**

(1) Visual appearance measurement (approved as R2-32)

Proposed by Mike Pointer (UK) who also accepted Reportership.

TR: To monitor the work of CIE Division 1 on visual appearance measurement, which will include potential new measurement areas.

(2) Measurement of laser-based projection displays (approved as R2-33)

Reporter: Keith Niall (Canada)

TR: To describe concepts and methods of photometry for the comparison of laser-based projection displays.

General CIE Issues:

- Future directions for measurement R&D
- Training and education
- Database of optical radiation properties of sources, detectors and materials (for more info contact DD)

Future Symposia:

2004: Planned 3rd CIE Symposium on LED measurements in 2004, in conjunction with 2004 D2 meeting.

2005: Proposed Symposium on Uncertainty Evaluation in 2005.

Future CIE Division 2 Meetings:

- 2004:** With D1 in early June 2004 in Tokyo, Japan (dates TBD)
- 2005:** There are two options: (1) Leon, Spain in conjunction with CIE Midterm meeting and AIC meeting (May 2005) or (2) Davos, Switzerland, in conjunction with NEWRAD, Sept. 19-23, 2005. No decision made at meeting but preference was for Leon, Spain,

Other CIE Division 2 Notes:

Canadian participation in the work of the Division continues at a high level with the following members of Technical Committees or Liaisons:

TC 2-04	A. Gaertner (NRC)
TC 2-16	A.R. Robertson (NRC)
TC 2-25, Chairman	J.C. Zwinkels (NRC)
TC 2-28	A.R. Robertson, J.C. Zwinkels
TC 2-35	A.R. Robertson
TC 2-39	J.C. Zwinkels, B. Jordan (PAPRICAN)
TC 2-42	S. McFadden (DCIEM), R. Baribeau (NRC)
TC 2-43	A. Gaertner (NRC)
TC 2-47	L.P. Boivin (NRC), B. McArthur (AES)
TC 2-48	L.P. Boivin (NRC), B. McArthur (AES)
TC 2-57, Chairman	A. Robertson (NRC)
Member	J. Zwinkels (NRC)
ISO/TC6, Liaison	J.C. Zwinkels (NRC)
R2-33, Reportership	K. Niall (DCIEM)



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Canadian Division Members' Reports

CNC/CIE 48th Annual Meeting

2003-October-24

CIE Division 3

Interior Environment and Lighting Design

48th Annual CNC/CIE and CIE/USA Joint Meeting

October 24, 2003, Montreal, Quebec, Canada

Canadian Division Member's Report

Division 3

Interior Environment and Lighting Design

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Meetings

The CIE Division 3 General and TC meetings were last held on July 1st, 2003, during the CIE 25th Session, held in San Diego, USA. The following summary report on the meeting's highlights was prepared by Dr. Jennifer Veitch as Mr. Pasini could not attend. I wish to express my thanks and gratitude for her diligent work. The official minutes of the meeting will be posted on Division 3 web site as soon as they will become available (<http://ciediv3.entpe.fr>).

Canadian Participation in Division 3

Mr. I. Pasini, Canadian Member
Dr. J. Veitch, Chair TC3-34
Dr. J. Love, TC3-11, TC3-32
Dr. R. Topalova, TC3-34, TC3-39, R3-17
Dr. I. Ashdown, TC3-11, TC3-32, TC3-33
Mr. P. Gabriel, TC3-22
Dr. L. Whitehead, TC3-30 TC3-33, TC3-38
Dr. C. Reinhardt, TC3-33

Progress on draft and new CIE Documents

- 👍 Drafts Standard CIE DS 011.3/E:2002 “ Spatial Distribution of Daylight-CIE standard general sky” was voted by the National Committees in 2003-01-28
- 👍 Divisional balloting for TC 3-22 “Control of damage to museum objects by optical radiation” was recently voted by the National Committees (2003-09-2)

CIE Awards

Mr. Jacques Roberge

Next meeting: late March/early April 2004, Dublin, Ireland - attached to the Society for Light and Lighting symposium on workplace lighting taking place that week.

CIE Division 3, Interior Environment and Lighting Design Meeting Notes, 2003-July-01, San Diego, CA

Notes taken by Jennifer Veitch

TCs and Reporterships on grey backgrounds denote areas of significant Canadian contributions.

1. The meeting opened with a presentation by Wout van Bommel, incoming CIE President, about the challenges and activities he sees before us in this quadrennium. The PowerPoint slides are to be posted on the CIE WWW site.

2. Division Business: Marc Fontoynt is to be DD3 for a second term, and Dominique Dumortier as AD3-Daylighting. Yoshiki Nakamura will be the new AD3-Interior Lighting, replacing Sueko Kanaya who has asked to step down. Geoff Cook will remain as secretary.

The DD3's report will be on the D3 www site.

3. TC news:

TC3-11	Daylighting calculation methods (Canadian member: Ian Ashdown)	M.Navvab		2003	Review
TC3-19	Scale model photometry for interior lighting (Canadian member: Jim Love)	M.Navvab		2003	CD Rom

[TC3-32](#) Validation of algorithms for daylight outdoors [M.Navvab](#) 2003 Review

- TC 3-11 and TC 3-19 reports are complete, and ready for Division ballot.
- TC 3-32 was closed and the work transferred to TC 3-37 which is highly overlapping.

[TC3-20](#) Lighting and architecture [H.Kramer](#) 1991 2003 Book

TC 3-20 (H. Kramer) - we repeated a discussion we had had in Ottawa in Oct. 2002. A deadline for action was set, that the resolution must be found by the 2004 meeting. Two possibilities exist: to publish it on CD, because CIE can't afford 200 colour photos in a printed report; or to find a publisher. Although DD3 felt that it was up to the chairman to find a publisher, others felt that better success for CIE would come if the approach were done corporately by CIE, through the VP Publications. This view was held by Jonathan David (of SLL) and Lou Bedocs. Bedocs also offered to do the scanning of the photos, if that was part of the hold-up.

TC3-22	Museum lighting and protection against radiation damage (Canadian member: Phil Gabriel)	E.Ne'eman	1991	2003	Guide
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TC 3-22 (E. Ne'eman) - The recommendations for museum lighting are complete and ready for division ballot. DD3 suggested that note be taken that when

published, the report should be sent to the International Council on Museums to make sure they get the information. J-J Ezrati (France) is a member and will act as liaison on this.

<u>TC3-25</u>	Coordination and development of the IDMP and its data	<u>D.Dumortier</u>	1991	2004	<u>Web Server</u>
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TC 3-25 (Dumortier) - The WWW server will be updated in the next year, then they want to convert this TC to a study group that will maintain the data on an ongoing basis. If so, it would be SG3-01. (Canadian member: J. Love)

<u>TC3-30</u>	Hollow light guides	<u>L.Whitehead</u>	1993	2003	Guide
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TC 3-30 - Report ready for division ballot. (Canadian members: L. Whitehead; B. York)

<u>TC3-31</u>	Lighting for real spaces	<u>D.Carter</u>	1995	2003	Guide
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TC 3-31 - Report ready for division ballot

<u>TC 3-33</u>	Test cases for assessment of accuracy of lighting computer programs	<u>F. Maamari</u>	1997	2003	Guide
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TC 3-33 - (M. Fontoynt reported) - Progress has been made with a fruitful meeting in 2003. It is linked to IEA Task 31, "Daylighting Buildings for the 21st Century". Inactive members will be asked to step down and a deadline for input to the report has been set, of Oct. 31, 2003. The committee hopes to have a report for review in 2004 with 20 cases. They also caution others not to make too large a commitment in these things regarding WWW sites, which require ongoing maintenance. (Canadian members: C. Reinhardt, I. Ashdown)

<u>TC3-34</u>	Protocols for describing lighting	<u>J.Veitch</u>	1999	2003	Guide
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TC 3-34 (Veitch - CA) - Productive meeting held in San Diego, committee hopes to have draft report for review within TC by autumn 2003, and for division ballot by summer 2004. They are coordinating with the revision of ILV to avoid any accidental redefinitions or incorrect usage. DD3 said he thinks this report will be very useful for pointing to new research directions. (Canadian members: J. Veitch, R. Topalova)

<u>TC3-36</u>	Use of satellite images to derive daylight data	<u>D.Dumortier</u>	New !	2004	Standard
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TC 3-36 (Dumortier) - This same group proposed a new IEA task on this topic, which was approved in June 2003. This is expected to assist members in getting the work done, because it helps to release funds from sponsoring countries.

TC3-37 Guide for the application of the CIE general sky Y.Uetani **New !** 2004 Guide

TC 3-37 (Dumortier reported) - Held an informal meeting in San Diego, but is working to identify the most frequent sky types. This is easy for Europe because there are satellite images, but they are reliant on IDMP data elsewhere, which is not as good nor as comprehensive. They are working with the Radiance and Adeline developers to get their info into the software. They have asked for an extension to 2006 for completion.

<u>TC3-38</u>	Tubular Daylight Guidance Systems	<u>D. Carter</u>	New !	2005	Guide
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TC 3-38 - A productive meeting was held in San Diego. They are working on plans to involve the industry in CIE when the report is complete, so that they can distribute it more widely. (Canadian member: L. Whitehead)

<u>TC 3-39</u>	Discomfort glare from daylight in buildings	<u>W. Osterhaus</u>	New !	2005	Guide
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TC 3-39 - (Y. Koga reported) Discomfort Glare from Windows - (Osterhaus) - Chairman was not present, but a committee member reported that work is progressing slowly. They hope to move forward while the chairman is on study leave in Freiburg at the Fraunhofer Institute. J. Veitch offered to send him the contact information for Peter Ngai, chairman of the IESNA Quality of the Visual Environment committee, to establish a link and prevent duplicate efforts. (Canadian member: R. Topalova)

4. Reporterships

<u>R3-02</u>	Stage and studio lighting	K.R.Ackerman	2005	Expos
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R 3-02 (Ackerman) - This reportership has to do with SHOWLIGHT, which had been an effort sponsored by CIE-UK. That relationship has changed and so it's not clear if this is really a CIE reportership at all, or whether some other kind of liaison with the stage lighting community would work better.

<u>R3-10</u>	Maintenance of indoor lighting	<u>L.Bedocs</u>	2003	Report
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R3-10 (Bedocs) - Reports that the document CIE Pub, 97 is widely cited, but does need updating and expansion to consider lamp disposal issues. He will propose a new TC to do this (see below).

<u>R3-13</u>	Lighting vocabulary	<u>Y.Koga</u>	1996	2004	Publication
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R3-13 (Koga) - Has a draft document for the ILV, which is currently in the hands of a few reviewers before going to the division as a whole for review. Christine Hermann at CIE CB has Clay Belcher's work, and will send it to Y. Koga to be included.

R 3-15 (Fontoynt for Simos) - Draft spreadsheet has been circulated. There was discussion about changing the structure to make the distinction between standards and recommendations clearer. Canada/US information isn't yet in because J. Veitch didn't follow through to provide it. Chairman wants to complete work, resign in 2004. It would be desirable to have this kept up to date, but no solution was found at the meeting.

<u>R3-17</u>	Calculation of utilisation factors	<u>R.Topalova</u>	1998	2003	Review
<p>R 3-17 - Presented her draft report on harmonizing utilization factors. This is a hot topic for a CEN working group, and Axel Stockman has done some work on this. Right now there are 9 different systems in use in Europe, but there's a proposal for a new UF system that is an extension of the old CIE system with better prediction at low room factors. Topalova's report will remain a draft until the CEN document is completed, when it will incorporate new information from Stockman's report. (Canadian member: R. Topalova)</p>					

5. New Business

New committees/reporterships/liaisons

- TC 3-39 (W. Osterhous, NZ) – “Discomfort Glare from Daylight in Buildings”. To review existing discomfort & glare assessment methods with respect to their suitability to daylight glare
- TC 3-40 (Bedocs) - Maintenance - proposed new TC will revise Publication 97.
- TC 3-41 (Ne'eman) - “Visual quality of display in museums” to follow up work just completed.
- Reportership on overhead glare - T. K. McGowan was suggested for this, but he was not present to respond.
- Reportership on lighting and the elderly - Geoff Cook will act as a link to a Society of Light and Lighting endeavour on this topic
- Bedocs would particularly like someone to take on a revision of Publication 29.2 to extract guidance for applications, to show how to go from the minimum standard to providing excitement in a space. Hy Kaplan volunteered to act as a reporter on this and provide an interim report in 2004. It might turn into a TC.
- A reportership on the acceptance of controls and dynamic changes of light will be undertaken by P. Dehoff (Austria).
- J. Veitch suggested that a formal letter be sent from CIE DD3, to IESNA, proposing a liaison be established. We can consider who it would be once it was established. The reason is that we have liaisons with ISO and CEN standards-writing committees, why not also IESNA?

General discussion

DD3 opened a discussion on future needs. Topics discussed were:

- Providing design guidance - Should we do this in addition to the technical reports we usually produce? Can we do so at a price to compete with CIBSE, IESNA, etc.? No one volunteered to take on any of this task.

- Contrast rendering factor - W. Julian thinks it's being ignored, or at least that it is not well presented in publications 19.21/19.22 (Blackwell). Is there enthusiasm for re-addressing this topic?
- DD3 asked if there was still agreement that energy management should NOT form part of the D3 work. There was discussion on avoiding the issue of setting energy limits (e.g., don't go down the path of ASHRAE/IESNA 90.1), but yet not avoiding obvious D3 issues like controls, acceptance, daylighting for energy savings.
- There was discussion of a need to have a time set aside at each meeting for a formal review of D3 documents, to decide which might need revision, withdrawal. This seems to be likely to happen, although some of the preparatory work will fall to the ADD3's.
- Glass buildings have thermal as well as daylighting issues, as well as a separate issue related to night-time appearance. Jan Ejhed would like CIE to provide design guidance for architects on these issues and trade-offs. Jonathan David reported that there will soon be a CIBSE Society for Façade Engineering, which might be a group that could liaise, help to do this. (No action was taken).



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Canadian Division Members' Reports

CNC/CIE 48th Annual Meeting

2003-October-24

CIE Division 4

Lighting and Signalling for Transport

File/Dossier	33-1010-145-7
Encl. / P. J.	
Dir. to / Trans. A	
Reviewed by / Clas. par	SM
Forwarded to /	
Disposal /	

Report on the Activities of Division 4 "Lighting and Signalling in Transport" in the Years 2002 and 2003

Report at the CIE/CNC meeting on October 24, 2003 in Montreal, Quebec

Dr. W. Adrian

The Division comprises 21 active committees. Seven of these have finished their reports. One of these reports, that on "Lighting of Roads for Motor and Pedestrians" will be combined with the document on calculation (TC 4-24).

The proposed incorporation of "Tunnel Lighting" to form a comprehensive handbook appears to be too time consuming, so that it would delay the publication of the whole Road lighting document. Due to health reasons the author could neither attend the Annual Division 4 meeting nor the quadrennial CIE – Session in San Diego in July 03. This report is based on my active involvement in the committee on Tunnel Lighting and in TC 4-36 "Visibility design for Roadway Lighting" and beside that on second hand information by colleagues and minutes of several TC's that had a meeting in San Diego.

In TC 4-35 Tunnel-lighting, a step towards completion of the 9th. Tunnel draft report has been achieved. With 12 of 7 votes with 6 abstains the members agreed to adopt the Lseq-method to determine the necessary luminance in the entrance zone which has been prevented in the past. However prior experience showed that decisions have often been overturned, and I am reluctant to make any predictions regarding a soon completion of the report. It seems that we are underway to agree on a draft that contains the French suggestions. An agreement on the influence of the windscreen on the driver adaptation seems possible. The windscreen luminance was found to be between 30 and >100cd/m² which is not as high as formerly predicted. At last, the Tunnel lighting document has still scientific hurdles to overcome. However the suggested method requires an iterative process to calculate the luminance in the Tunnel entrance until the required contrast of the target is reached. A Canadian expert warned not to chose such a complicated method and to try to raise it to a standard.

TC 4-26 "Systems" for measurement of photometric quantities of Road Lighting Installations". The very active chairman G. Rossi, Italy, held a meeting in San Diego. Due to his own developments of a mobile photometer for dynamic data collection, a report on such systems is well underway. The incomplete parts of the guide will be prepared in the next month incorporating the requirements of TC 4-24 and TC 4-35.

- TC 4-27 "In-service visibility requirements for road markings". P. Walraven and K. Soerensen feel that there is a need for a CIE-publication. No meeting took place and nothing happened in the meantime.
- TC 4-29 This committee remains inactive as ISO-Standards on road traffic lights have been published. The development of very efficient LED's, which are best suited for traffic lights, will soon make a revision of the standards necessary.
- TC 4-33 "Discomfort Glare in Road Lighting". The chairman, H.-J. Schmidt-Clausen, Germany, called a meeting at which the presently available descriptions of discomfort glare have been elaborately presented. Formulae exist for road lighting installations and for discomfort glare by automotive head-lighting, which have very different forms. It will be attempted to find a common basis for both descriptive terms that could serve for recommendations for discomfort glare evaluation. No progress has been made since the Istanbul meeting.
- TC 4-36 "Visibility Design for Roadway Lighting". The 2nd draft document on visibility prepared by a number of experts serving on the committee chaired by R. Stark, USA was distributed among the members. It was supported by 6 members and 4 felt that it was still incomplete. An amended version will be presented at the next meeting. It is expected that the Committee follows the suggestions contained in the American Standard RP-8, which was recently released.
- TC 4-38 "Daytime requirements for roadway signs". At the Torino meeting the committee chaired by T. Schnell decided to reorganize the 3rd draft report to better structure it in order to comply with TC 4-40 as these 2 committees work on related matters.
- TC 4-40 "Requirements for retro-reflective traffic signs". The chairman, J. Rennilson, resigned and left it to P. Carlson to continue the work. Four working groups study specific issues which will form the basis of an overall report. Considerable progress has been made, and the groups seems to work very well. Another interim meeting took place in September 2002 in Darmstadt, Germany. Significant changes to the previous draft report included also new measurements of dirty head lamps. The geometrical location of the signs are set to -6 to +6 degrees horizontal and 0 to 6 degrees vertical. An overlay of the positions of traffic signs above the horizontal allowed to read the amount of light available for the 3 locations of signs (left, right and overhead). This was done at intervals of 50 meters from 50 to 250m and are contained in the present draft.
- TC 4-41 "Crime and lighting". K. Painter called a meeting. A remarkable amount of data have been collected that are presently condensed in a report she called "Toolkit" how to evaluate the effect of street lighting on crime and fear of crime. Additions and changes will be made to the "Toolkit".

- R 4-14 "Road lighting and accidents". B. Bijelland of Norway has compiled a great many data which are contained in a Norwegian report. The content was presented at the meeting. It will be translated into English and made available to Div. 4. No further details are known.

Other written reports from reporters

- R 4-22 The use of LEDs in road transport. Due to the rapid development of the LED-technology the report that was written so far had constantly to be changed and updated. The "intensity and vision cone" have reached a level that renders LEDs the eminent light source together with the efficiency and life-time that is combined with low maintenance. Investigations showed that there is no difference with Tungsten signals of the same intensity neither in conspicuity, reaction time or detectability. Meanwhile multi-colour LEDs are available that allow for signals that change colour.

Questions had been repeated to the CIE suggesting to look into the feasibility of defining a set of eye sensitivity functions in the mesopic range to allow for calculations of road lighting levels. It is **unintelligible** that no one seems to know that the CIE has in 1967 already recommended a set of functions for *preliminary use*. They were based on measurements of many researchers and contained curves obtained by interpolation. They proved to be not too bad as Kokoschka showed, who reinvestigated in 1970 to 74 systematically the eye sensitivity including the influence of field size. The results suggest to adopt the $V(\lambda)$ 10° curve as initial photopic function. The mesopic sensitivity functions form the basis for the mesopic photometry system that is described in DIN 5031 Part 1 and 2 and is used for 17 years. It is time that we learn it and not try to reinvent the wheel. Nothing has been discussed in San Diego on that topic.

Waterloo, September 28, 2003



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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Canadian National Committee Comité National Canadien



Canadian Division Members' Reports

CNC/CIE 48th Annual Meeting

2003-October-24

CIE Division 5

Exterior Lighting and Other Applications

1**25th Session****25 June –2 July 2003**

Hopefully by now all of you who plan to attend the 25th Session will have received the Final Circular either by post or from the CIE Web Site.

- 1.1** The Division 5 papers are all being presented on **Friday 27 June** in a morning session chaired by our Director Jozsef Horvath.

The four papers will be preceded at 09.00 hr. by an Invited Paper from

G. Brainard (US) entitled: *Photoreception for the biological and behavioural effects of light in humans: Relevance to architectural lighting.*

The Divisional Papers that follow after a break at 09.50 are as follows

Lecocq J. (FR) *Minimising sky glow and obtrusive light: an unexpected way to improve the global efficiency of a lighting installation.*

Fukuda M (JP) *Study on Modelling Effect of the human face on Monitoring Images.*

Alvarez d. Castillo (US) *Preserving our Nighttime Environment: Global Activities*

Gillet M. (BE) *Rigorous Evaluation of the total upward flux from outdoor lighting installations (the case of roadway lighting)*

- 1.2 The Division meeting** will take place on the morning of **Monday 30th June** to be followed in the afternoon by a joint CIE/IAU/IDA **Workshop** on:
“Obtrusive Light – The measurement and limitation of Sky Glow”

As you will be aware our Director, Dr Jozsef Horvath, having been our leading light for the past two sessions, cannot proceed to another term and we have therefore to find a new Director. Jozsef has persuaded your Secretary [Nigel Pollard (UK)] to put his name forward as one choice, although as there is already one UK Division Director (Teresa Goodman - Division 2), it would be good to have someone from an unrepresented Country. If Nigel were elected, we would also have to find a new Secretary – although one who could run a Web site would possibly be a bonus we could do with even if he was not elected !

Please think about these issues carefully, your Secretary believes the future of our Division depends on more members being willing to take on such responsibilities.

1.3 Technical (TC) meetings

The following TC Chairs have either arranged meetings, or have expressed a desire to hold one if circumstances permit. All members wishing to attend such meetings are advised to let their chair know as soon as possible, and the dates they are available:

TC 5.19	Emergency Lighting	(Bruno Weis)	30/6 pm?
TC 5.20	Sports Lighting	(Tom Lemons)	27/6 16.00-18-00
TC 5.21	City Beautification	(Mujgan Sozen-Serephanogu)	?

Any other TC Chairs wishing to hold meetings – please make contact

2 Divisional Meeting 2002

Our meeting last year was held in the elegant arcaded Italian city of Torino to which we owe the great thanks of **Paulo Soarodo** and **Gussippie Rossi** for their excellent organisation.

As well as the technical side, held at the “Istituto Elettrotecnico Nazionale” we were extended generous hospitality by the Italian Lighting Industry to a dinner and for those of us able to accept the Division 4 invitation to their TC 4.11 meeting on the Sunday, a most pleasant day was spent up in the Alps around “Monte Bianco”. (For photos of TC 4.11 see the Division 4 web site)

Three TC's held meetings and 14no. delegates stayed on to attend the Divisional meeting. The TC's that met were:

TC 5-19	Emergency Lighting
TC 5-20	Guide for Sports Lighting
TC 5-21	City Beautification

Further details are given in the minutes of both those TC's and the Divisional meeting that you should have already received.

3. Roster

The latest Roster, dated March 2003 is attached.

Please check your own details and advise the Secretary of any corrections required, also of any more E-mail addresses.

4. News on TCs.

TC 5.12	<u>Obtrusive Light</u> This has now been published as CIE Pub. 150:2003 The TC will be formally closed at the next meeting, although it may be thought desirable to link it in some form with TC 4.21.
TC 5.14	<u>Maintenance of Outdoor Lighting Systems</u> This is currently out for Divisional voting.
TC 5.16	<u>Exterior Security Lighting of Private Properties</u> Nothing to Report
TC 5-19	<u>Emergency Lighting</u> 2 nd Draft now available, actions on which are being collated by the chairman for further progress at next meeting in San Diego.
TC 5.20	<u>Sports Lighting</u> Following the discussions on the 2 nd Draft in Torino, minutes have been sent to TC members for action and a date set for a further meeting in San Diego.
TC 5.21	<u>City Beautification</u> 2 nd Draft (30/09/02) now available. Chairwoman to examine in relation to comments received in Torino. Outcome and form of Draft 3 to be discussed at next meeting in San Diego.

5. Other News

We welcome **Korea** as a new member of the CIE family, and particularly their Division 5 member: **Jung Keol Ham** and look forward to meeting him at further meetings.

6. Date of next Meeting

Monday 30th June 2003, San Diego, California, USA during the 25th CIE Session

CIE DIVISION 5

Minutes of the Division Meeting

Monday, 30 June 2003, 10 AM

Town & Country Hotel

San Diego, CA, USA

Present:	Jose Luiz Pimenta	Brazil	(m)	
	K. Sokansky	Czech Republic		
	Hans J. Jacobsen	Denmark		
	Henri Juslen	Finland	(m)	
	Jacques Lecocq	France	(m)	
	Bernard Duval	France		
	Vincent Laganier	France		
	Bruno Weis	Germany	(m)	Chair, TC 5-19
	M. Seidl	Germany		
	Peter Schwarcz	Hungary		Chair, TC 5-16
	Gyula Major	Hungary		
	Kohji Kawakami	Japan	(m)	
	A. Tanaka	Japan		
	Anseop Choi	Korea		
	Wort van Bommel	Netherlands		CIE Pres. Elect.
	Eirik M. Bjelland	Norway	(m)	
	Marko Bizjak	Slovenia		
	Dennis Culley	South Africa	(m)	
	Nigel E. Pollard	UK		Div. 5 Director, Chair TC 5-12 & TC 5-14
	Jonathan Daniel	UK		
	Tom Lemons	USA	(m)	Sec. Div. 5, Chair TC 5-20
	Elizabeth Alvarez	USA		
	David Crawford	USA		
	Mary Crawford	USA		
	Terry McGowan	USA		
	Christine Hermann			CIE CB

Note: (m) = Division voting member

1. OPENING OF THE MEETING

CIE Pres. Elect. Van Bommel opened the meeting to introduce the new Division 5 Director, Nigel Pollard since a business conflict had made it impossible for outgoing Div. 5 Director Jozsef Horvath to attend this meeting. Nigel Pollard welcomed the members and guests and appointed Tom Lemons as Division Secretary. He further noted that he was searching for a Division Editor.

Apologies were received from:

Jozef Horvath	Hungary	Div. 5 Director
Pranab Bandyopadhyay	India	Division Editor
Eduardo Manzano	Argentina	
Patrick Rombauts	Belgium	(m)
Jacques Roberge	Canada	(m)
C. D. Spiering	Netherlands	(m)
J-H. Audestad	Norway	(m)
Hans-Henrk Bjorset	Norway	Chair TC 5-08
Marek Lasinski	Poland	(m)
Andrej Orgulan	Slovenia	(m)

Changes in membership:

HONG KONG	Simon Chung replaces Gary Ko
KOREA	Jung Keol Ham (Welcome new country and new member)
NORWAY:	Eirik Bjelland replaces J-H. Audestad
Slovenia	Andrej Orgulan replaces Smiljan Neumuller

2. MINUTES OF LAST MEETING IN TORINO, ITALY, 1 OCTOBER 2002

The minutes of the Torino meeting were approved as distributed

3. DIRECTOR'S REPORT

A report by Division 5 Director had been previously circulated. In addition it was noted:

- a. The CIE Board has requested that we provide terms and definitions for a new CIE Vocabulary by 1 July 2004.

ACTION – All Members

- b. We are also requested to provide suggested topics for CIE Symposia.

ACTION – All Members

4. SECRETARY'S REPORT

The minutes of the last meeting in Torino in September 2002 had been published together with an *Activity Report* in March 2003. An amended Roster together with a list of TC members had been sent out and the CB were updating the Division web site as and when requested.

5. EDITOR'S REPORT

In the past year the following drafts were received, which were duly forwarded to the CB by the Editor:

- a. TC 5-12 *Obtrusive Light*
- b. TC 5-14 *Maintenance of Outdoor Lighting Systems*

Also received was the 2nd draft on TC 5-19 *Emergency Lighting*. Positive comments on the same were forwarded to Dr. Bruno Weis.

Publications:

- a. TC 5-12 has been published as CIE # 150-2003 *Guide on the Limitation of the Effects of Obstrusive Light for Outdoor Lighting Installations*.
- b. TC 5-14 Final Draft on *Maintenance of Outdoor Lighting Systems* is now accepted for publication.

The Editor has requested the Div. Director to kindly elect a new Div. Editor due to some personal difficulties experienced by the Editor. He will continue to be the Director of the CIE India Committee and the Indian Member in Division 5. The Editor is taking this opportunity to sincerely thank the Div. Director, Div. Secretary, all the TC Chairmen, other Members of Division 5 and the CIE CB for their tremendous support received in the past eight years. He has worked very closely with most of these and enjoyed their friendship for sixteen years (since CIE Venice).

6. TECHNICAL COMMITTEE REPORTS

TC 5-08 *Lighting of Off-shore Gas and Oil Structures* (H-H Bjorset)

The material prepared to date needs further revision which will be accomplished by a group assembled by Eirik Bjelland. Upon completion the resultant report will be circulated to the Division for comment and approval.

ACTION – E. Bjelland

TC 5-11 Practical Design Guidelines for Sports Lighting Installations for Television and Film (J. Horvath)

(This report was made for J. Horvath by G. Major) The work on this report will be finalized and sent to the Division for review and approval by the end of August, 2003.

ACTION – J. Horvath & G. Major

TC 5-12 Obtrusive Light (N. Pollard)

This work is completed and CIE Publication # 150 has been published.

TC 5-13 CIE/ISO Standard for the Lighting of Exterior Working Areas (J. Horvath)

(This report was made for J. Horvath by P. Schwarcz.) The proposed CIE/CEN/ISO Standard (CIE DS 015/E:2002) has been circulated for comment but some concerns voiced by Japan and the USA have still to be considered. The CIE Board has suggested that it is not desirable for a CEN and CIE Standard to be different which was the reason for considering the acceptance of the CEN and CIE committees working together.

T. Lemons suggested that before the new draft can be considered as a replacement Standard for the one previously prepared by TC 5-13, the CIE must prepare a Code of Procedure for the process to be used to approve a Standard not prepared by a CIE Committee. He further identified that there is presently a Code of Procedure for the preparation of CIE Standards that is not being followed for the CEN Standard approval. This issue was raised in a letter sent by the USA which some unfortunately considered inappropriate because it is only an organizational comment.

K. Kawakami spoke to indicate that Japan believes the process being used to approve this Standard is wrong.

A study group between the CEN/TC169 and CIE/TC 5-13 was formed with a request for representatives from at least Finland, UK, Japan and USA to represent the CIE to see if the comments received to date can be resolved. It was proposed that this meeting be held on 28 & 29 August 2003 in Vienna. (Due to time limitation it has since been confirmed that the August meeting in Vienna will be a CEN/TC169 meeting only and that a newly proposed joint meeting, possibly in Prague, will be held later in October.)

ACTION – Div. Dir. & J. Horvath

TC 5-14 Maintenance of Outdoor Lighting Systems (N. Pollard)

This report has been approved by the committee and Division and is now being edited prior to being published.

ACTION – Div. Editor

TC 5-15 Tolerances in Lighting Design (W. Julian)

No report received so no action taken.

TC 5-16 Exterior Security Lighting of Private Properties (P. Schwarcz)

This committee met in San Diego with 13 people present but few of them were committee members. A Standard from South Africa was reviewed and it provided much helpful information. The IESNA (USA) has a Design Guide for *Security Lighting* which was reviewed but it is not a Standard. The committee has now determined that a new Terms of Reference should be prepared for this Committee. A third draft is now being prepared and will be distributed to the committee in October/November 2003. It was noted that additional ACTIVE* committee members are needed.

***ACTION – All Members ACTION – P. Schwarcz**

TC 5-18 Practical Design Guidelines for the lighting of Exterior Work Areas (P. Bandyopadhyay)

No report and no committee meeting in two years. The Div. Director will contact the chairman to determine if this committee should continue or be terminated?

ACTION – Div. Dir. & P. Bandyopadhyay

TC 5-19 Emergency Lighting (B. Weis)

The committee met in San Diego and a Final Draft will now be prepared and distributed in August 2003. If approved, the report will go to the editor and then to the Division for approval. The chairman has also been asked to provide emergency lighting information for the TC 5-20 report.

ACTION – B. Weis

TC 5-20 Guide for Sports Lighting (T. Lemons)

The committee met in San Diego to review the comments made for the Third Draft of this Guide. A Forth Draft will now be prepared and distributed by 1 November 2003. It is expected that a Final Draft will not be prepared until the end of 2004.

ACTION – T. Lemons

TC 5-21 City Beautification (M. Serfhanoglu Sozen)

N. Pollard reported for the chairperson, who unfortunately could not attend the San Diego Session, about the committee meeting held the previous week. At that meeting a Third Draft of the report was reviewed and a Forth Draft is expected this fall. Sermin Onaygil who attended the meeting and took notes, will pass them on to the Chairperson on her return to Turkey.

ACTION –M. Serfhanglu Sozen

7. REPORTERS' REPORTS

R 5-05 Semi-cylindrical Illuminance (P. Rombauts)

N. Pollard reported that the draft report previously received has not yet been finalized. Reported, P. Rombauts, will be contacted to obtain it.

ACTION – Div. Dir. & P. Rombauts

8. LIAISON OFFICER'S REPORTS

N. Pollard indicated that he will try to establish liaison with all sports organizations and report on the progress at next year's meeting.

ACTION – Div. Dir.

9. WORK PROGRAMS

TCs to be desolveded.

TC 5-12	Work completed and committee desolved.
TC 5-15	Committee desolved for lack of activity.
TC 5-18	The committee must show activity prior to the next meeting or it is desolved.

New TCs

None proposed.

Reporterships

Proposed that S. Davis (USA) be accepted as the Reporter for *Lighting and ECCO Systems*. Motion made and passed.

Proposed that J. Pimenta (Brazil) be accepted as the Reporter for *Lighting Controls/Visual Effects*. Motion made and passed.

Symposia

Proposed that the CIE and IDA conduct joint Symposia on *Obstrusive Light/Sky Glow* in 2004 at 2 or 3 locations such as USA (Tuson), Europe and Brazil.

10. DATE AND VENUE OF NEXT MEETINGS

Divisions 4 and 5 have been invited to meet in September, 2004 in San Polo, Brazil with the arrangements being made by J. Pimenat. Motion made and passed.

ACTION – Div. Dir. & J. Piment

Division 5 will meet at the time of the midterm meeting in Leon, Spain 13-20 May, 2005.

Division 5 meeting in 2006 is not yet known.

Division 5 will meet at the 26th Session of the CIE, Beijing, China, 27 June- 4 July 2006.

11. OTHER BUSINESS

Vocabulary – The Division Director and Division Secretary will initially work to prepare the material needed by 1 July 2004. All Members are asked to provide them suggested terms.

ACTION – Div. Dir., Sec. & All Members

Proposal – A suggestion has been made for consideration by the CIE Board to combine Divisions 4 and 5 as part of long range planning.

12. CLOSE OF THE MEETING

The meeting was adjourned at 12:19 PM.

Minutes prepared by:
Thomas M. Lemons
USA



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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Canadian Division Members' Reports

CNC/CIE 48th Annual Meeting

2003-October-24

CIE Division 6

Photobiology and Photochemistry

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

**Division 6
Photobiologie et Photochimie
Photobiology and Photochemistry
Photobiologie Und Photochemie**

**Report to the Canadian National Committee
October 24, 2003**

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1. Introduction.

The Commission Internationale de L'Éclairage (CIE) Division 6 met in San Diego, California for its annual meeting in conjunction during the 25th Session of the CIE. Members representing 15 countries were present at the meeting.

The Division Terms of Reference are to study and evaluate the effects of optical radiation on biological and photochemical systems (exclusive of vision).

2. Division Officers.

The Division Officers for the coming session are:

Director: (New)	Dr. Ann R. Webb (UK)
Associate Director, Photobiological Standards: (New)	Dr. Kohtaro Kohmoto (JP)
Associate Director, Photobiological Standards & Measurements:	Dr. Karl Schulmeister (AT)
Associate Director, Photodermatology:	Dr. Jean-Pierre Césarini (FR) for at least one year. (With two potential successors Dr. Gillian Murphy (RI, Dublin) and Dr. Honigsmann (AU).)
Secretary: (New)	Mr. Stephen Wengraitis (USA)
Editor:	Dr. Myron L. Wolbarsht (USA)

3. Technical Committee Annual Meeting progress reports.

TC 6-08 Guidelines for Obtaining Action Spectra.

Interim chair Erin Chaney has made good progress with the work of the TC but now wishes to pass on this role. David Sliney will take over as Chair, subject to Board approval. Current state of the effort was presented during the week's poster sessions.

TC 6-11 Systemic Effects of Optical Radiation on the Human.

Jennifer Veitch reported that the Committee had a fluctuating membership, but a draft report had been submitted to national delegates for ballot. The deadline for voting is September and the report can be seen on the CIE web site.

Chair: Jennifer Veitch (Canada).

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

A draft report has been expected and not yet appeared. D6 Director David Sliney will follow this up.

Chair: David Jack Lund (USA).

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

There are two positions within the TC on this subject. There is a weight of evidence suggesting that UVB is the causal agent, but there may also be another UVA mechanism. Both positions will be represented in a draft report.

Chair: David H. Sliney (USA).

TC 6-23 Develop Generalised Action Spectra for Plant Responses to Wavebands from 280 to 1100 nm.

Martyn Caldwell has agreed to take over as Chair of this TC, which has been inactive for some time, subject to board approval and agreement of the current chair, Donald Krizek.

TC 6-24 Sunscreen and UVA.

TC members met in San Diego, with the discussion also encompassing the related TCs 6-28 and 6-31. Jean-Pierre Césarini noted that the report for this TC was virtually completed and would soon be ready for the approval process.

Chair: Jean-Pierre Césarini (France).

TC 6-25 Spectral Weighting of Solar Ultraviolet Radiation.

Final report published in CIE 151, 2003.

Chair: Stephen Wengraitis (USA).

TC 6-28 Standardisation of Sunscreen Testing.

Jean-Pierre Césarini reported that a request for methods of sunscreen testing from the TCC had produced 5 different methods, but no agreement on which method would be acceptable as a standard. The next process will be to write a state of the art review of the 5 methods in current practice and proceed from there.

Chair: Jean-Pierre Césarini (France).

TC 6-29 UV Protection and Clothing.

TC members met in San Diego. The draft report was updated and approved. A number of actions were allocated to members to provide information to complete parts of the report. It was agreed that protection factors above 50 would be useful for people with photoallergies or sun sensitising medication and the report would reflect this. New recent figures and references were also added. Chair: Peter Gies (Australia).

TC 6-31 Immediate Pigment Darkening.

Jean-Pierre Césarini is ready to write the report and hopes to circulate it in the near future.

Chair: Jean-Pierre Césarini (France).

TC 6-32 Action Spectrum for Photocarcinogenesis (Non-Melanoma Skin Cancers)

Report published with TC 6-34. Action spectrum is also published in the scientific literature as the van der Leun-de Gruijl-Forbes curve. Standard needs to be published from this TC.

Chair: Paul Donald Forbes (USA).

Note: Jean-Pierre Césarini reported that IEC TC-61 MT-16 "Standardisation of use of UV sources in social and domestic use of UV for tanning" was using the action spectrum of TC 6-32 to define the total number of sessions per year (chronic damage), and CIE erythema for determining the length of the first and subsequent sessions (acute damage). The TC 6-32 action spectrum has also been adopted by ICNIRP and EUROSkin.

TC 6-33 Photoimmunological Effects Mediated through the Skin.

A report was sent to CB about 6 years ago but was considered too technical and was partially redrafted. Jean-Pierre Césarini will assist in translating the original document into more-approachable lay language. The chair plans to meet possibly with David Sliney to discuss editorial issues in the document, and to add new ground-breaking material in this area relating to the evolution of melanocytic skin cancer.

Chair: E. C. de Fabo (USA).

TC 6-34 Testing Protocols for Photocarcinogenesis Safety Testing.

Published in CIE 138, 2000. See TC 6-32

Chair: P. Donald Forbes (USA)

TC 6-35 Present State UVR Disinfection.

Richard Vincent informed the meeting that the report is complete and is in the D6 balloting process.

Chair: Richard L. Vincent (USA).

TC 6-36 UV Protective Qualities of Shading Materials.

Natasha van Tonder reported that a literature review had been completed in Istanbul and a measurement programme undertaken. The next step will be to develop and validate a mathematical model to predict shade ratios under different structures. This phase of work is scheduled for completion by the end of the year. A technical report will be produced first, followed by a standard.

Chair: Natasha van Tonder (South Africa).

TC 6-37 Light and Retinal Disease.

There are two opposing scientific views on this subject that must be represented. The document was recently reviewed by Dr. Maria Ines de Wilde and Prof. Joan Roberts. Kjell Daae from Norway was invited to join the TC.

Chair: David H. Sliney (USA).

TC 6-39 UV Radiation at Lighted Environments.

Kohtaro Kohmoto reported that the current draft was discussed in Istanbul, and has a draft report containing many useful lamp spectra. He was asked to consider incorporating some of the work from TC 6-06 that was never published and was closed in 1991.

Chair: Kohtaro Kohmoto (Japan).

TC 6-41 A Proposed Global UV-Index.

In the final ballot for a standard (although already in use as such).

Chair: E. C. Weatherhead (USA).

TC 6-43 UV Water Disinfection.

Dr. Cabaj (recently appointed as TC chair) is very active in this field but was not present at the meeting to report.

Chair: Dr. Cabaj (India).

TC 6-44 Illuminators for Treatment of Infant Hyperbilirubinemia.

Myron Wolbarsht has recently reported that a TC meeting on this subject was held in Lake Buena Vista, Florida in November 2002. Studies performed in Florence, Italy were discussed. A draft report is expected soon.

Chair: Myron L. Wolbarsht (USA).

TC 6-45 Optical Radiation Hazard Measurements in the Workspace.

Parallel work on this subject within CEN has slowed the work of this TC. UV work is done, visible and IR are almost complete. Standards are already being quoted in Germany and the work needs to be pushed to completion (role for Karl Schulmeister to link the two documents?). The CIE and CEN documents have slightly different purposes: The CIE document is intended as a background report while the CEN document is more prescriptive and aimed at measurement technology. The two documents should send the same message and use the same vocabulary.

Chair: Robert Angelo (USA)

TC 6-46 Standardised Action Spectrum for UV Disinfection.

Petra Rettberg should be formally approved as the new chair - to be taken to the Board meeting.

Chair: Edward Nardell (USA)

TC 6-47 Photobiological Lamp Safety Standard.

This has been published as a standard (CIE Std S 009/E: 2002), but has not yet been adopted by IEC (TC 34). The goal is to have a joint CIE/IEC standard that is globally accepted but there are differences between the two bodies in respect of defining risk groups and the resulting responsibilities for classifying and labelling products. Michael Seidl is to follow up on points of discrepancy.

Chair: Rolf Bergman (USA).

TC 6-48 Typical Minimal Erythema Doses.

Review of research results is underway. This report should provide background information for IEC work on sunbeds (i.e. how much UV exposure is required to get and maintain a tan).

Chair: Janusz Z. Beer (USA).

TC 6-50 Photodegradation of Pharmaceuticals.

The new TCC (Steven Baertschii) has spoken with David Sliney about recent progress. Uli Osterwalder was asked to liaise with this TC.

Chair: Steven W. Baertschii (USA).

TC 6-51 Standardised Solar Simulator Spectral Irradiance for Sunscreen Testing.

In a joint meeting with TC 6-28, in San Diego Robert Sayre was asked to expand the scope of this TC to cover phototoxicity testing.

Chair: Robert M. Sayre (USA). (This TC is working on a standard.)

TC 6-52 Proper Measurement of Passive UV Air Disinfection Sources.

Richard Vincent reported that a Lighting Research Centre publication on this subject had been completed and he was now forming a TC to work on the CIE report.

Chair: Richard Vincent (USA)

TC 6-53 Personal Dosimetry for UV Radiation.

The work is on-going.

Chair: Gerda Horneck (Germany)

TC 6-54 Standardised Action Spectrum for Vitamin D Synthesis in Human Skin.

A draft report has been circulated within the TC. There is a need for numerical values as well as the pictorial action spectrum originally published. The theoretical action spectrum could also be calculated using chemical kinetics and skin optics (Irina Terentskaya). This could be compared with the original experimental work and possibly clarify the action spectrum at its ends. Animal studies could be used to help determine the extreme endpoints.

Chair: Michael F. Holick (USA)

TC 6-55 Light Emitting Diodes

There is a problem as to whether to classify an LED as a laser or a lamp for safety evaluations - both have merits and both present problems, depending on how the LEDs are arranged and used. In Europe LEDs have to be classified as lasers due to the IEC low voltage regulation. A report of a comparison of laser/lamp and CIE/IEC regulations (with some surprising results) was circulated to the TC members, but there has been no response to date. There is a call for new members of this TC.

Chair: Werner Horak (Germany)

TC 6-56 Infrared Warming Cabins

A TC meeting was held in San Diego. A report is nearing completion but it was suggested that some Japanese scientists be invited to join the committee as Japan is where IR cabins are widely used, and where many of the health claims (unsubstantiated in the West) originate.

Chair: Jan Stolwijk (USA)

4. Proposals for Dissolution of TCs and Reporterships

Reports from the following TCs have all been published and should be closed:

- TC 6-14 Blue Light Hazard
- TC 6-16 Psychobiological Effects of Lighting
- TC 6-25 Spectral Weighting of Solar Ultraviolet Radiation

TC 6-42 Lighting Aspects for Plant Growth in Controlled Environments, is recommended for closure, with the agreement of the TCC Seidlitz first.

TC 6-08 Guidelines for Obtaining Action Spectra, Chair is changed to David Sliney.

TC 6-23 Develop Generalized Action Spectra for Plant Responses to Wavebands from 280 to 1100 nm, Chair should be changed to Martyn Caldwell, with the agreement of the current chair Donald Krizek.

5. Proposals for New TCs and Reporterships.

The following new TC was established:

TC 6-57(S) Standardization of Terms and Action Spectra for Blue Light and Retinal Thermal Hazard Functions. Chair: Kohtaro Kohmoto (JP)

Terms of Reference: To prepare a draft CIE standard on the definitions and action spectra for two retinal hazard functions used in photobiological safety documents.

The following new Reportership was established:

UV absorbing clothing additives and changes with laundering to include measuring porosity (Uli Osterwalder, Switzerland)

Change in TC Chairmanship:

TC 6-08 Guidelines for Obtaining Action Spectra
New Chair: David Sliney (USA).

Proposed TC - UVC photocarcinogenesis from germicidal lamps. A TC Chair needs to be identified before this can be approved by the Board.

Proposed TC - Division 5 have approved a reportership on the Effects of (outdoor) lighting on Ecosystems, under the chairmanship of Scott Davis (USA). They seek D6 members for a potential TC on this subject and propose a joint meeting or workshop at the mid-session when the initial report should be available.

6. Future D6 Meetings

2004 - September/October:

An expert symposium on Light and Health is being proposed, probably at Bureau facilities in Vienna, and this would constitute the venue for the next D6 meeting. David Sliney will organise the Symposium and asks that he be notified of any potentially conflicting meetings.

2005 – May:

The Midterm Meeting of the General Assembly and the Board of Administration will be held in León, Spain. D6 may plan to meet there.

2007 – June:

The 26th Session will be held in Beijing.

7. Present Status of TCs

COMMITTEE NUMBER	COMMITTEE TITLE	STATUS
TC6-01	Actinic Effects of Optical Radiation on Man Chair: Sandor Ferenezi Report published in 1987 from Res Insti Techn Phys, Hungarian Academy of Sciences	COMPLETED
TC6-02	Reference UV-Erythema Action Spectrum Chair: Alistair McKinlay Report published in CIE Journal 611, 1987, CIE 106, 1993.	COMPLETED
TC6-03	Photo-Kerato-Conjunctivitis Chair: Bernhard Steck Report published in CIE Journal 511, 1986.	COMPLETED
TC6-04	Selected Photobiological Information Chair: Charles C.E. Meulemans No publication, data available; closed at Durban meeting in 1997.	CLOSED
TC6-05	Actinic Effects on Plants Chair: G.S. Sarytchev Report published in CIE Journal 612, 1987.	CLOSED
TC6-06	UV Actinic Sources of Relevance to Illuminating Engineering Chair: Kohtaro Kohmoto No publication, closed in 1991.	CLOSED
TC6-07	Recommendation of the Methods of Measurement of Optical Radiation in Terms of its Effects on the Corresponding Receivers Chair: G.S. Sarytchev No publication, transferred to TC 2-31.	TRANSFERED TO DIV. 2
TC6-08	Guidelines for Obtaining Action Spectra Chair: David Sliney (USA). Terms of Reference: Guidelines for Obtaining Action Spectra Definitions (detector, effective radiant quantities, responsivity, spectral responsivity, action spectra, threshold radiant exposure, threshold exposure period). Bunsen-Roscoe law; type of detectors; general relation between effect and irradiation; principles of obtaining action spectra; monochromatic irradiation; sources (random parameters); measurement of irradiance on the detector; measurement of the effect of irradiation. Background: 1998 - Draft circulated and comments received. 2002 - Additional editing and revision recently performed by Erin Chaney. 2003 - Interim chair Erin Chaney has made good progress with the work of the TC but now wishes to pass on this role. New Chair David Sliney	OPEN

TC6-09	Malignant Melanoma and Fluorescent Lighting Chair: Bernard Muel Report published in CIE Journal 711, 1988.	COMPLETED
TC6-10	Photobiological Effects on Human Skin Chair: Maxim Mutzhas Report published in CIE 103, 1993.	COMPLETED
TC6-11	Systemic Neuroendocrine Effects of Optical Radiation on the Human Chair: Jennifer Veitch; Institute for Research in Construction; NRC Canada, Bldg. M24, Room 322; Ottawa, Ontario; Canada; K1A 0R6. Tel: +1 (613) 993-9671; Fax: +1 (613) 954-3733; Email: jennifer.veitch@nrc.ca Members: Dr. George Brainard, G. van den Beld Advisory Members: Dr. Morris Waxier, Dr. Norman Rosenthal, Dr. Charmane Eastman, Dr. Michael Terman, Dr. Dave Dinges, Mr. Richard Vincent Terms of Reference: Provide the CIE with a concise summary document on the systemic effects of ocularly detected optical radiation with the relevant, key scientific references. Specifically the document will introduce the controlled laboratory and clinical studies on the effects of light on human physiology, mood and behavior. Studies on use of ocular light therapy for clinical disorders as well as for improving human adaptation to shift work and intercontinental jet travel will be discussed. How these new findings may change future architectural lighting strategies will be considered. Background: Initial master list was completed in 1991. Dr. Brainard revised his approach in 1995 to provide a general review, since the first document was much too large for a TC Report. DD6 recommended that it be replaced by a review of the current state of knowledge in this area, along with the original bibliography. The revision of the terms of reference was approved in New Delhi in 1995. Dr. Jennifer Veitch was appointed as chair, replacing Dr. Brainard. The committee prepared a draft report, based on Dr. Brainard's work, for a presentation in October 1999 at the joint meeting of the Canadian and U.S. National Committees in Toronto, Canada. A completed report was handed to the Division Director by the end of 1999. The report was coordinated with that of Dr. Kulier's TC6-16. It was suggested that CIE publish these two reports together with TC3-16 (Psychological Aspects of Lighting), to form a handbook of information on inter-related issues. A summary presentation on the draft report was made at the joint 1999 USNC-CNC technical conference. Discussions among those members present concluded that the final report should include photoimmunologic effects as well as neuroendocrine effects. The report was not to be an attempt to be comprehensive; rather, it would identify the current state of knowledge and areas for further exploration. The committee was committed to producing a draft report for the Division Director by 2000-Jun-30. 2002 – 3rd draft revised. Paper on this subject presented at the LRO conference on Lighting and Human Health. 2003 – The Chair reported that the Committee had a fluctuating membership, but a draft report had been submitted to national delegates for ballot. The deadline for voting was September 2003 and the report can be seen on the CIE web site. October 2003, report approved by Central Committee for publication.	OPEN
TC6-12	Phototesting of Skin Applications for Sun Protection Chair: Jean-Pierre Césarini Report published in CIE 90, 1991.	COMPLETED

TC6-13	Lighting Aspects of Large-Scale Plant Growing in Completely Protected Environments ("Dark Rooms") Chair: G.S. Sarytchev Closed for inactivity; work assumed by TC 6-42.	CLOSED, MERGED WITH TC6-42
TC6-14	The Blue Light Photochemical Retinal Hazard Chair: Kohtaro Kohmoto Report published in CIE 138, 2000. Standard work now being performed.	COMPLETED
TC6-15	A Computerized Approach to Reflection, Transmission, and Absorption Characteristics of the Human Eye Chair: David Jack Lund; 7914 A Drive; Building 176; Brooks AFB, TX 78235_-5138, USA; Tel (210) 536-4631; Fax (210) 536-3450; E-mail: Jack.Lund@brooks.af.mil Members: Not available. Terms of Reference: To design a working model, for the assessment of the actual amount of radiation reaching various eye structures. Background: 2000 - New chair appointed. Members sought. A draft report had been expected and not yet appeared. David Sliney will follow this up.	OPEN
TC6-16	Psychobiological Effects of Lighting Chair: Rikard Küller Published in CIE 139, 2001.	COMPLETED
TC6-17	Spatial and Temporal Variability of Radiation Exposure and Human Behavior Chair: Lucia R. Ronchi 1997 - Closed at Durban meeting, subject was discussed in a published document authored by Ronchi.	CLOSED
TC6-18	Evaluation of Potential Optical Hazards Associated with "Desk Top" Quartz Halogen Lamps Chair: Alistair F. McKinlay Published in CIE 103, 1993.	COMPLETED
TC6-19	Personal Dosimetry of UV-Radiation Chair: Joachim Barth Published in CIE 98, 1992.	COMPLETED
TC6-20	Phototoxicity in Domestic and Industrial Chair: Jean-Pierre Césarini; 83 Avenue Simon Bolivar; Foundation Rothchild; 25, Rue Manin; 75019 Paris, France; Tel: 011-33-1-480-36948; Fax: 011-33-1-480-36510; E-mail: jpcesarini@wanadoo.fr Members: Pr. J. Barth, Pr. F. Dall'Aqua, Pr. P. Thune, Mr. J. Unkovic. Terms of Reference: To define a ratio between the potential future and benefits of a given chemical versus the potential risk of phototoxicity and photoallergy. Background: 1994 - A complete file of phototoxic and photoallergic compounds has been completed. They have been classified in 3 categories corresponding to: high frequency, and low frequency. Meeting is scheduled during 1994, after publication of the results of the European Community Commission.	OPEN

TC6-21	<p>Cataractogenesis by Low-Level Exposure to Ambient Ultraviolet Radiation Chair: David H. Sliney; Commander, US Army CHPPM; MCHB-TS-OLO; Bldg. E-1950; APG, MD 21010 USA; Tel 410-436-3002; Fax: 410-436-5054; E-mail. David.Sliney@apg.amedd.army.mil Members: C. Barth, H. Taylor, S. Lerman, G. Perdriel, L. Ronchi, A. Medgyaszay, P. Sodenberg, R. Young. Terms of Reference: To evaluate the current biological and medical evidence relating to ultraviolet radiation cataract. Background: UV-B radiant energy has been shown to cause cataract in experimental animals, but the evidence for UV-A cataract is much less convincing. Animal and human studies only point to UV-B; biochemical studies suggest UV-A. Draft report revised in 1994 and again in 1995. Report updated in 1998. 2001 - Chair recently updated current draft. Presently trying to resolve different points of view.</p>	OPEN
TC6-22	<p>Terminology and Units for Characterizing Photosynthetically Active Radiation for Plants Chair: Ted W. Tibbitts Published in CIE 106, 1993.</p>	COMPLETED
TC6-23	<p>Develop Generalized Action Spectra for Plant Responses to Wavebands from 280 to 1100 nm Chair: Donald T. Krizek; Natural Resources Institute; Building 046A, BARC-West; Beltsville, MD 20705-2350; Tel: (301) 504-5324; Fax: (301) 504-6626; E-mail: krizekd@ba.ars.usda.gov Members: Not available. Terms of Reference: To develop generalized action spectra for plant responses to wavebands from 280 to 1100 nanometers. Background: 2000 - Chair reported on progress and DD6 recommended summary report re: plant action spectra. 2003 - New chair sought, Martyn Caldwell considered; however, need to determine if Krizek is agreeable to this change.</p>	OPEN

TC6-24	<p>Sunscreen and UVA Chair: Jean-Pierre Césarini; 83 Avenue Simon Bolivar; Foundation Rothchild; 25, Rue Manin; 75019 Paris, France; Tel: 01 1-33-1-480-36948; Fax: 011-33-1-480-36510; E-mail jpcesarini@wanadoo.fr Members: Not available. Terms of Reference: To develop a standardized sunscreen testing procedure. Note: In view of the importance of UVA (in matter of skin premature ageing, skin carcinogenesis, immune local or systematic depression), and because of lack of existing regulations to test for UVA protection, it is proposed to extend the work of TC 6-12 (concerning UVB protection) on high protection factor (SPF) sunscreens. The goal is to arrive at an international consensus on sunscreen testing for UVA protection. Background: Meetings were held in Chicago, 16-30 June 1993 during the ASP Meeting. A second meeting was held in Washington, D.C., December 1993, and in Scottsdale, June 1994. Third draft in circulation; however, a great difficulty has been encountered in achieving an international consensus, since there are at least three tests being promoted: one on immediate pigment darkening, one on delayed pigmentation and one using a photosensitizer. A move by the US Food and Drug Administration or other major regulatory body could force a consensus, but the route to resolution is unclear at this time. Some favor a report on the status of sunscreen testing at this time and explaining each proposed method. Group met in August 1997. Report by Chair at the Gaithersburg 1998 meeting stated that the document was written, but still no international consensus existed on UV-A sunscreen testing. TC report may be written as a "current status" report. Warsaw 1999, Chair discussed difficulties of achieving a consensus in the cosmetics, phototoxicity and solar-protection communities on sunscreen testing; hence the report reviewed the relative merits of the 3 methods and report the state-of-the-art. 2000 - Report discussed relative merits of test methods and discuss state of knowledge. San Diego 2003, Chair believed that the report would soon be ready for approval process.</p>	OPEN
TC6-25	<p>Spectral Weighting of Solar Ultraviolet Radiation Chair: Stephen Wengraitis Published in CIE 151, 2003.</p>	COMPLETED
TC6-26	<p>Standardization of the Terms UVA-1 and UVA-2 Chair: Jean-Pierre Césarini Published in CIE 134, 1999.</p>	COMPLETED
TC6-27	<p>Standardization of the Erythema Action Spectrum Chair: Alistair F. McKinlay See TC 6-40.</p>	COMPLETED MERGED WITH TC6-40

TC6-28	<p>Standardization of Sunscreen Testing: Method of UV-A Sunscreen Testing</p> <p>Chair: Jean-Pierre Césarini; 83 Avenue Simon Bolivar; Foundation Rothchild; 25, Rue Manin; 75019 Paris, France; Tel: 011-33-1-480-36948; Fax: 011-33-1-480-36510; E-mail: jpcesadni@wanadoo.fr Members: F. Wilkinson. Terms of Reference: To develop standardized sunscreen testing procedures. Background: 2000 - Group may correspond with similar TC 2-17. Much controversy exists over whether solar simulators are a good representation of real sunlight. Awaiting TC 6-24 report. Expect that report will discuss relative merits of test methods and discuss state of knowledge. San Diego 2003, Chair stated that the report would be ready for approval process soon.</p>	OPEN
TC6-29	<p>UV Protective Index for Clothing</p> <p>Chair: Peter Gies; Ultraviolet Radiation Section; Non Ionizing Radiation Branch; Australian Radiation Protection and Nuclear Safety Agency; Lower Plenty Road; Yaliambie VIC 3085; Australia; Tel: +61 (3) 9433 2285; Fax +61 (3) 9432 1835; E-mail: peter.gies@health.gov.au Members: J-P Césarini, B L Diffey, C Driscoll, K Hatch, J Leland, U Osterwalder, M Pailthorpe, LR Ronchi, M Saito, R Sayre, D Sliney, N. van Tonder, S Wengraitis, F Wilkinson, CF Wong. Terms of Reference: To develop standardized methods to measure the sun protective factor of fabrics based upon realistic exposure conditions (e.g. wet and dry states). Background: Chair was changed to Peter Gies in 1995. A number of labs around the world participated in round-robin testing of samples, and a second round was performed more recently. The most recent study provided further information on the advantages and drawbacks of different test methods. The results compared well and supported the TCs view that in vivo testing would not be a requirement for fabric testing. Dr. Gies is pulling together the results from all the studies and is writing an overview report. Recent editing included addition of national standards information, more-thorough discussion of factors affecting fabric transmission, uncertainties, additional references and figures.</p>	OPEN
TC6-30	<p>Dosimetry of UVR Exposure - UV Protection of the Eye</p> <p>Chair: C. F. Wong Published in CIE 134, 1999.</p>	COMPLETED

TC6-31	<p>Immediate Pigment Darkening Chair: Jean-Pierre Césarini; 83 Avenue Simon Bolivar; Foundation Rothchild; 25, Rue Manin; 75019 Paris, France; Tel: 011-33-1-480-36948; Fax: 011-33-1-480-36510; E-mail: jpcesadni@wanadoo.fr Members: A. Chardon, R. Mascotto, Kaidbey, H. Honigsman. Terms of Reference: To develop a standardized action spectrum for IPD Note: after review of contrasting published results of testing for immediate pigment darkening. Background: Preparation of a draft following the proposal by the former chairman (A. Chardon) to CIE Division 6 and COLIPA. Meeting of TC 6-24 and TC 6-31 in early 1995 was postponed. Dr. Césarini will circulate a draft to the TC based upon the study of Irwin and Chardon. The IPD is really only stable after 2 hours (Chardon); however, a consensus may require two action spectra: one for immediate, post-irradiation and one for a 1-2 hour delay. Warsaw 1999, chair discussed that IPD was no longer a key aspect and the report would show the current state-of-knowledge.</p>	OPEN
TC6-32	<p>Action Spectrum for Photocarcinogenesis Chair: P. Donald Forbes Published in CIE 138, 2000. 2002 - Standard work now being performed.</p>	COMPLETED
TC6-33	<p>Photoimmunological Effects Mediated Through the Skin Chair: Edward C. de Fabo; Ross Hall, Room 101 B; George Washington University Medical Center; Dermatology; 2300 I Street, N. W.; Washington, DC 20037; Tel: 202-994-3975; Fax: 202-994-3975; Email: ecd@gwuvvm.gwu.edu Members: D. Godar, F. Noonan, D. Sliney, H. Tuschl, S. Wengraitis Terms of Reference: To prepare a report on the current state of knowledge regarding the effects of UVR photoimmunology aimed for the lighting engineering community. Background: Initial draft circulated to TC members. CB suggested that the final draft was not suitable for publication unless it was re-written for the non-medical specialist. Prof. Wolbarsht agreed to attempt a lay interpretation, March 1995. Miller of FDA recommended some editing. Report was sent to Helga Tuschl of Seibersdorf Austria in 1998, which provided a glossary of immunology terms. Report will be edited by de Fabo and Dianne Godar of FDA. Dr. Sliney recommended that a comparison between several biologically-weighted spectra be added to the report. The light sources will include fluorescent lights and solar spectra, and the biological weighting functions will include DNA damage, the ACGIH actinic UV hazard function, and contact hypersensitivity.</p>	OPEN
TC6-34	<p>Testing Protocols for Photocarcinogenesis Safety Testing Chair: P. Donald Forbes Published in CIE 138, 2000.</p>	COMPLETED
TC6-35	<p>Present State of UV Disinfection Chair: Richard Vincent October 2003, report approved by Central Committee for publication.</p>	OPEN

TC6-36	<p>UV Protective Materials Used in Shading Chair: Natasha van Tonder; P.O. Box 395; Pretoria 0001; South Africa; Tel: +27 12 841-3618; Fax: +27 12 841-4458; E-mail: nvtonder@csir.co.za Members: F. Denner, S. DiDomenico, B. Diffey, C. Roy Terms of Reference: To investigate the properties of materials, such as tent or awning fabrics used in solar UVR shading devices, and develop standardized methods for the testing of fabrics other than clothing that are used for UVR protection. Background: A major difficulty is to distinguish between material diffuse transmittance and area of the sky visible to the person under the shading material. First meeting held in Gaithersburg 1998 under new chair (van Tonder). Studies would hopefully be completed within the following year. A proposed protection factor based on shading material transmission, dimensions and shading geometry was discussed at the 1999 Warsaw meeting. At San Diego in 2003, van Tonder reported that a literature review had been completed in Istanbul and a measurement programme undertaken. The next step will be to develop and validate a mathematical model to predict shade ratios under different structures. This phase of work is scheduled for completion by the end of the year.</p>	OPEN
TC6-37	<p>Light and Retinal Disease Chair: David H. Sliney; Commander, US Army CHPPM; MCHB-TS-OLO; Bldg. E-1950; APG, MD 21010 USA; Tel 410-436-3002; Fax: 410-436-5054; E-mail: David.Sliney@apg.amedd.army.mil Members: J. Marshall, M. Mainster, P. Gabel Terms of Reference: To prepare a report on the current state of knowledge regarding the alleged effects of light exposure as an etiologic factor in retinal disease. The report should be written to be understood by the lighting engineering community. Background: Initial draft completed by Prof. Mainster, revised by Prof. Marshall, and then material on animal studies added by Dr. Reme. The final draft re-circulated in TC being reviewed by DD Editor to determine if a "lay translation" is required. New animal data was recently provided. Group met at Gaithersburg 1998 meeting. 2002 - Draft recently reviewed by Joan Roberts and Maria Ines de Wilde.</p>	OPEN
TC6-38	<p>Photobiological Safety Standards for Lamps Chair: David H. Sliney Published in CIE 134, 1999.</p>	COMPLETED

TC6-39	<p>UV Radiation in Lighted Environments Chair: Kohtaro Kohmoto; Chiyoda Kohan Co., Ltd.; Ginza Toshiba Bldg. 7F, 2-1, Ginza 5-chome, Chuo-ku, Tokyo, 104-8115 Japan; Tel: 81-3-3575-0573; Fax: 81-3-3575-0596; E-mail: kohtaro.komoto@chiyodakohan.co.jp Members: Not available. Terms of Reference: To develop an evaluation method of UV radiation at lighted environments. To investigate UV spectral characteristics of filters and reflectors used for luminances, and interior environment. Background: Investigations have been completed and involved more than 50 lamps. Guidelines need to be established for lamps. Erythral reference action spectrum may be used along with discussion of risk groups. 2002 - Draft recently discussed at 2001 Istanbul meeting. Language editing recently performed by T. Hansen, S. Wengraitis, USA CHPPM.</p>	OPEN
TC6-40	<p>Standard Erythral Dose Unit Chair: Brian Diffey Published as CIE Std S007/E1998, ISO 17166:1999/CIE S 007/E-1998.</p>	COMPLETED
TC6-41	<p>A Standardized UV Index Chair: Elizabeth C. Weatherhead Published in CIE 138, 2000. 2002 – Standard work in progress.</p>	COMPLETED
TC6-42	<p>Lighting Aspects for Plant Growth in Controlled Environments Chair: Harald Seidlitz; GSF-Forschungszentrum für Umwelt und Gesundheit GmbH; Institute fuer Bodenökologie / Arbeitsgruppe Expositionskammern; Ingolstaedter Landstraße 1; DE -85764 Oberschleissheim; Germany; Tel: +49-89-31872413; Fax: +49-89-31873389; E-mail: harald.seidlitz@gsf.de Members: Not available. Terms of Reference: To define the general prerequisites for growing terrestrial plants in controlled environments and the characteristics of both commercial and research facilities. Discuss the economic constraints of commercial production facilities, and the critical optical radiation parameters for successful culture. Examine the interaction of optical radiation with other environmental parameters. Identify new and current optical sources suitable for plant culture. Background: TC proposed at Durban meeting September 1997. Chair would likely be replaced by Seidlitz; changed due to health problems. Seidlitz was named the chair in January 1999.</p>	OPEN

TC6-43	<p>UV Water Disinfection Chair: Viney Jain; Dr. B.R. Ambedkar Centre for Biomedical Research; University of Delhi; P.O.Box No.2148; Delhi 110 007 India; Tel: 91 11 725 6272; Fax 91 11 725 7730; E-mail: vineyjain@hotmail.com Members: K. Kohmoto, J. Malley, R. Vincent, G. Van den Beld Terms of Reference: To examine the state of knowledge on UV water disinfection Background: TC proposed at Durban meeting September 1997. Dr. Vincent and Dr. Van der Beld looked for other possible members. J. Malley prepared a first draft. Next meeting planned for Warsaw 1999. The three technical committees related to UVR disinfection met jointly at a discussion group of the Warsaw 1999 meeting. 2000 - New collaborative efforts being considered to move this TC forward. Dr. Cabaj was recently (2003?) appointed as TC chair and is very active in this field.</p>	OPEN
TC6-44	<p>Illuminators for Treatment of Infant Hyperbilirubinemia Chair: Myron L. Wolbarsht; Dept. of Psychology; Box 90086; Duke University; Durham, NC 27708-0086; Tel: 919-660-5670; Fax: 919-660-5672; Email: deryag@psych.duke.edu Members: Pratesi, K. Jailink, D. Sliney Terms of Reference: To examine the state of knowledge on infant hyperbilirubinemia, and recommend the formation of a standardized action spectrum for comparative evaluation of therapy lighting. Background: No action spectrum currently exists on infant hyperbilirubinemia, but data have been gathered. At Gaithersburg 1998, Chair emphasized the need for manufacturers to create an illuminator that would provide constant output. Duke researchers have not only developed a control circuit to do this, but have also developed a meter to measure how much bilirubin is in the body by measuring the skin's reflectance. 2000 - Some material submitted to chair to help with this effort. Myron Wolbarsht has recently reported that a TC meeting on this subject was held in Lake Buena Vista, Florida in November 2002. Studies performed in Florence, Italy were discussed. A draft report is expected soon.</p>	OPEN
TC6-45	<p>Optical Radiation Hazard Measurements in the Work Space Chair: Robert Angelo; Gigahertz Optik, Inc.; E-mail: b.angelo@gigahertz-optik.com Members: A. Barrett, Brose, Brueggemeyer, C. Driscoll, G. Hee, Hietanen, Jossen, K. Kohmoto, M. Morys, Ott, BauA, D. Sliney, B. Tengroth, U. Wester, T. Goodman Terms of Reference: To examine the methods of measurement and the required accuracy of field instruments and broad-band meters used to measure the optical radiation hazards in the workplace. Emphasis is on UV and blue light hazards. Background: Group and new recruits met at Gaithersburg 1998 and discussed a first draft for the report. 2001 - New Chair. 2003 - Parallel work within CEN has slowed the work of this TC. The CIE and CEN documents have slightly different purposes, as the CIE document is more of a "background report" and the CEN document is more "prescriptive." The two documents should send the same message and use the same vocabulary, however.</p>	OPEN

TC6-46	<p>Standardized Action Spectrum for UV Disinfection Chair: Petra Rettberg; Radiation Biology; Linder Hoehe; D - 51170 Koeln; Germany; Tel: +49 2203 6014637; Fax: +49 2203 61970; E-mail: petra.rettberg@dlr.de Terms of Reference: To develop a standardized action spectrum for UV disinfection; Note: DIN, US and other published action spectra are not consistent. Background: Group met at Gaithersburg 1998, would gather data and write first draft. Other members outside the USA would be sought. The three technical committees related to UVR disinfection met jointly at a discussion group of the Warsaw 1999 meeting.</p>	OPEN
TC6-47	<p>Photobiological Lamp Safety Standard Chair: Rolf Bergman Published in CIE Std S 009/E: 2002.</p>	COMPLETED
TC6-48	<p>Typical Minimal Erythema Doses Chair: Janusz Beer; HFZ-114, 12709 Twinbrook Parkway; Rockville, MD 20852; Tel: (301) 443_-7159; Fax: (301) 227-6775; E-mail: jzb@cdrh.fda.gov Members: A. Anders, J.-P. Césarini, B. Diffey, J.C. van der Leun Terms of Reference: To propose typical minimal erythema doses for different skin types, for use in the evaluation and revisions of different standards for UV-emitting appliances and in educational efforts related to the risk of UV exposure. Background: Met at Gaithersburg 1998. Defined the goals and ways to accomplish them. Proposed three categories of human skin for the purpose of artificial tanning. Proposed ways of development of tanning schedules using 3 levels of exposure. Note: Collection of information involves clinical research conducted by the U.S. FDA along with National Cancer Institute, Harvard University, Utrecht University, and Philips Research Laboratories. The study is conducted on a cohort of healthy volunteers representing six skin types (according to the Fitzpatrick classification) and six racial/ethnic origins (as defined by the U.S. Office of Management and Budget). The results of this study will be analyzed together with the other published and unpublished data to support the TC 6-48 document. Review of research results is currently underway. Results should provide background info for IEC work on sunbeds (how much UVR is required to get and maintain a tan).</p>	OPEN
TC6-49	<p>Infrared Cataract Chair: Myron L. Wolbarsht; Dept. of Psychology; Box 90086; Duke University; Durham, NC 27708-0086; Tel: 919-660-5670; Fax: 919-660-5672; Email: deryag@psych.duke.edu Members: A. Cullen, E. Rydal, M. Mainster, T. Okuno, K. Sasaki, B. Tengroth, J. Zuclich. Terms of Reference: To evaluate current biophysical data related to infrared and heat-induced cataractogenesis and report on the potential mechanisms - both thermal and photochemical. Background: Not available.</p>	OPEN

TC6-50	<p>Photodegradation of Pharmaceuticals Chair: Steven Baertschi; Eli Lilly and Company; Tel: (317) 276-1388; Fax: (317) 277-2154; E-mail: baertschi_steve_w@lilly.com Members: S. Pugh, N. Searle, H. Tonnesen Terms of Reference: To report on the current knowledge related to the potential photodegradation of pharmaceuticals during storage and illumination by both sunlight and artificial illuminants. Background: 2002 - Efforts mostly halted, due to retirement of some members and abandonment of the project by others. Consensus issues are highly unlikely. Chair Piechocki resigned, Baertschi assumed effort.</p>	OPEN
TC6-51	<p>Standardized Solar Simulator Spectral Irradiance Distribution for Sunscreen Testing Chair: Robert Sayre; Rapid Precision Testing Laboratories; P. O. Box 1342; Cordova, TN 38018-1342; Tel (901) 386-0175; Fax (901) 386-7218; E-mail: rpti@aol.com Members: J.-P. Césarini, F. Wilkinson, J. Chandon, D. Berger. Terms of Reference: To provide a standardized solar simulator emission spectrum for testing sunscreens. Spectral tolerance values will be provided. Background: 2000 - Chair reported drafting an initial proposal for a spectral distribution. 2003 - In a joint meeting with TC 6-28 in San Diego, Sayre was asked to expand the scope of this TC to include phototoxicity testing.</p>	OPEN
TC6-52	<p>Determination and Measurement of Passive UV Air Disinfection Chair: Richard Vincent; Manager and Lighting Specialist; Department of Community Medicine; Saint Vincents Hospital and Medical Center; 153 W. 11 th Street; New York, NY 1001 Tel: (212) 604-8034; Fax: (212) 604-7627; E-mail: vincentrl@msn.com Members: A. Cabaj, R. Bergman, and K. Kohmoto. Terms of Reference: To specify the biologically meaningful distances and positions in installations of UV germicidal lamps for open, upper-air disinfection. Background: Chair has reported that a Lighting Research Centre publication on this subject had been completed and he was now forming a TC to work on the CIE report.</p>	OPEN

TC6-53	<p>Personal Dosimetry for UV Radiation Chair: Gerda Horneck; DLR FF-ME, Radiation Biology; Linder Hoehe; 51147 Koeln; Germany; Tel: (49) 2203-601-3594; Fax: (49) 2203-61970; E-mail: Gerda.Horneck@dlr.de Members: Not available. Terms of Reference: To update the previous technical report on personal dosimetry of UV radiation (CIE 98-1992) and to consider, in addition to the personal dosimeters mentioned before, personal dosimeters based on biological sensors as well as optoelectronic devices. Background: 2001 - TC recently met, discussing the structure of the report and assigning report tasks to TC members. 2003 – Work reported to continue on going.</p>	OPEN
TC6-54	<p>Standardized Solar Simulator Spectral Irradiance Distribution for Sunscreen Testing Chair: Michael Holick; 715 Albany Street, M-1013; Boston, MA 02118; Tel: (617) 638-4545; Fax: (617) 638-8882; E-mail: mfho_lick@bu.edu Members: R. Bouillon, J. Eisman, M. Garabedian, F. Glorieux, B. Dawson-Hughes, G. Jones, S. Reddy, T. Suda, I. Terenetskaya, A. Webb Terms of Reference: To evaluate the current state of knowledge in the photobiological action spectrum for the production of Vitamin D in human skin, and to propose a standardized action spectrum for general use in estimating effective exposures in humans of differing skin types. The Technical Committee will examine the impact of natural skin pigmentation, skin optics, and skin exposure area and describe the effective dose per unit of skin area that produces a given quantity of serum Vitamin D. The output will be a technical report and standard. Background: Draft report has been circulated. Theoretical spectrum could be calculated using chemical kinetics, skin optics. This could be compared with the original experimental work and animal studies to clarify the extreme endpoints.</p>	OPEN
TC6-55	<p>Light Emitting Diodes Chair: Werner Horak; Siemens AG; CT ES RD; Corporate Office for Radiation Safety and Dangerous Goods Transportation; Otto-Hahn-Ring 6; D-81730 Munich; Germany; Tel: +49 89 636 47059; Fax: +49 89 636 40162; Email: wemer.horak@siemens.com Members: Not available. Terms of Reference: To report on the differing methods of assessing the photobiological safety of Light Emitting Diodes (LEDs). Background: The assessment measures in the CIE Lamp Safety Standard, CIE S009/E:2002 will be compared to the measures in IEC 60825-1-2001. This entails a review and report on the known effects from a physiological standpoint and a determination of the dose relationships that pose a potential risk for eye injury from excessive irradiation. There is a problem as to whether to classify an LED as a laser or a lamp for safety evaluations - both have merits and both present problems, depending on how the LEDs are arranged and used. In Europe LEDs have to be classified as lasers due to the IEC low voltage regulation. A report of a comparison of laser/lamp and CIE/IEC regulations (with some surprising results) was circulated to the TC members, but there has been no response to date. There was a call for new members of this TC.</p>	OPEN

TC6-56	<p>Infrared Warming Cabin Chair: Jan Stolwijk; 3705 Green Ash Court; Beltsville, MD 20705; Tel: (+1) 301 937-1945; Fax: (+1) 301 595-9788; E-mail: stojiwk@prodigy.net Members: M. Hietanen, H. Meffert, W. Schmidt, K. Schuimeister, D. Sliney, F. Urbach (US) Terms of Reference: To report on the potential health benefits and risks in the use of far-infrared heating cabinets, sometimes referred to as infrared "saunas." This entails a review and report on the known effects from a physiological standpoint and to determine the dose relationships that poses a potential risk for skin injury from excessive irradiation. Background: A TC meeting was held in San Diego. A report is nearing completion but it was suggested that some Japanese scientists be invited to join the committee as Japan is where IR cabins are widely used, and where many of the health claims (unsubstantiated in the West) originate.</p>	OPEN
TC6-57	<p>Standardization of Terms and Action Spectra for Blue Light and Retinal Thermal Hazard Functions Chair: Kohtaro Kohmoto; Chiyoda Kohan Co., Ltd.; Ginza Toshiba Bldg. 7F, 2-1, Ginza 5-chome, Chuo-ku, Tokyo, 104-8115 Japan; Tel: 81-3-3575-0573; Fax: 81-3-3575-0596; E-mail: kohtaro.komoto@chiyodakohan.co.jp Members: Not available. Terms of Reference: To prepare a draft CIE standard on the definitions and action spectra for two retinal hazard functions used in photobiological safety documents. Background: To produce a standard.</p>	OPEN
	Proposed TC - UVC photocarcinogenesis from germicidal lamps. A TCC needs to be identified before this can be approved by the Board.	
	Proposed TC - Division 5 have approved a reportership on the Effects of (outdoors) lighting on Ecosystems, under the chairmanship of Scott Davis (US). They seek D6 members for a potential TC on this subject and propose a joint meeting or workshop at the mid-sessional when the initial report should be available.	



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE
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Canadian Division Members' Reports

CNC/CIE 48th Annual Meeting

2003-October-24

CIE Division 8

Image Technology

The CIE Division 8 “Image Technology” and its Activities in 2002/2003

Report to the CNC-CIE, October 25, 2003

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1- Introduction

The fourth meeting of CIE Division 8, Image Technology, was held in conjunction with the 25th Session of the CIE in San Diego, CA, USA, on June 30, 2003. Reports were presented by a number of TC chairs and liaisons, details of which can be found in sections 3 and 4. This following action then occurred during the discussion session:

- A motion was unanimously approved to dissolve Reportership R8-03 with thanks to Dr H. Ikeda for his work on behalf of Division 8.
- A proposal to create a liaison with the AIC was considered and decided that there was not sufficient technical overlap to justify a liaison.
- Liaison with JBMA was proposed but it was felt that there was sufficient overlap of participants that a formal liaison was not needed.
- A formal liaison with JTC1/SC28 was proposed and agreed to and Professor Klaus Richter agreed to support this liaison.
- A new Reportership was proposed on image appearance with Mark Fairchild of RIT as the reporter.
- A possible TC was discussed under the topic of "Testing of Spatial Colour Appearance Models" with possible terms of reference "To design, implement and report the results of a psychophysical test comparing the output of spatial colour appearance models (including Retinex, MOM, and iCAM) for high dynamic range still images." The proposed chair was G Johnson (US) of RIT. Todd Newman is to discuss this with Dr. Johnson and others for possible action.

Several possibilities were discussed for the next meeting. The most promising was the ISCC Williamsburg meeting in Nov 05 with IS&T Color Imaging Conference as a second possibility.

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.

Domain 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.colour.org/>

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	Todd Newman
Associate Directors	Dr. Noboru Ohta (reporters)
Secretary of Division	David McDowell
Editor of Division	Dr. Mike Pointer

2.2 Official Division Members

CIE Division 8 has 36 member countries, of which 19 have designated representative. Canadian Member: Réjean Baribeau

2.3 Liaisons

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

CIE Division 1 (Michael Pointer)
CIE Division 2 (Y. Ohno)
AIC - Association Internationale de la Couleur
ISO/TC36: Cinematography
ISO/TC38/SC1: Textiles: Colour Fastness & Measurement
ISC/TC42: Photography (Mike Pointer)
ISO/TC61/SC5/WG1:
ISO/TC159/SC4/WG2: Ergonomics/Sign & Contr/VDU Requirements
ISO/TC187: Colour Notations
ISO/TC6/WG3: Paper Board and Pulp - Optical Properties
ISO/TC130: Graphic Technology(Danny Rich)
ISO/IEC/JTAG2:Joint Technical Advisory Group (JTAG) 2 for Imagery(Tim Kohler)
ICC -- International Colour Consortium (Tim Kohler)
CCPR - Comité Consultatif de Photométrie et Radiométrie,
BIPM
IEC/TC100 Multimedia Equipment and (Danny Rich)
ASTM/E12 Color and Appearance (Mike Pointer)
JTC1/SC28 (Klaus Richter)

2.4 Publications from Division 8

None.

2.5 Technical Reports

None.

2.6 Technical Committees

TC8-01: Colour Appearance Modeling for Colour Management Applications
TC8-02: Colour Difference Evaluation in Images

TC8-03: Gamut Mapping
TC8-04: Adaptation under Mixed Illumination Conditions
TC8-05: Communication of Colour Information
TC8-06: Image Technology Vocabulary
TC8-07: Multispectral Imaging

2.7 Reporterships

R8-01 Reportership on Grading of Color Measurement Equipment (Y. Ohno)
R8-02 Reportership of Fluorescence (C. McCamy) –closed.
R8-03 Reportership on Potential CIE and IEC/TC100/PT61966 Interactions (H. Ikeda)
R8-04 Reportership on the Effects of Fluorescence in the Characterization of Imaging Media. (D. Rich)
R8-05 Reportership on Image Appearance (M. Fairchild)

3- Technical Committees work in progress

TC8-01: Colour Appearance Modeling for Colour Management Applications

Terms of Reference:

To study, develop, and recommend a colour appearance model based on CIECAM97s for use in digital colour management and to develop clear usage guidelines for common applications. Consideration is to be given to colour and engineering requirements for open colour management systems.

Chair: Nathan Moroney

Web site: <http://www.colour.org/tc8-01/>

The technical report entitled *Colour Appearance Models for Colour Management systems* has passed divisional and national balloting. This document outlines a specific colour appearance model, CIECAM02, which may be useful for colour management applications. The model is based on CIECAM97s and consists of a chromatic adaptation transform and equations for computing a set of perceptual attribute correlates. An additional paper, "Field Trials of the CIECAM02 Color Appearance Model" was presented at the [CIE 25th Quadrennium](#) in June of 2003. An online JAVA-based [CIECAM02 calculator](#) is also available. This committee is to be disbanded on publication of the technical report.

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/>

A technical report entitled *Methods for Deriving Colour Differences in Images* has been approved by this TC and is now ready for international ballot. In short, the report proposes:

- a colour-difference equation with an option to add spatial filters,
- a method for evaluating colour reproduction fidelity including test images,
- experimental data sets (available on the Web),
- a summary report on a collaborative research program for investigating perceptibility and acceptability thresholds using a set of colour difference images.

TC8-03: Gamut Mapping

Terms of Reference:

To study, develop and recommend an optimal solution for cross-device and cross-media image reproduction. This solution will provide a standard procedure to calculate the colour gamut of an image, an imaging system, or its components, and either one algorithm, or a set of algorithms and rules for use in specific applications.

Chair: Jan Morovic

Web site: <http://www.colour.org/tc8-03/>

A technical report entitled *Guidelines for the Evaluation of Gamut Mapping Algorithms* has completed Central Bureau balloting and is to be published shortly. This technical report provides guidelines for the evaluation of the cross-device and cross-media colour image reproduction performance of gamut mapping algorithms (GMAs). The guidelines cover numerous aspects of GMA evaluation including test images, media, viewing conditions, measurement, gamut boundary calculation, gamut mapping algorithms, colour spaces and experimental method. Also provided are example workflows that show how the general principles are applied and a checklist for determining compliance with the guidelines. The results of GMA evaluation carried out in accordance with these guidelines will then serve as the basis for recommending either one gamut mapping algorithm, or a set of algorithms and rules for use in specific applications.

TC8-04: Adaptation under Mixed Illumination Conditions

Terms of Reference:

To investigate the state of adaptation of the visual system when comparing soft-copy images on self-luminous displays and hard copy images viewed under various ambient lighting conditions.

Chair: Naoya Katoh

Web site: <http://www.colour.org/tc8-04/>

The TC compared results from several experiments and found that observers were between 40% and 60% adapted to the video display, and 60% to 40% adapted to the ambient illumination. A draft technical report is being considered by the members of this committee. The report proposes a simple extension to colour appearance models like CIECAM02 to account for mixed adaptation

TC8-05: Communication of Colour Information

Terms of Reference:

To standardize a minimal set of techniques that enable unambiguous and efficient communication of the colour information in images. Two fundamental approaches will be addressed:

- The association with the image data of additional data that describes the colour space of the image data.
- The representation of the image data in a standard colour space.

The standard will also define a minimal set of standard colour spaces that addresses a wide range of imaging applications. Whenever possible, existing standard colour spaces will be used in preference to creating new ones.

Chair: Rob Buckley

Web site: <http://www.colour.org/tc8-05/>

A technical report entitled *Criteria for the Evaluation of Extended-Gamut Color Encodings* is undergoing TC ballot. This document defines a set of objective metrics for evaluating the characteristics of output-referred extended-gamut colour encodings. Detailed metrics have been developed to evaluate a number of important attributes of extended-gamut encodings, including gamut volume characteristics, colour quantization characteristics, hue constancy when applying non-linear tone scale modifications to RGB colour values, and complexity of transformations required to and from typical standard spaces.

TC8-06: Image Technology Vocabulary

Terms of Reference:

To liaise with TC7-06 (International Lighting Vocabulary) and collate definitions of terms associated with image technology.

Chair: Janos D. Schanda

Web site: <http://www.colour.org/tc8-06/>

The chairman has submitted parts of several terminology documents to members who are to collect terms and definitions and place them in a database.

TC8-07: Multispectral Imaging (CIE approval pending)

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. Patrick Herzog (P.Herzog@color-aixperts.de)

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 metamerics 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 TC had its first meeting in November 2002 and is still formulating a plan of work. In particular, it has been found that the focus should be on the visible range of the spectrum, while extensions into the near IR and UV should not be excluded. It was also noted that multi-spectral imaging covers multi-spectral image acquisition, multi-spectral image encoding, multi-spectral images and multi-spectral image reproduction systems such as multi-primaries displays and spectral printers.

4- Reporterships

R8-01 Reportership on Grading of Color Measurement Equipment

(Y. Ohno)

Div. 8 members voted unanimously for the termination of this reportership, as it was felt that it had not resulted in any tangible results and, consequently, did not appear to be needed at this time.

R8-02 Reportership on Fluorescence

C McCamy (USA)

Terms of Reference

To report annually on problems involving fluorescence in image technology, activities in the standards bodies and publications that bear on fluorescence problems, and to recommend the formation of a technical committee if such activity appears desirable.

This reportership is now closed.

R8-03 Reportership on potential CIE and IEC/TC100/PT61966 interactions

H Ikeda (Japan)

Terms of Reference

To produce a report on how CIE Division 8 should interact with IEC TC100 PT61966. End Date: March 2000.

Div. 8 members voted unanimously for the termination to this reportership, as it was felt that it had not resulted in any tangible results and, consequently, did not appear to be needed at this time.

R8-04 Reportership on the Effects of Fluorescence in the Characterization of Imaging Media.

D. Rich (USA)

The reporter is to define the issues and report on what the terms of reference and working program should be for possibly a Division 2 TC.

R8-05 Reportership on Image Appearance.

(pending concurrence from Dr 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