



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

Canadian National Committee Comité National Canadien



MINUTES OF THE 40TH ANNUAL CNC/CIE MEETING

1995-December-01

The 40th annual meeting of the Canadian National Committee of the Commission Internationale de l'Éclairage (CNC/CIE) was held on Friday, December 01, 1995 in the Audits Boardroom at Canadian Standards Association (CSA), 178 Rexdale Boulevard, Etobicoke, Ontario.

1. Call-to-Order:

Inclement weather once again delayed the arrival of the attendees from Ottawa and Montreal. The meeting was called to order at 9:15 a.m. by M.G. Bassett, Past President. J.A. Chrysler volunteered to take notes for the Minutes of the meeting until the Secretary (A.A. Gaertner) arrived. Eli Szamosi from Canadian Standards Association welcomed attendees to the new meeting location.

Members, Advisory Members and guests introduced themselves. Thirteen Members and Advisory Members and two guests were in attendance. Ben Bauer from DCIEM attended as representative for S.M. McFadden. Four additional attendees: President, Secretary and two other members from Ottawa arrived later. The list of all attendees is given in Appendix A.

The agenda, as circulated by mail (Appendix B), was accepted with the order of items arranged to suit the arrival of delayed attendees.

Jacques Roberge, President, arrived at 9:40 a.m. and assumed the chair with thanks to M.G. Bassett.

E. Alf and K.F. Lin left the meeting during the lunch break due to other engagements.

Note: For the purposes of these Minutes, the agenda items are reported in the order of the proposed agenda. However, due to the late arrival of the three Members from Ottawa, items 4 and 5 (Secretary/Treasurer's Report and Publications Report) were presented after the Division Members' Reports.

2. Minutes of the 39th Annual CNC/CIE Meeting:

Matters arising from the minutes:

E. Wotton raised an issue with item 8.7 (and 8.3.10) regarding CIE communications. It was his opinion that the CNC/CIE is not addressing the Canadian lighting community. He suggested that the Secretary should submit summaries of CIE activities to local publications such as *LIGHTING MAGAZINE*. This suggestion was endorsed by all present. However, the motion arising was withdrawn when the meeting was informed later that the Secretary does currently submit CIE information to *LIGHTING MAGAZINE*, but has rarely seen any of this material published.

J. Roberge suggested that internal communications could be improved if all of the seven Division Members forwarded any direct mailings from the Central Bureau to the Secretary for dissemination to interested parties. Discussion on this suggestion focussed on the difficulties of determining and maintaining a mailing list of people actively engaged in matters relevant to technical committee work. E. Alf suggested that perhaps the activities could be made available on an electronic bulletin board so that activities could be monitored by interested parties.



B. Jordan noted that item 8.3.10 also raised the issue of the cost of holding the annual meeting. He suggested that the next meeting could avail itself of both video conferencing and teleconferencing technology.

Moved by M.G. Bassett and seconded by V. Cimino that the minutes be accepted as circulated. Passed.

3. President's Report:

J. Roberge presented his report, enclosed as Appendix C.

4. Secretary / Treasurer's Report:

A.A. Gaertner presented his report, enclosed as Appendix D. There was some discussion concerning the information sent to journals such as *LIGHTING MAGAZINE*. The Secretary indicated that this journal receives most CIE material including all the press releases for the CIE publications and the *CIE NEWS*. Moved by A.R. Robertson and seconded by R.W. White that the Secretary's Report be accepted. Passed.

5. Publications Report:

A.R. Robertson presented his report, enclosed as Appendix E. J. Roberge thanked A.R. Robertson for his success in eliminating the deficit in our publications account and promoting the growth of our sales such that we now have a positive balance. He also pointed out a new CIE system which allows the National Committees to print CIE documents locally and remit thirty percent of the selling price to the Central Bureau. There was some discussion as to what was intended to be the selling price.

The Committee accepted A.R. Robertson's resignation as Publications Officer with thanks for his dedicated and successful efforts in providing these publications to Canadians. J. Roberge suggested that K.F. Lin be approached to determine whether he would be willing to carry on this work, since he had volunteered several years ago. It was agreed that A.R. Robertson approach K.F. Lin to determine his willingness to undertake this responsibility.

E. Wotton raised the issue of the intended purpose for the positive balance in the bank account. This was discussed for some time, with the Committee suggesting that it be used to assist members with their expenses to attend CIE and CNC/CIE meetings, scholarships, publicity for the CNC/CIE, donations of CIE publications to lending libraries, teleconferencing expenses, etc. No decision was reached.

6. Reports from Division Members:

(Secretary's Notes:

- i. The CNC/CIE Division Members' Reports are attached as a separate document, i.e. they are not labelled with an Appendix number. This has been done to enable separate use of this information for those who wish only these reports, independent of the Minutes of the Annual Meeting.
- ii. The CIE Division Quadrennial Reports, which are referred to in the Division Members' Reports, were mailed to the Members and Advisory Members in advance of this meeting.)

DIVISION 1

Vision and Colour

S.M. McFadden

Since S.M. McFadden was unable to attend this meeting, Ben Bauer distributed copies of, and presented her report. A.R. Robertson, who had attended the Division 1 meetings at the CIE 23rd Session in New Delhi, India, presented his report on the three half-day meetings held by Division 1. Discussion followed. W.K. Adrian, Chair of TC 1-19 Visual Performance, noted that most of the work of this committee was done by the chair and the secretary and that "no" votes cast represented more a political stance rather than a technical bias. J. Roberge noted that the new structure will weaken the position of a "no" vote and that, as in Division 5, "no" votes must have justification.

DIVISION 2 Physical Measurement of Light and Radiation J.C. Zwinkels

J.C. Zwinkels distributed copies of, and presented her report for Division 2. The report included the report of A.R. Robertson who attended the Division 2 meetings at the CIE 23rd Session in New Delhi, India in November 1995.

DIVISION 3 Interior Environment and Lighting Design I.C. Pasini

Since I.C. Pasini was unable to attend this meeting, D. Takeuchi distributed copies of, and presented his report, which includes his report for the Division 3 meeting at the CIE 23rd Session in New Delhi, India in November 1995.

DIVISION 4 Lighting and Signalling for Transport W.K. Adrian

W. K. Adrian distributed copies of, and presented his report.
Clarification of the Work of TC 4-18: the "environment" includes the natural environment with street lighting and shop lighting etc.

TC 4-24: There is no data on reflectance values. Dirt, texture and humidity changes the reflectance values from those studied in the lab. Ron Gibbons is now at Philips in the U.S., and the road pavement samples and measuring apparatus is with him as he is still working on his Ph.D. thesis to develop a system for all four different road classes and various observation angles.

TC 4-25: It is difficult to know what a road surface is and how to illuminate them especially when wet. q_D is easier to measure and more reliable. The committee is working well.

TC 4-29: CIE publication 79 established light intensity standards and would have to be changed to suit LED output. LED sources are a questionable inclusion because of light output. B.W. Tansley studied LED signal lights for railways and although there are high intensity LED sources in the red, the lamps evaluated in K.F. Lin's laboratory did not have sufficient light output when compared with standard lamps.

DIVISION 5 Exterior and Other Lighting Applications J. Roberge

J. Roberge presented his report. He commented on the "workshop" presentation at the quadrennial meeting and suggested that rules for how workshops are to be run should be established if they are to accomplish something in the future.

TC 5-12 Obtrusive Light: J. Roberge objected to the dismissal of the issue of discomfort glare in the work of this committee as he believes that discomfort glare is a large factor in obstruction.

DIVISION 6 Photobiology and Photochemistry K.F. Lin

K.F. Lin distributed copies of, and presented the report prepared by Jennifer A. Veitch, who had attended the Division 6 meetings at the CIE 23rd Session in New Delhi, India in November 1995. K.F. Lin recommended that J.A. Veitch assume the membership for Division 6. Some Division 6 correspondence is still going to E. Wotton.

DIVISION 7 General Aspects of Lighting R. W. White

R. W. White distributed copies of, and presented his report. Since he was unable to attend the CIE 23rd quadrennial Session held in New Delhi, J. Roberge had attended the Division 7 meetings. He reported that these meetings were characterised by considerable apathy on the part of the participants. A.R. Robertson clarified how the members of TC7-06 Lighting Terminology are to be determined. J.A. Chrysler commented on the problems of lamp performance standards being

'harmonized' between the USA and Canada. R.W. White pointed out some problems with the lighting codes in the National Building Code.

7. Nominations and Appointments:

The current list of Members and Advisory Members was circulated (Appendix F).

Members:

The Secretary noted that the six Member appointments recommended by the CNC/CIE at the 39th annual meeting were endorsed by A.L. VanKoughnett, Director-General of NRC-INMS, and all accepted: W.K. Adrian, R.B. Gibbons, J. Love, S.M. McFadden, I.C. Pasini, and J.C. Zwinkels. The Secretary noted that S. M. Kaye had not responded to the follow-up request concerning his appointment. Consequently, he had been placed on the Advisory Members list.

Since the term of the President, J. Roberge, would expire December 31, 1995, J. Roberge vacated the chair and the Vice President, W.K. Adrian, conducted the meeting to determine the willingness of the CNC re extending the term of J. Roberge for the next four years. There was unanimous agreement that he be asked to continue. J. Roberge indicated his willingness to do so.

R.B. Gibbons has taken a position in the USA but had sent a letter to the Secretary indicating his desire to continue receiving CNC/CIE information. The meeting agreed to move him from being a Member to being an Advisory Member.

K.F. Lin had indicated his willingness to step down as Division 6 member (and this was confirmed by J. Roberge by telephone at this meeting), and had indicated that J.A. Veitch was willing to accept this position. After some discussion, it was moved by J.A. Chrysler, seconded by V. Cimino, that the CNC/CIE nominate J.A. Veitch as Member with Division 6 portfolio. Passed.

Advisory Members:

A.A. Gaertner noted that Dr. Brian Liddy and Dr. Lorne A. Whitehead had accepted their nomination as Advisory Members of the CNC/CIE due to their activity on CIE Technical Committees. He also noted that R.J. Adams had declined our invitation to join the CNC/CIE as an Advisory Member. The Committee approved the appointment of Dr. Tim M. Richardson as an Advisory Member. The Committee also recommended that we extend an invitation to Eduard Alf and Nikolay Stoev to become Advisory Members.

8. CIE Awards:

During the CIE 23rd Session in New Delhi, India, the CIE Board of Administration awarded M.G. Bassett and P.K. Kaiser CIE Certificates. Since neither of them were able to attend the Session in New Delhi, the awards were to be presented at this meeting by J. Roberge. He read the citations in each Certificate, and presented M.G. Bassett with her Certificate. Since P.K. Kaiser was unable to attend this meeting, J. Roberge will send his Certificate to him.

9. Report from the Board of Administration:

A.R. Robertson reported on some of the considerations now before the CIE Board of Administration (Appendix G).

10. General Discussion of CIE 23rd Session, New Delhi:

Written comments concerning the Session were received from W. K. Adrian, J.A. Veitch (via A.A. Gaertner), and I.C. Pasini (via D. Takeuchi). W.K. Adrian and D. Takeuchi also presented these comments verbally. J. Roberge made additional comments that he could not find all the poster presentations, and that he felt the travel agency was not screened well enough, but that we could not expect 'New York facilities' in a quite different country. It was requested that A.R. Robertson put together a constructive report from all the comments received concerning the Session.

E. Wotton indicated that he would expect a presentation at this CNC/CIE meeting from the Canadian representatives to the Session concerning their presentations at the Session, and

information concerning the Session itself. Discussion followed.

A.R. Robertson requested comments concerning the length of the Session. W.K. Adrian commented that it could not be shortened and still be of scientific value. J. Roberge suggested that the three days of the conference plus the three days of the Divisional meetings be put together in one grouping of six days in one calendar week, rather than having three days in one week and three days in the next week. A.R. Robertson pointed out that the long six-day Session would require two weekends at the Session rather than the one weekend when the Session is split into two separate weeks. J. Roberge moved, seconded by W.K. Adrian that the CNC/CIE oppose any shortening of the Session below 6 days. Passed. J. Roberge moved, seconded by V. Cimino, that the Session be all grouped into one calendar week. This did not pass.

11. Other Business:

11.1 Correspondence:

J. Roberge brought forward several items of correspondence which he had received during the year. W.K. Adrian presented some information concerning a Lighting field trip which he was organising in Europe for the spring. He indicated he would send information concerning this to the Secretary who would mail it to the membership.

11.2 Date and Place for next meeting.

Offers were received from K.F. Lin (Waterloo), B. Jordan (Montréal), and E. Szamosi (Toronto). J. Roberge suggested, and the meeting agreed, that we accept the offer of B. Jordan. He also suggested that we look into the possibility of video-conference facilities. E. Szamosi suggested that a group of people could meet at CSA(Toronto) to use their video-conference facilities to connect with the meeting in Montréal.

It was moved by J.A. Chrysler, seconded by E. Szamosi, that the 41st CNC/CIE annual meeting be held on Friday, November 01, 1996. Passed.

11.3 Meeting Format:

A.A. Gaertner asked the attendees whether they would like to use the occasion of these meetings to take advantage of possible tours of the facilities in the meeting locale. The difficulty is that the business meeting itself takes a full day. Consequently, at this meeting we did not have time to take advantage of E. Szamosi's offer to guide us through the CSA facilities. A.R. Robertson suggested that we consider the possibility of next year touring the Paprican facilities on the Thursday afternoon prior to the Friday business meeting, and informally meeting over dinner that Thursday evening.

11.4 New Business:

Eduard Alf from Transport Canada raised an issue regarding CIE Report No.107 (TC 4-14) on Colour of Signal Lights. Mr. Alf would like to form an ISO national committee with input to standards development as it is likely that Canada will move to adopt the CIE/ISO Standard. Persons interested in this subject are asked to contact Mr. Alf directly at :

Mr. Eduard Alf, P.Eng.
Safety and Technical Services
Transport Canada - Airports
Place de Ville
Ottawa, Ontario K1A 0N8
Tel: (613) 998-2999
Fax: (613) 957-4260

12. Adjournment:

J. Roberge extended the appreciation of the attendees to M.G. Bassett for her generous gift of delicious desserts, and to Eli Szamosi for his efforts in arranging the meeting locale and providing the facilities for the teleconference link to T. Nilsson.
The meeting was adjourned at approximately 17:45.

I would like to express my gratitude to J. Allyson Chrysler for her excellent work in recording the Minutes during the morning session of the meeting.



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

1996-June-12

LIST OF APPENDIXES

- Appendix A:** Attendees to the 40th Annual Meeting of the CNC/CIE
- Appendix B:** Proposed Agenda for the CNC/CIE 40th Annual Meeting
- Appendix C:** President's Report
- Appendix D:** Secretary / Treasurer's Report
- Appendix E:** Publications Report
- Appendix F:** List of CNC/CIE Members and Advisory Members
- Appendix G:** Highlights from CIE BA Meeting 1995-11-09

APPENDIX A

ATTENDEES TO THE 40TH ANNUAL MEETING OF THE CNC/CIE Friday, 1995-December-01

	Werner K. Adrian	University of Waterloo
§	Eduard Alf	Transport Canada, Airports
	Marion G. Bassett	Professor Emeritus
#	Ben Bauer	Defence and Civil Institute of Environmental Medicine
	J. Allyson Chrysler	Lighting Consultant
	Vince Cimino	Ontario Ministry of Transportation
*	Arnold A. Gaertner	National Research Council (INMS)
	Byron Jordan	Paprican
	Barbara Kolesnik	UMA Engineering Ltd.
‡	K. Frank Lin	Lighting Sciences Canada Ltd.
†	Thomy Nilsson	University of Prince Edward Island
	Jacques Roberge	Lithonia Lighting Canada
*	Alan R. Robertson	National Research Council (INMS)
#	Nikolay Stoev	Ontario Laser and Lightwave Research Centre
	Eli Szamosi	Canadian Standards Association
	Debbie Takeuchi	Public Works and Government Services Canada
	Robert W. White	Duschenes & Fish Architectes
	Ernest Wotton	Lighting Consultant
*	Joanne C. Zwinkels	National Research Council (INMS)

§ visitor to am session

visitor

* attended pm session

‡ attended am session

† attended am session via telephone conference call.

REGRETS

Andrée Bichon	National Research Council (International Affairs)
H.W. Budde	National Research Council (retired)
Ronald B. Gibbons	Philips Lighting Company, West Virginia
Peter K. Kaiser	York University
James Love	University of Calgary
Sharon M. McFadden	Defence and Civil Institute of Environmental Medicine
Ivan C. Pasini	Public Works Canada
R.A. Smith	Ralph Smith Engineering Inc.
Jennifer A. Veitch	National Research Council (IRC)
Lorne A. Whitehead	University of British Columbia

APPENDIX B



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

Canadian National Committee Comité National Canadien



CNC/CIE 40th Annual Meeting Proposed Agenda

DATE: 1995 DECEMBER 01 - Friday

TIME: 9:00 am to 5:00 pm

LOCATION: Canadian Standards Association
178 Rexdale Blvd., Etobicoke, Ontario
(see enclosed directions for getting there)

RSVP: A.A. Gaertner Tel: (613) 993-9344
Fax: (613) 952-1394
Email: arnold.gaertner@nrc.ca

PROPOSED AGENDA*:

1. Call to Order and Approval of Agenda
2. Minutes of the 39th Annual CNC/CIE Meeting (Matters arising?)
3. President's Report (including report on GA meeting) J. Roberge
4. Secretary/Treasurer's Report A.A. Gaertner
5. Publications Report A.R. Robertson
6. Reports from Division Members
 - Division 1: Vision and Colour S.M. McFadden
 - Division 2: Physical Measurement of Light and Radiation J.C. Zwinkels
 - Division 3: Interior Environment and Lighting Design I.C. Pasini
 - Division 4: Lighting and Signalling for Transport W. K. Adrian
 - Division 5: Exterior and Other Lighting Applications J. Roberge
 - Division 6: Photobiology and Photochemistry K.F. Lin
 - Division 7: General Aspects of Lighting R.W. White
7. Nominations and Appointments
8. CIE Awards J. Roberge
9. Report from Board of Administration A.R. Robertson
10. General Discussion of CIE 23rd Session, New Delhi J. Roberge
11. Other Business
 - 11.1 Correspondence J. Roberge
 - 11.2 Date and Place for next year's meeting
 - 11.3 Meeting Format
12. Adjournment

* If time permits we may have a tour of CSA facilities during the lunch break.



November 21, 1995

APPENDIX C



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

Canadian National Committee Comité National Canadien



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CNC/CIE
PRESIDENT'S REPORT TO THE 40th ANNUAL MEETING
December 1, 1995

The major CIE event in 1995 was obviously the 23rd Quadrennial Session held in New Delhi, India, from Nov. 1 to 8, 1995. For many attendees this period was extended by attendance to various meetings like Finance Committee, General Assembly and Board Meeting held before or after the official conference period.

As the official delegate of Canada to the General Assembly (with Alan Robertson present as alternate), my report will be centered on that meeting, held on October 31, 1995, from 09:30 to 17:30.

- Attendance:

CIE now has 40 member countries, the increased number resulting for the most part in new members created by the split of former entities like the USSR, Tchekoslovakia, Yugoslavia, etc. 23 representatives and one proxy were present, for a total of 24 voting members (required quorum is 20).

- CIE President's report:

An advance copy of that report has been forwarded to every Member and Advisory Member of CNC/CIE. Highlights include: the constant efforts of the executive to control the CIE budget in this period of world-wide business recession,

- The idea to have an "Observer Members" class added to the current "Full Members" and "Individual Members" did not seem to catch the favor of the majority.

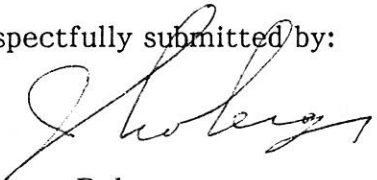
- Draft Standards are now officially sold as a new category of publications and all CIE publications are becoming available on CD ROM as a result of a non-exclusive licensing agreement with IHS, a USA company. Until the Mid-Term meeting in 1997, 50% of the proceeds would go to the National Committee of the country from which the request originates. After 1997, the full amount charged the user would go to Central Bureau.
- The new fee structure adopted in Edinburgh in 1993 will take effect on Jan. 1, 1996.
- Central Bureau operations will be maintained, with a staff of three persons in the following positions, effective Jan. 1, 1996: the current Office Manager, C. Herman, will become General Secretary (and CIE senior Administrator); the present Executive Director, Janos Schanda, will become Technical Manager until retirement at the end of 1997 (successor to be hired in mid-1997); the Office Assistant will remain in her current position.
- Other reports sent with the invitation to this meeting cover most of the routine matters of interest. The financial report for 1994 and the first 6 months of 1995 were approved as well as the balanced budget for 1996 and 1997.
- Member countries were encouraged to propose potential members for technical committees to ensure a broad range of opinions on technical matters studied.
- Two countries, Poland and the USA proposed to host the 24th session in 1997: Poland was preferred by the majority. Canada cast a minority vote for the USA, out of "continental solidarity".
- For the Mid-Term Session in 1997, three locations were considered: Lux-Pacific in Japan, SANCI Conference in Durban or Capetown in South Africa, and Lux-Europa in Holland. Japan withdrew and a subsequent vote favored South-Africa for Sept. 1997 since Lux-Europa would not provide required facilities.
- In another vote, Portugal's expulsion from membership was approved by all (but for three abstentions) for repeated neglect in paying their dues. Thailand was suspended for similar reasons.

The next Board of Administration will be made of 16 persons from 12 different countries:

- President:	Jack Hsia, U.S.A.
Past-President:	Robin Aldworth, U.K.
Vice-President:	Alan Robertson, Canada.
V.P. Publications:	W. Julian, Australia.
Vice-President:	K. Narisada, Japan
V.P. Technical:	Allan Löfberg, Sweden.
Vice-President:	W. van Bommel, Netherlands.
Secretary:	Jean Bastie, France.
Treasurer:	K. Gmeiner, Austria.
Directors: Div. 1:	K. Sagawa, Japan.
Div. 2:	F. Hengstberger, South-Africa.
Div. 3:	A. Slater, U.K.
Div. 4:	P. Walraven, Netherlands.
Div. 5:	J. Horvath, Hungary.
Div. 6:	D.H. Sleiney, U.S.A.
Div. 7:	M. Seidl, Germany.

Due to the short time elapsed since the conclusion of the 23rd Session, minutes of division and technical committees meetings have not been received at this time. In line with the wish previously expressed by the members, I am urging all division members to disseminate quickly the information to be received in the coming months to their own mailing list, as well as to our Secretary for forwarding to all other Members and Advisory Members of CNC/CIE.

Respectfully submitted by:



Jacques Roberge
President CNC/CIE
LITHONIA LIGHTING CANADA
5650, Trudeau
St-Hyacinthe, Québec, CANADA.
J2S 1H4

TEL: 514-773-5503
FAX: 514-773-0936

December 1, 1995

APPENDIX D



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

Canadian National Committee Comité National Canadien



CNC/CIE SECRETARY'S REPORT TO THE 40th ANNUAL MEETING

1995-DECEMBER-01

This report covers the period from 1994-November-28 to 1995-November-30

CIE MATTERS:

1. Annual Membership Fee:

The annual membership fee of the CNC/CIE as a member of the CIE for 1995 is 77,179.00 Austrian Schillings. This is approximately \$11,106.00 Cdn. The NRC International Affairs Branch is responsible for making this payment. The NRC-IA is concerned over the continued increase in annual fees, particularly since their budget is frozen.

Since this year was a 'quadrennial' year, there was considerable accounting information received concerning the CIE. This information was passed on to the NRC-IA.

2. CIE Membership:

i. Republic of Moldova: The results of the CNC/CIE ballot was to approve the membership of the CIE National Committee of Moldova. (45 ballots were mailed, 16 were returned: 15 in favour, 1 abstention.) This result was transmitted to the Central Bureau. The final international vote was unanimous approval of their membership.

ii. Estonia: The results of the CNC/CIE ballot was to approve the membership of the Estonian Illuminating Engineering Society. (46 ballots were mailed, 23 were returned: all in favour.) This result was transmitted to the Central Bureau. The final international vote was unanimous approval of their membership. The Estonian Illuminating Engineering Society became the 40th member of the CIE.

3. CIE Volunteers:

The CIE Board of Administration requested the help of people who have retired from their professional activities, but were still interested in CIE work, such as providing help in editing reports. Professor Marion G. Bassett has indicated her willingness to do so.

4. CIE Draft Standards:

Comments concerning CIE DS004 *Colours of Signal Lights* were received from two sources: J.G. White of Transport Canada, and M.G. Whillans of The Colour Blind Committee. These were passed on to the Central Bureau for use by the relevant TC in preparing a new version. The comments received from all National Committees were substantial enough that a special meeting of the TC, together with any NC representatives, was called to discuss the comments and come to a consensus opinion as far as possible.

5. CIE Publications:

The CIE Board of Administration has set up a 3-year trial period for the distribution of CIE Technical Reports on CD-ROM with Information Handling Services, Englewood, Colorado. IHS also provides this service for ISO, IEC, IESNA, and other standards organisations.

The Central Bureau also makes available by email various items of information such as Circular Letters to NCs, the text of *CIE News*, Press Releases, etc. CIE information has also been set up on the WorldWideWeb by H.Ikeda in Japan.

At our request, Christine Hermann of the Central Bureau made a compilation of the French abstracts of all CIE Publications published since 1990. These have been forwarded to A.R. Robertson, who is in charge of CIE publication sales for the CNC/CIE.

6. Mailings:

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

CIE NEWS # 32, December 1994
CIE NEWS # 33, March 1995
CIE NEWS # 34, June 1995
CIE NEWS # 35, September 1995

CIE Press Releases:

CIE Publication 13.3 (1995), *Method of Measuring and Specifying Colour Rendering Properties of Light Sources*.
CIE Publication 112 (1994), *Glare Evaluation System for Use Within Outdoor Sports and Area Lighting*.
CIE Publication 113 (1995), *Maintained Night-Time Visibility of Retroreflective Road Signs*.
CIE Publication 114 (1994), *CIE Collection in Photometry and Radiometry*.
CIE Publication 115 (1995), *Recommendations for the Lighting of Roads for Motor and Pedestrian Traffic*.
CIE Publication 116 (1995), *Industrial Colour-Difference Evaluation*.
CIE Publication 117 (1995), *Discomfort Glare in Interior Lighting*.
CIE Publication 118 (1995), *CIE Collection in Colour and Vision*.

CIE Special Publication x009 (1995), *Proceedings of the CIE Symposium '94 on Advances in Photometry - 70 Years of CIE Photometry*.

CIE Disk D008 (1995), *Computer Program to Calculate CRIs*.

23rd SESSION OF THE CIE, November 1-8, 1995, New Delhi, India

A letter was received from H.S. Mamak, chairman of the Indian Organizing Committee concerning the purchase of a video film of parts of the opening of the Session (at a possible cost of \$200.). I replied that I did not think that such a film would be of use to us.

At our last annual meeting, the CNC/CIE recommended J. Roberge as the official delegate of the CNC/CIE to the 23rd Session of the CIE, with A.R. Robertson to act as alternate. This was passed to the NRC Institute for National Measurement Standards (INMS) who made these nominations to the NRC-IA who appointed the candidates to the CIE General Assembly.

At this Session of the CIE, Alan Robertson assumed his responsibilities as Vice President Without Portfolio. We commend him on this appointment and for his continuing dedication to the work of the CIE.

The six papers submitted by our members for presentation at the meeting were all accepted for either verbal presentations or poster presentations. The Canadian delegation consisted of seven members. They were:

Werner K. Adrian
Shail Mahanti
Sam W. McKnight
Ivan C. Pasini

Jacques Roberge
Alan R. Robertson
Jennifer A. Veitch

We look forward to their reports at our annual meeting. Our sympathies go to Dale Tiller who had also planned to attend but became ill enroute and was forced to return to Ottawa.

Our congratulations to two of our members who received CIE Certificates:

Professor Marion G. Bassett
Dr. Peter K. Kaiser

These Certificates are awarded by the CIE Board of Administration in grateful appreciation of distinguished and valuable service.

CNC/CIE MATTERS:

1. Mailing Lists:

At present I maintain 4 mailing lists: Members(12), Advisory Members(36), General Interest(32), and a list of Journals/Associations(20). In general, the difference between the first two and the 3rd 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.

2. Membership:

A list of our Members and Advisory Members is available and will be discussed later in the agenda for the purposes of making any changes.

Members:

- i. At last years annual meeting (39th), six Member appointments were recommended by the CNC/CIE, and letters of appointment were sent to these people by A.L. VanKoughnett, Director-General of INMS. All have accepted. They are:

W.K. Adrian	S.M. McFadden
R.B. Gibbons	I.C. Pasini
J. Love	J.C. Zwinkels

- ii. I did not receive a reply to my follow-up request to S.M. Kaye. As a result, I have moved his name from the Members list to the Advisory Members list.
- iii. Ron Gibbons has moved to the USA. He has taken a position with Philips Lighting in Fairmont, West Virginia.

Advisory Members:

- i. In addition to the additions recommended at our last annual meeting, the following have become Advisory Members as a result of their activity on CIE Technical Committees:
 - a) Dr. Brian Liddy, membership in TC4-31 (Colour Vision Standards for Transport).
 - b) Dr. L.A. Whitehead has accepted our invitation to become an Advisory Member. He is working with TC 3-30 (Hollow Light Guides).
- ii. R.J. Adams has declined our invitation to join the CNC/CIE as an Advisory Member.
- iii. The following have shown an interest in CNC/CIE matters and I recommend their nomination as CNC/CIE Advisory Members:

Dr. Tim M. Richardson	Dr. Jennifer A. Veitch
VITAL Technologies Corporation	NRC Institute for Research in Construction
Bolton, Ontario	Ottawa, Ontario

3. Communications:

In response to our discussion at the last annual meeting concerning improving communications amongst members about the activities in the various Divisions, I have sent two Information Updates (1995-January-26 and 1995-March-27) to Members and Advisory Members. If Division Members receive reports which they wish the members to know about, this is one means by which we can let the membership know that these are available, and where to get them.

The quadrennial reports of the CIE Divisions, the CIE President, Vice Presidents (Technical, Publications), Secretary, and the Executive Director were duplicated and sent to all Members and Advisory Members.

Respectfully submitted,



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

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

APPENDIX E



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

Canadian National Committee Comité National Canadien



CNC/CIE Publications Report, November 1995

A.R. Robertson

The following table summarizes publication sales and purchases for the last two years. Details for 1995 are on the attached spreadsheets.

	1994 (\$)	1995 (\$)
Balance forward	4016.23	5211.20
Sales	5465.00	7343.00
Interest	2.18	3.25
Other income	622.42	0.00
Payments to CB	(4894.63)	(7637.13)
Other expenses	0.00	(12.50)
Closing balance	<u>5211.20</u>	<u>4907.82</u>
Debt to CB	<u>(5493.48)</u>	<u>(355.46)</u>
Effective balance	(282.28)	4552.36

Based on my experience of the last few years, a net annual income of about \$3000 appears to be sustainable with our present price structure. Our prices were originally based on a mark-up of 49 per cent but the effective mark-up is now closer to 40 per cent. This is because the Austrian Schilling has increased in value from about \$0.114 to about \$0.135.

The CNC/CIE should decide whether to adjust the mark-up, bearing in mind the following factors:

1. Comparability with USNC prices
2. The use we can make of the profits
3. Our mandate to disseminate CIE information
4. The possible effect of a price change on sales volume.

With our finances finally out of the red, I feel I have accomplished the task that was given to me in 1993. With this in mind, and given that I have now assumed duties as CIE Vice-President, I have informed the President of the CNC of my resignation as Publications Officer, effective 31 December 1995.

CASH.XLS

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	CIE Publications	95-11-29												
2														
3	Cash Flow													
4														
5	Date	Sales	Other Income	Payments to CB	Other Expense	Deposit	Cheques Inhand	Bank Balance	Total Balance	Purchases (A/S)	Debt to CB (A/S)	Exchange Rate	Debt to CB (\$)	Effective Balance
6														
7	94-11-25 Forward						\$414.00	\$4 797.20	\$5 211.20	1 352.00	42857.50	0.13000	\$5 493.48	(\$282.28)
8	94-11-21 Invoice #306						\$414.00	\$4 797.20	\$5 211.20			0.13000	\$5 669.24	(\$456.04)
9	94-12-08 City of Calgary	\$97.00					\$511.00	\$4 797.20	\$5 308.20			0.13000	\$5 669.24	(\$361.04)
10	94-12-22 M.Basnett	\$104.00					\$615.00	\$4 797.20	\$5 412.20			0.13000	\$5 669.24	(\$257.04)
11	95-01-04 NRC/CSTI	\$194.00					\$609.00	\$4 797.20	\$5 606.20			0.13000	\$5 669.24	(\$35.04)
12	95-01-12 Ontario Hydro	\$593.00					\$1 402.00	\$4 797.20	\$6 199.20	-10 926.50	32643.00	0.13000	\$4 248.79	\$1 950.41
13	95-01-12 Returns					\$988.00	\$414.00	\$5 785.20	\$6 199.20			0.13000	\$4 248.79	\$1 950.41
14	95-01-17 Deposit						\$414.00	\$5 785.20	\$6 199.20	-91.65	32591.35	0.13000	\$4 236.88	\$1 962.32
15	95-01-17 5% off #306 & 313						\$414.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
16	95-01-17 Exchange rate						\$414.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
17	95-01-17 Payment						\$414.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
18	95-01-17 Commission						\$414.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
19	95-01-17 Adjustment						\$414.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
20	95-01-26 Invoice #17						\$414.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
21	95-01-26 Invoice #22						\$414.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
22	95-01-29 Can. Conservation	\$104.00					\$518.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
23	95-01-31 Invoice #49						\$3 276.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
24	95-02-06 Health Canada	\$2 758.00					\$3 276.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
25	95-02-07 Invoice #59						\$3 276.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
26	95-02-10 Invoice #75						\$3 276.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
27	95-03-01 Can. Tech. Textiles	\$344.00					\$3 620.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
28	95-03-06 Invoice #85						\$3 620.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
29	95-03-13 Invoice #96	\$266.00					\$3 886.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
30	95-03-22 Univ. of Calgary	\$171.00					\$4 057.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
31	95-04-05 Lumelec-Schneider	\$347.00					\$4 404.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
32	95-04-12 IREQ	\$101.00					\$4 505.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
33	95-04-20 Min. Transport Que.	\$268.00					\$4 763.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
34	95-04-21 Transport Canada	\$655.00					\$5 418.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
35	95-04-29 Interest					\$1.61	\$5 418.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
36	95-05-04 Deposit					\$5 418.00	\$5 418.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
37	95-05-15 City of Calgary	\$189.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
38	95-05-08 Invoice #179						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
39	95-05-08 Invoice #180						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
40	95-05-24 Invoice #205						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
41	95-07-17 Deposit					\$189.00	\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
42	95-07-17 Exchange rate						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
43	95-07-17 Payment						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
44	95-07-17 Commission						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
45	95-07-17 Adjustment						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
46	95-07-17 Adjustment						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
47	95-07-18 Manitoba Hydro	\$69.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
48	95-07-20 Invoice #263						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
49	95-08-02 Bell Canada	\$82.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
50	95-08-04 NRC/INMS	\$101.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
51	95-08-18 Min. Transport Que.	\$107.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
52	95-08-18 U. de Sherbrooke	\$133.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
53	95-09-05 Invoice #319						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
54	95-09-10 Lighter	\$90.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
55	95-10-03 Invoice #352						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
56	95-10-12 Invoice #361						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
57	95-10-16 Umanio Lighting	\$254.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
58	95-10-22 Sask. Highway	\$107.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
59	95-10-31 Interest						\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
60	95-11-20 Min. Transport Que.	\$82.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
61	95-11-28 Min. Transport Que.	\$133.00					\$189.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
62	95-11-28 Deposit					\$1 162.00	\$1 162.00	\$5 785.20	\$6 199.20			0.13000	\$4 236.88	\$1 962.32
63														
64	Total	\$7 343.00	\$3.25	\$7 637.13	\$12.50					15 405.06				

STOCK.XLS

	CIE Publications							
	Stock list	95-11-29						
	Exchange rate	0.114						
	Safety factor	1.1						
	Mark up	0.49						
	Multiplier	0.245882 (=ATS x ER x SF / (1 - MU))						
No.	Title	Year	Cost (ATS)	Price (CDN\$)	Stock 941125	Purchases since 941125	Sales since 941125	Current stock
1	Urban sky glow	1980	0.00	\$74.00	5		1	4
2.2	Signal colours	1975	0.00	\$120.00	4		1	3
12.2	Road Lighting	1977	0.00	\$94.00	4			4
13.3	Colour rendering	1995	539.50	\$133.00	0	5	4	1
15.2	Colorimetry	1986	481.00	\$118.00	0	3	2	1
16	Daylight	1972	0.00	\$120.00	5			5
17.4	Vocabulary	1987	2515.50	\$619.00	2		1	1
18.2	Physical photometry	1983	0.00	\$88.00	4		1	3
19.21	Visual performance -	1981	0.00	\$152.00	4			4
19.22	Visual performance -	1981	0.00	\$120.00	4			4
23	Motorway lighting	1973	0.00	\$101.00	5			5
24	Luminaire phot. (ind)	1973	0.00	\$101.00	5		2	3
27	Luminaire phot. (street)	1973	0.00	\$107.00	4			4
29.2	Interior lighting	1986	539.50	\$133.00	2	-1	1	0
30.2	Calc.&meas. (road ltg)	1982	0.00	\$184.00	2		1	1
31	Glare (road lighting)	1976	0.00	\$74.00	2		1	1
32A	Special road ltg (French)	1977	0.00	\$101.00	4			4
32B	Special road ltg (English)	1977	0.00	\$101.00	5			5
33A	Road ltg depn (French)	1977	0.00	\$94.00	4			4
33B	Road ltg depn (English)	1977	0.00	\$94.00	5			5
34	Road ltg installn data	1977	0.00	\$88.00	4			4
38	Char. of materials	1977	0.00	\$184.00	4			4
39.2	Surf.colours for signal	1983	0.00	\$120.00	5		1	4
40	Interior lighting calcs	1978	0.00	\$101.00	4			4
41	Light as true vis.quant	1978	344.50	\$88.00	5		1	4
42	Lighting for tennis	1978	0.00	\$74.00	6			6
43	Phot. of floodlights	1979	0.00	\$94.00	5		1	4
44	Absolute reflection	1979	0.00	\$107.00	3		1	2
45	Lighting for ice sports	1979	0.00	\$74.00	5			5
46	Material refl. stds.	1979	0.00	\$133.00	4			4
47	Lighting for wet road	1979	0.00	\$120.00	4			4
48	Road traffic signals	1980	0.00	\$88.00	3		1	2
49	Emergency lighting	1981	0.00	\$62.00	4			4
51	Daylight simulators	1981	0.00	\$82.00	3		1	2
52	Interior lighting calcs	1982	0.00	\$184.00	4			4
53	Radiometers & phot	1982	0.00	\$82.00	4		1	3
54	Retroreflection	1982	0.00	\$82.00	2			2
55	Discomfort glare	1983	0.00	\$94.00	3			3
56	Proceedings 1983	1983	0.00	\$184.00	5			5
57	Lighting for football	1983	0.00	\$62.00	4			4
58	Lighting for sports ha	1983	0.00	\$48.00	4			4
59	Polarization	1984	0.00	\$82.00	4			4
60	Vision & the vdu	1984	0.00	\$82.00	2		1	1
61	Tunnel entrance light	1984	0.00	\$120.00	3			3
62	Lighting for swimming	1984	0.00	\$74.00	2			2

STOCK.XLS

No.	Title	Year	Cost (ATS)	Price (CDN\$)	Stock 941125	Purchases since 941125	Sales since 941125	Current stock
63	Spectroradiometry	1984	0.00	\$101.00	3		3	0
64	Spectral responsivity	1984	0.00	\$107.00	4		1	3
65	Absolute radiometer	1985	0.00	\$82.00	4		1	3
66	Road surfaces	1984	0.00	\$107.00	2			2
67	Photometry of sports	1986	195.00	\$48.00	5	-3		2
68	Exterior lighting	1986	435.50	\$107.00	1			1
68	Exterior lighting	1986	0.00	\$107.00	4			4
69	Illuminance meters	1987	357.50	\$88.00	1	1	1	1
69		1987	396.50	\$97.00	0	1		1
70	Meas. of luminous int	1987	383.50	\$94.00	4	-2		2
71	Proceedings 1987	1987	1898.00	\$467.00	2	-1		1
72	Retroreflectors	1987	396.50	\$101.00	3	-2	1	0
73	Road markings	1988	435.50	\$107.00	0	1		1
74	Road signs	1988	617.50	\$152.00	1	0	1	0
74	Road signs	1988	682.50	\$168.00	0	2		2
75	Spec. luminous effici	1988	299.00	\$74.00	4	-2		2
76	Meas. of luminescen	1988	435.50	\$107.00	3	-1		2
77	Electric light sources	1988	617.50	\$152.00	4	-2	1	1
78	Brightness-luminance	1988	812.50	\$217.00	5	-3		2
79	Road traffic lights	1988	273.00	\$74.00	2		1	1
80	Observer metamerism	1989	273.00	\$74.00	5	-3		2
81	Mesopic photometry	1989	318.50	\$82.00	3			3
82	CIE history	1989	884.00	\$217.00	1			1
83	Lighting for tv sports	1989	273.00	\$74.00	5	-3		2
84	Luminous flux	1989	383.50	\$94.00	2		1	1
85	Solar spec. irradiance	1989	383.50	\$94.00	2	2	2	2
86	1988 spec.lum.eff.fur	1990	253.50	\$62.00	3			3
87	Self-luminous displays	1990	357.50	\$88.00	1			1
88	Lighting for road tunn	1990	364.00	\$90.00	1			1
89	Collection 1990	1991	422.50	\$104.00	0	4	2	2
90	Sunscreen testing	1991	279.50	\$69.00	0	4	2	2
91	Proceedings 1991	1992	1170.00	\$288.00	2			2
92	Lighting of urban are	1992	331.50	\$82.00	2			2
93	Road lighting / accid	1992	539.50	\$133.00	2		2	0
94	Floodlighting	1993	435.50	\$107.00	1			1
95	Contrast & visibility	1992	422.50	\$104.00	0	2		2
96	Electric light sources	1992	299.00	\$74.00	2		1	1
97	Maintenance/indoor	1992	299.00	\$74.00	2			2
98	Personal uv dosimetr	1992	299.00	\$74.00	1	2	1	2
99	Lighting education	1992	279.50	\$69.00	1			1
100	Night driving	1992	435.50	\$107.00	0	2		2
101	Parameters/colour d	1993	253.50	\$62.00	2			2
102	File format-photome	1993	331.50	\$82.00	0	2		2
103	CIE Collection 1993	1993	435.50	\$107.00	1	2	2	1
104	Daytime running ligh	1993	253.50	\$62.00	1			1
105	Spectroradiometry	1993	299.00	\$74.00	2		1	1
106	CIE Collection/Photo	1993	422.50	\$104.00	2		1	1
107	Signal colours	1994	396.50	\$97.00	1			1
108	Daylight measureme	1994	422.50	\$104.00	2		1	1
109	Corresponding colou	1994	279.50	\$69.00	2			2
110	Spatial dist. daylight	1994	364.00	\$90.00	2		1	1
111	Variable message sig	1994	422.50	\$104.00	2		1	1
112	Glare evaluation	1994	279.50	\$69.00	0	2	1	1
113	Retroreflective signs	1995	435.50	\$107.00	0	4	3	1

STOCK.XLS

No.	Title	Year	Cost (ATS)	Price (CDN\$)	Stock 941125	Purchases since 941125	Sales since 941125	Current stock
114	Collection - photome	1994	396.50	\$97.00	0	2		2
115	Lighting of roads	1995	331.50	\$82.00	0	4	2	2
116	Colour difference ev	1995	279.50	\$69.00	0	2		2
117	Discomfort glare	1995	364.00	\$90.00	0	4	2	2
118	Collection - colour &	1995	435.50	\$107.00	0	2		2
D001	Phot. & colorim. data	1988	331.50	\$82.00	0	1	1	0
D002	Colour rend. data	1991	598.00	\$147.00	0	2	2	0
D003	CIE Roster		331.50	\$82.00	0			0
D004	CIE Publications	1993	598.00	\$147.00	0			0
D005	Daylight simulators	1994	214.50	\$53.00	0			0
D006	Daylight AQC	1994	260.00	\$64.00	2		1	1
D007	Corresponding colour	1994	422.50	\$104.00	0			0
D008	Colour rendering	1995	260.00	\$64.00	0			0
ISO 10526	Standard illuminants	1991	208.00	\$62.00	2			2
ISO 10527	Standard observers	1991	390.00	\$101.00	3			3
DS003.2	Daylight	1994	165.00	\$28.00	0			0
DS004	Signal colours	1994	215.00	\$37.00	0			0
x001	SLG-Div.5 Symposium	1989	279.50	\$69.00	0			0
x002	SLG-Div.4 Symposium	1989	422.50	\$104.00	0			0
x003	CIE-WMO Symposium	1989	598.00	\$147.00	0	2	1	1
x005	Proc.sem.computer	1992	598.00	\$147.00	0			0
x006	Japan CIE / Prakash	1991	279.50	\$69.00	0			0
x007	Proc.Symp.Colorimet	1993	617.50	\$152.00	0			0
x008	Urban Sky Glow	1994	396.50	\$97.00	1	2	2	1
x009	Proc.Symp.Photomet	1995	650.00	\$160.00	0	2		2
AIC1AB	AIC Proc 93 A+B	1993	975.00	\$188.00	0			0
AIC1AC	AIC Proc 93 A+C	1993	975.00	\$188.00	0			0
AIC1ABC	AIC Proc 93 A+B+C	1993	1495.00	\$288.00	0			0
	Total				279	39	66	252
	Total cost (ATS)				48 711	15 314	21 970	42 055

APPENDIX F



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

Canadian National Committee Comité National Canadien



CNC/CIE MEMBERS

<u>CNC/CIE</u>			<u>TERM (expiry)</u>	<u>CIE</u>
President	J. Roberge	Québec	1995-12-31	Division 5, Finance Com.
Vice President	W.K. Adrian	Ontario	1998-12-31	Division 4
Secretary/Treasurer	A.A. Gaertner	Ontario	1997-12-31	
	R.B. Gibbons	Ontario	1998-12-31	
	K.F. Lin	Ontario	1996-12-31	Division 6
	J. Love	Alberta	1998-12-31	
	S.M. McFadden	Ontario	1998-12-31	Division 1
	T. Nilsson	P.E.I.	1997-12-31	
	I.C. Pasini	Ontario	1998-12-31	Division 3
	R.W. White	Québec	1996-12-31	Division 7
	J.C. Zwinkels	Ontario	1998-12-31	Division 2
<i>ex officio</i>	A.R. Robertson	Ontario		CIE VP, NRC/INMS Member

CNC/CIE ADVISORY MEMBERS

Ian Ashdown	British Columbia	P. Manning	Nova Scotia
M.G. Bassett	Ontario	J. Bruce McArthur	Ontario
H.W. Budde	Ontario	Donald B. McIntyre	Ontario
J. Allyson Chrysler	Ontario	S.W. McKnight	Ontario
Vince Cimino	Ontario	Arthur H. Mendel	Québec
W.B. Cowan	Ontario	H. H. Mikaelian	New Brunswick
Biman Das	Nova Scotia	M.J. Ouellette	Ontario
R.V. Day	Ontario	* Tim M. Richardson	Ontario
C.M. Henville	Ontario	Ralph A. Smith	New Brunswick
Byron Jordan	Québec	Eli Szamosi	Ontario
P.K. Kaiser	Ontario	Debbie Takeuchi	Ontario
Roy Kaufmann	British Columbia	B.W. Tansley	Ontario
S.M. Kaye	Manitoba	D.K. Tiller	Ontario
A. Ketvirtis	Ontario	M.K. Timmings	Ontario
Barbara Kolesnik	Ontario	D. Trotter	Ontario
Jacques Lacasse	Québec	Lorne A. Whitehead	British Columbia
R. Lakowski	British Columbia	George Woo	Ontario
Brian Liddy	Ontario	E. Wotton	Ontario

* = requires CNC/CIE appointment at annual meeting of 1995-December-01.

November 30, 1995



APPENDIX G
Highlights from CIE BA Meeting 1995–November–09
A.R. Robertson

Future meetings:

D1	1996–06	Goteborg, Sweden
	1997–05	Kyoto, Japan
D2	1996–09	Vienna, Austria
	1997–09	South Africa
	1998	USA
D3	1996	France
	1997	South Africa
D4	1996	France
	1997	South Africa
	1998	UK
D5	1997–05	Netherlands
D6	1996–09	Vienna, Austria
D7	1997–09	South Africa

Volume 2 of Proceedings will include opening and closing addresses, VPT and VPP reports, Division meeting reports, workshop reports, invited papers not in vol. 1, list of participants.

VP assignments:

Robertson – image technology
Van Bommel – marketing
Narisada – membership retention and development

ByLaws changed to allow NC to appoint member to TC even if there is already a member from that country.

Discussion of possible observer status. Lower dues. No voting rights. Limited time.

Brainstorming session on strategic plan. Main concerns seem to be recognition, funding, technical scope in that order.

Strong feeling Session was too long. Should be confined to one week with travel on weekends.

1999 Session will probably be last week of June or first two of July.

1997 mid-term – first week of September in South Africa

1996 meeting – Vienna, September 9–10

CNC/CIE DIVISION MEMBERS'
REPORTS
for the
40th Annual CNC/CIE Meeting
1995-December-01

The enclosed reports are an addition to the CIE Divisional quadrennial reports presented at the CIE 23rd Session held in New Delhi, India in November 1995. These reports were mailed to all Members and Advisory Members on 1995-November-21.

Further information concerning the work of the CIE Divisions may be obtained from the CNC/CIE Division Members:

Division 1 Vision and Colour

Mrs. Sharon M. McFadden
Defence and Civil Institute of Environmental Medicine
1133 Sheppard Avenue West
P.O. Box 2000
North York, Ontario
M3M 3B9

Tel: (416) 635-2189
Fax: (416) 635-2104
Email: sharon@ben.dciem.dnd.ca

Division 2 Physical Measurement of Light and Radiation

Dr. J.C. Zwinkels
Institute for National Measurement Standards
Bldg. M-36, Room 1401C
National Research Council of Canada
Ottawa, Ontario
K1A 0R6

Tel: (613) 993-9363
Fax: (613) 952-1394
Email: joanne.zwinkels@nrc.ca

Division 3 Interior Environment and Lighting Design

Mr. I.C. Pasini
Public Works Canada
A&E Services
Sir Charles Tupper Building D507
Riverside Drive
Ottawa, Ontario
K1A 0M2

Tel: (613) 736-2255
Fax: (613) 736-3178
Email: pasinii@pwc-tpc.ca

Division 4 Lighting and Signalling for Transport

Prof. Dr. Ing. W.K. Adrian
Faculty of Science
School of Optometry
University of Waterloo
Waterloo, Ontario
N2L 3G1

Tel: (519) 885-1211x3777
Fax: (519) 725-0784
Email: wadrian@watserv1.uwaterloo.ca

Division 5 Exterior and Other Lighting Applications

Mr. J. Roberge, P.Eng
Lithonia Lighting Canada
5650 Trudeau Avenue
Saint-Hyacinthe, Québec
J2S 1H4

Tel: (514) 773-5503
Fax: (514) 773-0936

Division 6 Photobiology and Photochemistry

Dr. J.A. Veitch
Institute for Research in Construction
Building M24, Room 322
National Research Council of Canada
Ottawa, Ontario
K1A 0R6

Tel: (613) 993-9671
Fax: (613) 954-3733
Email: veitch@irc.lan.nrc.ca

Division 7 General Aspects of Lighting

Mr. R.W. White
2364 Regent Avenue
Montreal, Quebec
H4A 2R1

Tel: (514) 931-7501
Fax: (514) 931-7503

CIE Activity Report for Division 1: Vision and Colour

Sharon M. McFadden

The activities for Division 1 over the past four years are summarized in the quadrennium report of Dr. Ikeda which was distributed to all members of the CNC/CIE. The annual meeting of Division 1 for 1995 was held at the CIE 23rd Session in New Delhi, India. Many of the Technical Committees also met at that time. Dr. Robertson represented Canada at that meeting and will provide a report on the latest activities in Division 1.

As stated in Dr Ikeda's report, many of the Technical Committees in Division 1 have been making good progress toward completing their mandate. The progress of the less active committees is being monitored and some have already been disbanded. Having said that, none of the Technical Committees submitted reports for ratification by all members of Division 1 during the past year. One new Technical Committee was formed - "TC1-43 Rod intrusion in Metameric Colour Matches". Dr Alan Robertson will represent Canada on that committee.

Canadian participation in Division 1 has remained essentially unchanged in 1995. Canada has representatives on 11 Technical Committees and one reporter. According to the Division 1 Activity Report for March 1995, the Canadian representatives are W. Adrian on TC1-18, TC1-19, and TC1-25; A. Robertson on TC1-27, TC1-31, TC1-38, and TC1-43; W. Cowan on TC1-21 and TC1-37; P. Kaiser on TC1-26 and TC1-21; R. Lakowski on TC1-35 and J. Zwinkels on TC1-38 and R 1-09.

CIE DIVISION 1: VISION AND COLOUR

CIE 23RD SESSION, NEW DELHI, INDIA

Notes on CIE Division 1 Meetings 1995–November–07/08

A.R. Robertson

Brief tribute and minute of silence in memory of R.Blackwell and J.Burch.

A new definition of equivalent luminance was proposed and accepted unanimously after some discussion. The change involved using 540 THz as the reference instead of a 2042 K blackbody. This is to conform to the SI definition of the candela.

- TC 1–16. TCC hopes for publication in 1996. Disk version will be used for voting to avoid expensive printing of this long report.
- TC 1–18. Strong disagreement within TC. One last attempt will be made to get agreement. If not possible, TC will be disbanded and replaced by reporter.
- TC 1–19. TC met in New Delhi. The TC has gone beyond its terms of reference and would like to go even further. It was agreed to concentrate on a report within the original terms and then to form a new TC to go further.
- TC 1–21. Ten different systems have been tested. Results are inconclusive. Selection of system will have to be based on qualitative aspects. Equivalent luminance will be calculated from photopic luminance, chromaticity and scotopic luminance.
- TC 1–23. TC cannot agree. It will be disbanded and replaced by a reporter.
- TC 1–24. Disbanded.
- TC 1–25. Disbanded.
- TC 1–26. Eigenvector analysis is underway.
- TC 1–27. Five research groups have submitted results. These will be collated and analyzed within one year.
- TC 1–29. Disbanded.
- TC 1–30. 1–nm tables have been produced by spline interpolation. Lagrange interpolation gave oscillations.
- TC 1–31. The AD has prepared a draft which is acceptable to the TCC and to J.A.Bristow (spokesman for the minority). This will be circulated to the full TC.
- TC 1–33. TC met in New Delhi. TCC has resigned. Will use Macbeth Color Checker samples with CIELAB as colour appearance model. Have not decided on reference illuminants but there will probably be six. Expect final report in 1996. J. Schanda appointed as new TCC.
- TC 1–34. TCC circulated first draft in October.
- TC 1–35. AD cannot contact TCC. One more attempt will be made.
- TC 1–38. TC met in New Delhi. Second draft will be prepared. All other Divisions will be informed of the work.
- TC 1–36. Exciting TC. Involves most of the world's colour vision experts. Will derive continuous observer with 2 deg and 10 deg as special cases. Will start from CIE 1964 and add continuously varying parameters.
- TC 1–37. Will follow from TC 1–21
- TC 1–39. TCC has become AD of D3 so cannot continue. M.Perry (UK) appointed new TCC.
- TC 1–40. No progress.

- TC 1-41. Report is ready but delayed to coordinate with TC 1-36.
- TC 1-42. No progress.
- TC 1-43. Draft method is agreed to except for calculation of pupil diameter. Metamers have been generated to use the method to evaluate the rod-intrusion effect in practice.
- R 1-02. Report received. Reporter will continue.
- R 1-03. Report received. Reporter will continue.
- R 1-04. Reporter has resigned. K.Witt (Germany) nominated as replacement.
- R 1-06. Report received. Reporter will continue.
- R 1-07. No report.
- R 1-09. Reporter recommends TC with R.Hirschler (Brazil) as TCC. Approved.
- R 1-10. Discharged.
- R 1-11. Report presented. Second report will be prepared suitable for CIE Collection.

Division 1 will play a leading role in the 1996 CIE Symposium on Colour Standards for Image Technology.

TC on Visual Properties of Elderly People in Relation to Lighting Requirements. No TCC has been found and there is question whether TC is really needed.

A Belgian proposal for clarification of some derivations in Publication 15.2 led to a wider discussion on the need to revise 15.2. A Reporter will be appointed.

P.Walraven (Netherlands) was appointed Reporter (R 1-12) on a possible revision of Wyszecki and Stiles' book, Color Science.

W.Julian (Australia) was appointed Reporter (R 1-13) on problems in diagnosis of cyanosis under tri-phosphor lamps.

C.McCamy (USA) was appointed Chairman of a new TC (TC 1-45) to revise Publication 51 to include metamers for D50.

S.Kokoschka (Germany) was appointed Chairman of a new TC (TC 1-46) on fundamental concepts of equivalent luminance.

M.Pointer (UK) was appointed Reporter (R 1-14) to liaise between D1 and TC 7-06 on terminology.

New officers will be:

- Director: Ken Sagawa (Japan)
- Associate Director (Vision): Francoise Vienot (France)
- Associate Director (Colour): Mike Pointer (UK)
- Associate Director (Visual Ergonomics): Siegfried Kokoschka (Germany)
- Secretary: Francois Denner (South Africa)
- Editor: TBA (probably USA)

Future meetings:

- 1996-06 Goteborg, Sweden
- 1997-05 Kyoto, Japan

CIE Division 2 (Physical Measurement of Light and Radiation)

Director: Dr. Franz Hengstberger (South Africa)

Secretary: Dr. Antoine Bittar (New Zealand)

Report to CNC-CIE, December 1, 1995

J.C. Zwinkels

Institute for National Measurement Standards

National Research Council of Canada

Montreal Road

Ottawa, Ontario K1A 0R6

Phone: (613) 993-9363

FAX: (613) 952-1394

e-mail: JOANNE.ZWINKELS@NRC.CA

A copy of the CIE Division 2 Quadrennial Report 1991-1995 was mailed by the Secretary CNC/CIE to all members and advisory members.

The most recent CIE Division 2 meetings were held in New Delhi, India, November 6 and 8, 1995. I was unable to attend the meeting but Dr. Alan Robertson of NRC represented me at this Session. He also provided the following notes on the Division 2 meetings.

Administrative Matters

There were no changes in the Division 2 officers: Division Director - F. Hengstberger (South Africa); Associate Directors: N. Johnson (USA), T. Goodman (UK), G. Vandermeersch (Belgium); Division Secretary - T. Bittar; Division Editor - J. Moore.

Technical Committee Work in Progress

TC 2-30	Diode array radiometry (P. Wychorski, USA)	This was inadvertently omitted from the quadrennial report
TC 2-04	Secondary standard sources (J. Moore, UK)	Draft is complete and ready for TC ballot except for a new chapter on what features make a standard lamp stable.
TC 2-10	Non-selective detectors (G. Vandermeersch, Belgium)	Report is ready for Division ballot.
TC 2-11	Gonioreflectometry of standard materials (J. Hsia, USA)	One negative in TC. More measurements to be made with new vote by end of 1996

TC 2-14	Measurement of reflectance and transmittance (Polato, Italy)	Chairperson not present. Ninth draft completed. Much confusion over whether this TC is writing a standard or a technical report or both. Also there seems to be overlap with TC 2-39. Consensus was to go ahead with technical report and consider a standard later.
TC 2-16	Tristimulus colorimeters (Rastello, Italy)	Chairperson not present. Meeting held last week chaired by T. Goodman. Discussed 3 criteria for characterizing the quality of a spectral responsivity distribution. Views expressed to be passed to Chairperson.
TC 2-17	Simulated solar radiation (D. Kockot, Germany)	Chairperson not present. Third draft ready for TC vote.
TC 2-19	Measurement of spectral coefficient of retroreflection (N. Johnson, USA)	Second draft to be prepared.
TC 2-22	Luminous flux of high-pressure sodium lamps (B. Garzo, Hungary)	No report.
TC 2-23	Photometry of street-lighting luminaires (G. Vandermeersch, Belgium)	F. Hengstberger reported. Work just starting following completion of TC 2-10. Expect completion in 1997.
TC 2-24	Users guide for the selection of luminance meters (J. Moore, UK)	Only an outline is done. Chairperson thinks TC should not proceed. Division Director and several Indian delegates strongly opposed. There is a South African document which can be used as a starting point. A volunteer from India agreed to work on this. It was not clear if he will be a new chairperson.
TC 2-25	Calibration methods and photoluminescent standards for total radiance factor measurements. (J. Zwinkels, Canada)	N. Johnson reported. Incomplete draft to be circulated. Next meeting to be held May 1996 in Orlando.

TC 2-26	Measurement of the colour of self-luminous displays (R. Berns, USA)	N. Johnson reported. Several negatives in Division ballot; one because terms of reference not fulfilled. Terms of reference to be reduced and new draft written to answer other negatives.
TC 2-28	Methods of characterizing spectrophotometers (J. Verrill, UK)	Document has 8 authors (2 Canadian). One more draft to be circulated.
TC 2-29	Measurement of detector linearity (T. Goodman, UK)	Meeting last week. Needs more input from TC members. Expect draft in April 1996.
TC 2-30	Diode array radiometry (P. Wychorski, USA)	N. Johnson reported. Fifth draft (a bibliography with 500 entries) will be circulated in March 1996.
TC 2-31	Method of characterizing actinic radiometers (M. Poppe, Hungary)	G. Dezsi reported. Needs some Division 6 work before this TC can proceed. TC will be disbanded.
TC 2-32	Measuring retroreflectance of wet horizontal road markings. (Bradshaw, USA)	Chairperson has resigned.
TC 2-34	LED measurements (K. Muray, USA)	G. Sauter reported. A draft is ready. J. Moore thinks it will not pass TC vote in present form. It includes reiteration of basic optical principles.
TC 2-36	Revision of CIE Publ. 54: Retroreflection (J. Rennilson, USA)	N. Johnson reported. Updated technical report will be written before embarking on standard.
TC 2-37	Photometry using detectors as transfer standards (Ohno, USA)	Meeting last week to discuss second draft.
TC 2-39	Geometric tolerances for colorimetry (D. Rich, USA)	N. Johnson reported. Some preparatory work done by chairperson but no meeting yet. Chairperson appears to be working to much expanded terms of reference. He will be asked to restrict work to original intent.

TC 2-40	CIE standard: Characterizing the performance of luminance and illuminance meters (Rattunde, Germany)	Meeting last week . List of contents prepared. First draft expected in 4 months. TC is not following original terms of reference which were to write a standard based on an existing published report.
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Reporterships in Progress:

R 2-05	Visual gloss (J. Taylor, UK)	T. Goodman reported. Report should be ready soon.
R 2-06	Standardization of measuring geometry for the colorimetry of metallic paints (C. McCamy, USA)	Verbal report on ASTM and DIN work given.
R 2-09	Absolute cryogenic radiometer (A. Parr, USA)	N. Johnson reported. CCPR will do an intercomparison. Results will be reported to CIE.
R 2-15	Colorimetry of lustre pigments (R. Grosswang, Austria)	Reporter not present. To be closed.

Proposals for New Technical Committees:

1. Photometry in developing countries.
2. Metrology of displays (The part of TC 2-26 that was not done)
3. International harmonization of standards for aircraft lighting (possibly to be deferred to Division 4)

Future Meetings:

1996-05	Possibly with CORM in Gaithersburg
1997-09	South Africa
1998-09	Possibly in France with CCPR and Newrad

Actions Arising from 39th CNC/CIE Meeting, November 1994

- Copies of CIE technical report "Guide to Characterizing the Colorimetry of Computer-Controlled CRT Displays" were mailed to T. Nilsson and S. McFadden.
- D. Rich, Chairman of TC 2-39, was contacted to include B. Jordan as TC member.

- G. Vandermeersch, Chairman of TC 2-10, was contacted for a copy of TC 2-10 draft report, at the request of J. Roberge. No reply has been received to-date. Schanda reported to me in December 1994 that Vandermeersch was in the process of updating this draft and a new version would be available soon.

Other CIE Division 2 Notes:

- A CIE Expert Symposium on Colour Standards for Image Technology will be held 25-27 March 1996 in Vienna, Austria. Registration forms were mailed out by CNC/CIE Secretary.
- The "CIE Collection on Photometry and Radiometry" has been published as CIE Publication 114-1994.
- The draft document "Gonioreflectance of Standard Materials" prepared by TC 2-11, was received for review. Several editorial changes were recommended.
- Canadian participation in the work of the Division continues at a high level with the following members of Technical Committees:

TC 2-16	A.R. Robertson (NRC)
TC 2-22	A.A. Gaertner (NRC)
TC 2-24	W. Budde (retired from NRC)
TC 2-25, Chairman	J.C. Zwinkels (NRC)
TC 2-28	A.R. Robertson, J.C. Zwinkels
TC 2-29	W. Budde
TC 2-33	A.R. Robertson
TC 2-35	A.R. Robertson
TC 2-39	J.C. Zwinkels, B. Jordan (PAPRICAN)

**CIE DIVISION 3 ACTIVITY REPORT FOR
THE MEETING OF 7th NOVEMBER, 1995, NEW DELHI, INDIA**

Submitted by I. Pasini, Canadian Delegate to Division 3
for CNC of CIE Annual Meeting, 1st December, 1995

Division 3 met for the entire day of 7th of November in order to complete the items identified in the agenda. In attendance were 16 national delegates and approximately 50 observers. The following is a summary of action items discussed at this meeting. These items are additional to the Division 3 Report previously submitted as a separate item.

1. New Division Officers

Anthony Slater of BRE (UK) was appointed by the Board as the new Division Director. There are two Associate Directorships, one for Daylighting (Peter Tregenza - UK) and one for Electric Lighting (S. Kanaya - Japan). The Secretary is Belinda Collins- USA, and the Editor is Clay Belcher-USA.

2. Semi-annual TC Reports

Each TC Chair is now requested to submit a bi-annual report to the Division Director. The exact timing will be established by the Director and communicated to each TC Chair by the Secretary.

3. TC Reports

TC3-01 "Glare for small and large sources"

The currently adopted UGR formula is being modified to adapt it to very small and very large glare sources as it is not adequately responsive to these extreme situations. Also there is the need to start new work to adequately model situations of non-uniform lighting and specular reflectorized luminaires. An interim report addressing most of these issues will be prepared for the next divisional meeting in 2 years time.

TC3-04 "Subjective responses to lighting and shading control systems"

This TC has produced a draft report only and, due to the exceptionally rapid evolution of technological innovations, it has been unable to finalize it into a useful document. Due to this factor the TC was disbanded and the draft report will be archived in Vienna.

TC3-11 "Daylighting calculations methods"

Work completed with report to be circulated to Division members by early

next year.

TC3-12 "Daylighting and solar radiation datafor building performance"
Work completed with draft report already circulated to Division memebbers. Final report should be ready for publication for next divisional meeting in two years.

TC3-13 "Discomfort galre evaluation system"
Work completed and TC disbanded.

TC3-15 "Standardisation of intermediate sky luminance"
Due to the substantial data becoming available world wide from the International Daylighting Year, work is rapidly progressing towards the standardization of a variety of skies, from clear to cloudy. A draft report will be ready in 2 years and the final report in 4 years.

TC3-16 "Psychological aspects of lighting"
Work is completed with report being currently reviewed by divisional memebbers. Final report expected to be ready for next year.

TC3-19 "Scale model photometry"
Work is completed with report being currently reviewed by divisional memebbers. The final report, expected to be ready for next year, will contain case histories and it will be made available in CD ROM.

TC3-20 "Lighting and architecture"
The content of this document has been prepared and agreed to. The present schedule indicates a draft document will be ready in 2 years, with the final ready in 4 years.

TC3-21 "CIE/ISO Interior lighting standard"
Draft report completed with final review ready by December 1995. Final report is scheduled for completion by summer 1996.

TC3-22 "Museum lighting"
Work is progressing well but an extension of 2 years was requested in order to complete the document, due to the complex nature of the subject. Final document should be ready in 6 years from now.

TC3-23 "Visibility in interior luminous environments"
Little work was undertaken. A 2 year grace period was given before deciding to disband this TC.

TC3-24 "Energy spectrs of lighting"

An outline of subject matter content was completed, but work has been progressing slowly.

TC3-25 "Monitoring progress of the IDMP and new sections for the daylight measurement guide"

Work is progressing well with completion date expected in 2 years. An Internet Server base communication system has been readied by Mark Fontoyant (France).

TC3-26 "Development of a protocol for a post occupancy evaluation of lighting"

Work is currently being finalized on the realization of an electronic media based questionnaire with wide access through Wide Web World. Draft report should be ready in 2 years.

TC3-27 "Evaluation of exit markings and emergency lighting"

Little work has been done, due to the resignation of the chair, B. Collins. TC disbanded.

TC3-28 "Standard on calculation of utilisation factors"

Draft report ready by December 1995 with final expected in 2 years.

TC3-29 "Visualisation"

No work has been forthcoming. C. Kanaya will investigate if this TC should be disbanded.

TC3-30 "Hollow light guides"

Work completed with draft submitted to Division for acceptance. Document should be ready for publishing by next summer.

4. Reportership

Current

R3-02

Workshop planned to better demonstrate subject matter. Details to be forthcoming soon on the CIE Newsletter.

R3-06

Some fundamental work has been done but no report has been produced yet. Liaison with other interested organizations will be promoted.

Newly Proposed

1. R3-12 L. Bedocs to investigate within TC 3.12 issues

pertaining to amending document CIE No 97 "Lighting Maintenance".

2. R3-13 Clay Belcher to represent Division 3 on Division 7 for issues pertaining to nomenclature definitions.
3. R3-14 Carole Jones appointed to prepare by next year a report based on the Workshop on Lighting Quality (see below) which is to define the issues raised.
4. R3-15 Simon Simos (Switzerland) was tasked to prepare a report on standard illuminants used in CIE participating countries within 2 years.

5. Liaison
Current

Division 1, Image Technology

This is an area of interest to both Division 1 and 3. Mark Fontoynt has been selected as the liaison officer and will report on progress made for this technology at the next Imaging Technology Meeting, planned for Vienna in March 1997.

CEN TC169, European Standard for Lighting for Interior Spaces
L. Bedocs will coordinate work with TC21.

IALD

C. Jones is involved but no report has been prepared yet.

IEA

P. Tregenza is scheduled to meet with TC on Daylighting during the next few months.

ISO

L. Bedocs is involved but has nothing to report.

WMO

No report at this time.

Newly Proposed

Mark Fontoynt is to report by next years Division's meeting the European work on satellite mapping information and on european daylighting activities.

New Publications

CIE 108

CIE 110

CIE 117

7. Workshops

Division 3 sponsored 2 workshops during the New Delhi Quadrennial Conference.

Lighting Quality Workshop whose aim was to exchange ideas for the definition and measurement of quality lighting issues. Some 70 delegates participated and their input will be soon published by the Division and it will be used to promote research in specific area of greatest needs.

Energy and Lighting whose aim was to solicit action plans for the CIE to better respond to the multi-disciplinary recommendations which will inevitably be part of any energy recommendations. Suggestions from the more than 100 delegates present were submitted to initiate the preparation of an energy code for lighting. The Division will soon publish a report on the issues and recommendations arrived at in this workshop.

8. Future Work

1. A new TC was proposed which will prepare a guide to the effects of lighting interior spaces with real obstruction. D. Carter to chair.
2. A new TC was proposed to provide an algorithm validating daylight outdoors. M. Navvab to chair.
3. A new TC was proposed to prepare an application guide for the "Guide to Illumination for Interior Working Environment", currently being finalized as an ISO standard by TC3-21.

9. Next Divisional Meetings

Annual meeting, October 8 and 9, Lyon, France

Mid-term meeting, September 1997, Durban, South Africa

CNC/CIE 40th Annual Meeting December 1, 1995

Report on Activities of Division 4 Lighting and Signaling for Transport

Division 4 comprises presently 19 more or less active committees. Let me mention those which I found interesting and promising beyond the Division Director's report.

- TC 4-14 Signal Colours and Light chaired by B. Cole, Australia. There had been a suggestion to correct for the boundaries of signal red which was heavily disputed as it has an impact on Automotive Signal Lights that would require an expensive change. Yet a consensus was achieved in July 1995 London.
- TC 4-18 Conspicuity of signs in non-uniform environments (Jenkins, Australia). It is still not fully known how to measure conspicuity in daytime and at night.
- TC 4-19 Visibility in Fog (Debuisson, France). The report is nearing its final stage which can be credited to Debuisson only. At a meeting in New Delhi, it was decided in his absence, to coordinate the mathematical procedures to avoid different systems used in 1-19 (Visual Performance of real tasks) and 4-19.
- TC 4-24 Tunnel Lighting Quality Criteria (Riemenschneider, Switzerland).
In order to calculate the wall luminance, that is essential to determine the quality of the lighting, the reflection properties of all surfaces have to be known. They are not known. Ron Gibbons will possibly be able to provide a system in his Ph.D. thesis at the end of 1996.
- TC 4-25 Road Surface Reflection Characteristics (K. Sørensen, Denmark). The topic was to replace q_o - the overall reflection of a road surface - which is difficult to measure by q_o - the diffusely reflected light into a hemisphere. Suggestions for a measuring geometry have been provided.
- TC 4-29 Road Traffic Lights (Schwab, U.S.A.). This newly setup committee has studied facts which are known for years and wrote a standard based on Publ. 79. The only new component would be to incorporate LED-sources for traffic lights.
- TC 4-33 Discomfort Glare in Road Lighting (Adrian, Canada). In the report on Road Lighting (TC 4-15) discomfort glare was eliminated due to lacking knowledge how to describe and calculate it. Several experimental investigations have been analyzed and seem to lead to identical equations. It has been decided in New Delhi to prepare calculations according to the Adrian-deBoer (CIE) equation and the one worked by Bennett (CBE). The program for use in PC's will be provided to the members and results are expected for the Div. 4 meeting in Poitiers, France, October 1996.

All other TC have delivered final reports or are relatively dormant without activities shown in New Delhi.

Werner Adrian



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

ACTIVITY REPORT

DIVISION 5

DIVISION 5

Ir. W.J.M. van Bommel
Division Director

R.A. Hargroves
Division Secretary

D.H. Culley
Division Editor

Philips Lighting B.V., Building ED 2
P.O.Box 80020, 5600 JM Eindhoven
Netherlands

Telephone : 40-756314, Telefax: 40-756406
Telex : 35000 phtc nl

Thorn Lighting Ltd.
Lighting Technology Centre
Spennymoor, County Durham, DL 16 7UR
Great Britain

Telephone : 388-420042, Telefax: 388-818172
Telex : 263201 THORN

1 Jossinni
31 Oosthuizen Drive
Floracliff 1709
South Africa

Telephone : 763-4846

SUMMER 1995

NOTE: It is the responsibility of division members to circulate this Activity Report to interested people in their country. TC Chairmen, please send a copy to your TC members!

GENERAL

Preparations for the New Delhi Session, 1 - 8 November of this year, are in full progress. At the divisional part of the Session we will evaluate the progress of the technical work of our division. At the same meeting we will have to decide upon the direction and priorities for the quadrennium 1995 - 1999! Prioritise our work becomes more and more important because of the trend that volunteers can spend less time for national and international standardisation work.

The total program of the Session looks very promising, while the place of the Session, New Delhi, is especially interesting for Division 5. World famous monuments and buildings have impressive decorative lighting. Some of these installations won awards in international lighting contests. Some of the installations are combined into sound and light (Son et Lumière) spectacles. Stadiums with huge spectator facilities have up to date lighting for colour television broadcasting, one with a surprisingly innovative mast design. Technical visits to some of these installations are scheduled in the Session program. Our Indian member Pranab Bandyopadhyay can supply us with in depth information. The Conference part of the Session has over 60 presented papers and more than 100 posters. During the afternoons 8 Workshops are scheduled, amongst which a Workshop on Accuracy and Tolerances in Lighting (a subject of TC 5-15). The timetable of the divisional program will be slightly adapted in order to give division 4 and 5 members the chance to participate, at least partly, in each other program. Division 5 will meet the whole day of Tuesday November 7 and not on Monday afternoon November 6. For us it is now possible to participate in the Division 4 meeting on Monday afternoon while still finishing our own program on Tuesday November 7.

After slightly more than 8 years my directorship of Division 5 comes to an end in New Delhi. I have enjoyed all of it, especially working together with such a mixed group of enthusiastic, and by times, critical, experts from all over the world. I like to acknowledge especially the cooperation with the divisional secretaries and editors over this period, Bob Hargroves, Philippe Joye, Gerard Hietbrink and Dennis Culley.

At the Board Meeting in Delhi, just prior to the opening of the Session, new Division Directors will be appointed. Our Division has put forward as candidate Jozseph Horvath (Hungary). Mr. Horvath is a long standing member and TC Chairman of our division. I am convinced that under his guidance and with the input of you all, Division 5 will have a bright quadrennium leading CIE into the twentieth century.

Wout van Bommel

Eindhoven, August 1995.

PROGRESS of TECHNICAL COMMITTEES

TC 5-01 Underground Mine Lighting

Status:

No publication. TC dissolved at the Newark 1994 meeting.

TC 5-02 Underground Mine Lighting Measurements

Status:

Work finished and published (1990); TC dissolved.

TC 5-03 Open Cast Mine Lighting

Terms of Reference: Study procedures and prepare a guide for the design of lighting for open cast mines.

Type of publication: Guide

Expected date of complete draft: 1995

Chairman: Bandyopadhyay

Members: Baxter, Davies, Hemp, Peay, van Oosten, Shotbolt, Zhang Hai-Cong

Status:

From the time it was decided to form this TC, eight years ago, several difficulties were encountered. Initially insufficient members could be obtained and later organising TC meetings was difficult because of the wide spread of members over the globe. Therefore much work was done by correspondence, which was time consuming. Nevertheless in Edinburgh (1993) an advanced draft was available. The chairman jointly worked on this draft during a visit to China, April 1995, with Mr. Zhang Hai-cong, the member from Shanghai. The resulting restructured complete draft has now been send to the TC members for voting (deadline 15 September 1995). The outline of the report:

1. Introduction.
2. Open-cast coal mines.
3. Open-cast metal and non-metal mines.
4. Machines used in open-cast mining.
5. Mine face lighting requirements.
6. Lighting requirements for areas other than mine faces.
7. Lighting systems.
8. Lighting design.
9. Conclusion.

TC 5-04 Glare in Outdoor Areas

Status:

Work finished and published (CIE Publication 112 -1994 "Glare Evaluation System for Use within Outdoor Sports and Area Lighting"); TC dissolved.

TC 5-05 Lighting for Sports Events for Colour Television

Status:

Work finished and published (1990); TC dissolved.

TC 5-06 Decorative Lighting for Exteriors

Status:

Work finished and published (CIE Publication 94-1993 "Guide for Floodlighting"); TC dissolved.

TC 5-08 Lighting for Off-Shore Gas and Oil Structures

Terms of Reference: Review the existing situation and make recommendations and a bibliography.

Type of publication: Guide

Expected date of complete draft: early 1996

Chairman: until May 1990: Van Malland
from June 1991: Bjorset

Members: Askeland, Brown, Cochran, Elsebutangen, Fine, Van Malland, Taylor, Weis

Advisors: Bieker, Reimertz, Stub

Status:

Meetings since the Newark May 1994 meeting: Liège, September 1994 (in cooperation with Division 4 on the subject of Helideck lighting); Trondheim, October 1994; Glasgow, March 1995.

The TC has found that recommendations of ICAO for helideck floodlighting are unrealistic and based on incorrect measurements at a simulated helideck. The Liège meeting discussed this with participants from ICAO's Visual Aids Panel and the International Federation of Airline Pilot's Association. It was agreed that the TC remarks were valid. The representative of ICAO's Visual Aids Panel agreed to come, together with the organiser of the tests on the simulated helideck, with informal suggestions in October 1994. Such suggestions are not yet received.

During the other two TC meetings several chapters of the draft Technical Report were discussed thoroughly. A list of recommended maintained illuminances for all relevant areas on offshore structures has been worked out. Still several chapters of the Technical Report are in a preliminary state and need to be rearranged and be more complete before circulation for comments. It is planned to have in New Delhi an advanced draft available so that editing and balloting can start shortly afterwards.

TC 5-09 Illuminance Levels for Sports Events

Terms of Reference: Produce a technical report listing lighting levels for all commonly known sports for different categories of use.

Type of publication: Technical Report; ISO/CIE Standard

Expected date of complete drafts:

Chairman: Lemons

Members: Audestad, Baldrey, Baxter, Bjorklund, Burghout, Horvath, Lecocq, Saito, Tsarkov, Vassilev

Status:

The essential aim of this TC is to produce an ISO Standard with CIE recommended illuminance values for different types of sports, each for some different categories of use (e.g. recreation, training, club competition, professional competition). A similar document is being compiled as a CEN (Commission Européenne de Normalisation) standard. CEN has contacted some of the major International Sports Federations. The CEN

document is now available for balloting by CEN. It is likely that the CEN values will provide a good basis for the CIE/ISO standard, but agreement with other countries must be achieved.

A difficulty that did arise while making an overview of different national recommendations for sports, is the fact that different countries may quote maintained values, initial values, or target values and it is not clear how they are related. This has initiated a discussion within the CIE Board. As a result a proposal for a clear definition for specifying lighting levels, maintained average (illuminance (over a surface), has been published in CIE NEWS. It is based on CIE Publication 97-1992.

TC 5-10 Exterior Security Lighting

Terms of Reference: Study and consider matters of exterior security lighting for private houses, residential areas, office buildings, banks, airports, prisons, exterior working areas, energy supply facilities, international boundaries, etc., as a deterrent to crime and to enable detection, as part of an integral security installation, with the intention of producing a guide beyond the scope of Chapter 11 of Publication No. 68.

Type of publication: Guide

Expected date of complete draft:

Chairman: Joye

Members: Audestad, Boyce, Cahn, Culley, Descheres, Diepenbroek, Horvath, Kasurinen, Prieur, Weis, Yoshida

Status:

No progress since Edinburgh 1993. - *Make last attempt - dissolve at next meeting (1997) in no further progress*

TC 5-11 Practical Design Guidelines for Sports Lighting Installations of TV

Terms of Reference: Prepare a technical report as an addition to Publication 28.2 giving a comprehensive guide to the layout of lighting installations suitable for CTV; also including a section on spill light and, if realistic, a section of semi-cylindrical illuminance.

Type of publication: Guide

Expected date of final draft: 1995/1996

Chairman: Hargroves

Members: Allegue, DiFraia, Hargroves, Horvath, Kasurinen, Lecocq, Lemons, Ludwig, Potter, Schnor, Stockmar, Van den Beld, Verbitskaya, Wittwer, Yoshikawa, Zieseniss

Status:

A TC meeting was held in conjunction with the divisional meeting in Newark, May 1994. As a result, the 3rd draft was issued to the TC members in September 1994. This included drafts of all the general sections and lighting recommendations for 44 specific sports. The relevant sections were also circulated to the International Federations of each sport for their comments. Included in this draft is a recommendation for calculated and measured grid spacings based on integer or half integer intervals for simplicity of use and understanding. This conflicts with the CEN European proposals where emphasis on exact coverage of the total playing leads to fractional spacings. Full TC comment is awaited on this and other aspects of the report before it is presented to the meeting in New Delhi.

TC 5-12 Obtrusive Light

Terms of Reference: To study the effects of obtrusive light from exterior lighting to residents and traffic; and to prepare a Technical Report that gives measure(s) to describe the effect(s), restricting values for these measures, and measuring methods; excluding the problem for astronomers.

Type of publication: Technical Report

Expected date of final draft: 1995/1996

Chairman: until July 1991: Julian

from July 1991: Fisher

Members: Matsumoto, Van Oosten, Pollard, Shotbolt, Tenner, Wilson, Wittwer, Wylie, Eberbach.

Status:

A TC meeting was held in conjunction with the Annual Conference of the Institution of Lighting Engineers in Lancaster England, in September 1994. This meeting was marked by good progress in the consideration of a second draft Technical Report and by very poor attendance. The draft report is modelled on a soon to be released Australian Standard. The report concentrates on light likely to be obtrusive to residents in proximity to a lighting installation. Manifestations of obtrusiveness are identified i.e., illuminations on surrounding properties from spill light, the view of bright luminaires and interference of visibility of transport signals due to glare, the intrusiveness of bright surfaces and upward wasted light, likely to produce local sky glow. Limiting values of these manifestations are given to keep impacts within reasonable practical limits. The values are less restrictive before a designated time, recognising that outside activity in the dark evening is a general community norm. Whereas after that time, when the community is generally at rest, the limiting values are much more restrictive. The report is based on work from Great Britain, Germany and Australia. If the response of the lighting industry in Australia to the Australian draft Standard is a guide, the CIE draft Report will provoke much discussion during its passage through to publication. The aim is to have the report circulated to Division 5 prior to the CIE Session at Delhi.

TC 5-13 CIE/ISO Standard for the lighting of exterior working areas

Terms of Reference: To produce a CIE/ISO Standard for the lighting of exterior working areas, by extracting and updating where relevant, the lighting requirements from CIE Publication No. 68/1986, adding to it the glare restriction values as given in the Technical Report of TC 5-04.

Type of publication: CIE/ISO Standard

Expected date of draft for balloting: 1995

Chairman: Horvath

Members: Audestad, Bandyopadhyay, Beckford, Breda, Deri, Dijon, Isomura, Pylvanainen, Queré, Roberge, San Martin, Spearing, Vincze, Weis.

Status:

The TC had since circulation of the last Activity Report, three meetings: Newark (1994), Lancaster (1994) and Budapest (1995). After the Budapest meeting the final version of the text (6 th draft) was accepted by the TC. In July 1995 the TC goes through its official ballot, so that before the Delhi meeting editing and Division and Board balloting can start. Done

TC 5-14 Maintenance of outdoor lighting systems

Terms of reference: To produce a Technical Report according the format of CIE Publication No. 97, describing the parameters influencing the depreciation process and the procedure for estimating the maintenance factor for outdoor lighting systems and providing information on the selection of equipment, estimation of economic maintenance cycles and advice on service techniques.

Chairman: Pollard

Members: Chan, Dijon, Iizuka, Lain, Oerkvitz, Szilas, Yates

Type of publication: Technical Report

Expected date of complete draft: 1996

Status:

The committee is now on its third Draft which was put together in January 1995 following much correspondence between members and two meetings, one in Newark (1994) and a second meeting during Division's 4 meeting in Liège, Belgium (September 1994). A further TC meeting is planned during the New Delhi Session following which the fourth and hopefully final draft will be produced and sent for voting. The Report has the following outline:

1. Introduction.
2. Need for maintenance.
3. Analysis of depreciation.
4. Economics of servicing.
5. Maintenance factor.
6. Servicing lighting systems.
7. Bibliography

TC 5-15 Tolerances in lighting design and measurement

Terms of reference: To describe the parties responsible for and involved in tolerances of lighting designs and to describe their relations and the uncertainties in these relations. To describe how existing standards on tolerances play a role in these relations. To give a qualitative (not quantitative) list of parameters which contribute to uncertainties. To give recommendations for terminology to be used.

Type of publication: Technical Report

Expected date of complete draft: Quadrennium 1995-1999

Chairman: Fisher

Members: Gierse, Jacobs, Lecocq, Roberge, Spierings, Zwick

Status:

The inaugural TC meeting was held in September 1994 in Lancaster, England in conjunction with The Annual Meeting of Lighting Engineers. It was well attended with TC members and guests. A one day workshop preceded the formal committee meeting. The meeting agreed on objectives and method of working, together with the sections in a proposed technical report, as set out below. The aim is to have a first draft ready by the New Delhi Session, November 1995, and to present a workshop on the subject at the Session. Report outline:

1. Review of situation and the need for tolerances and accuracy in lighting specification, associated design and measurement
2. Concepts, definitions of tolerances and accuracy and associated terminology.
3. Sources of variation in lighting and how the total variation may be computed.
4. Integration of variation into setting tolerances and computing accuracy.
5. Relationship between lighting specification and computational software. Need for and advice on precise definition of light technical parameters, conventions and computational algorithms.
6. Need for each performance specification to have software test data; advise on the development of such test data.
7. Relationship between lighting specification and measurement. Advise of development of measurement procedures.

Each section will address the design, installation and operational stages of lighting design.

Reporter R 5-03 The lighting for sports events for High Definition Television

Task: To study whether a Technical Report can be produced as an Annex to Technical Report No. 83/1989, specifying those lighting requirements for High Definition Television deviating from conventional Colour Television.

Reporter: Livingstone

Status:

A report has been prepared that will be discussed at the New Delhi Division 5 Meeting. The reporter suggests that before tackling HDTV aspects, Publication 83 needs updating.

**Commission Internationale de l'Éclairage 23rd Session
Division 6: Photobiology and Photochemistry Meeting
November 8, 1995, New Delhi, India**

Report to the Canadian National Committee
Submitted by Jennifer A. Veitch, Ph.D. (Substitute delegate)

1. Opening and Introduction

The Division Director, Dr. David Sliney, had to leave India suddenly on Nov. 6 for a family emergency. The meeting was chaired instead by Dr. Jean-Pierre Cesarini, the Associate Director. Richard Vincent (USA) was delegated to act as Secretary for the meeting. There had been an impromptu meeting (of which I was unaware at the time) on the afternoon of Nov. 6, before Dr. Sliney's departure, at which some Division 6 business was discussed. This gave a strange tone to the Nov. 8 meeting, which some seemed to feel was an information session, but others saw as the official meeting.

2. Director's Report

The Chair suggested that in Dr. Sliney's absence we not review the full text of the Quadrennial Report.

3. Review of Division 6 status

a. Directors

Dr. Sliney will remain DD. Dr. Cesarini will stay on as one ADD. The second ADD position is empty owing to the death of Prof. Mutzhas. The decision was taken to keep this position open for a year because there was no obvious candidate for the position.

b. Technical Committees

This portion of the meeting was very confusing. The chair did not take the committees in their numerical order, and there were several long digressions. Not every TC was discussed. Overall, it appeared to this delegate that there was comparatively little progress by most Division 6 TCs. There is a huge overlap between many TCs in subject matter and no discipline concerning the creation of TCs to serve the goals of Division 6. Indeed, it is difficult to identify the specific goals of Division 6, and these were never discussed.

In numerical order of TC, here is a summary of the outcomes of the meeting:

TC 6-04 Selected Photobiological Information

The task of compiling a vocabulary is too large for completion. At last count there were 1600+ terms for inclusion. Gerrit van den Beld (Netherlands) suggested that instead, every TC report should include a short glossary of the photobiological terms used in that report, in language understandable by designers and engineers. At the end of each quadrennium the short lists from the reports could be compiled in a running glossary. Cesarini agreed but also wanted a 300-400 word glossary to be produced as a report for this TC. This list could be provided to Division 7 for inclusion in the CIE vocabulary that is currently under development. It was decided that Beld will co-ordinate this list with C. Hermans. Henceforth, all TC reports are to have a short glossary of terms. For guidance in writing this, TCs should look to examples such as those in the IESNA Recommended Practice RP27.1 and RP27.3, or in the *Handbook of Photobiology and Photochemistry*.

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

Dr. Brainard commented that this TC has a long history, having first been chaired by Thorington, and later by Hughes, but that no documents had been passed along to him. The terms of reference he inherited specified that a bibliography be produced, but this has proved to be unwieldy. Also, it would produce a document useful to scientists but not to engineers. After some discussion of possible alternative terms of reference, new terms of reference were proposed that would use Dr. Brainard's CIE invited address as the framework for a TC report, with added material on UV radiation and systemic effects, to be completed within 2 years. The committee has new membership including Mr. G. van den

Beld (Netherlands), Dr. J. A. Veitch (Canada) and representatives from India and other countries. The new terms of reference specify that the report is to be written with reference to the reports of TC 6-16 (see below) and TC 3-16, *Psychological Aspects of Lighting* (in preparation, chair: B. Collins, USA).

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

The Chair of this TC did not respond to requests for a report and no one knows what its terms of reference are, but there was discussion of what it should be and why it might be important. Dr. Brainard made a short impromptu presentation trying to explain what this might be about. He explained that age-related changes in lens transmission mean that there can't be just one standard for blue or UV radiation limits. It was concluded that the DD should contact the Chair again. If no reply is again received within a reasonable time, then TC 6-15 should be folded and a new TC, with new terms of reference, should be created to address this important issue.

TC 6-16 Psychobiological Effects of Lighting

In the absence of further word from Dr. Kuller, the report from the Melbourne Proceedings was accepted as the final report and published in *CIE Collections in Photobiology*.

TC 6-18 Tungsten-halogen lamp UV Hazards

Discussion on this TC shifted suddenly to a new proposal for a TC on "UV Radiation at Lighted Environment", to be chaired by Dr. K. Kohmoto (Japan). The tungsten-halogen lamp issue seemed to overlap greatly with the broader issue. Dr. Brainard suggested that the new TC was redundant with the existing TC 6-38, "Lamp Safety Standards". Dr. Cesarini supported the creation of the new TC. Mr. Beld suggested that furthermore, the new TC was too broad in scope to be completed within a reasonable time frame. Dr. Veitch suggested that the scope be limited to consider UV hazards associated with the Division 3 *Guide to Interior Lighting*, currently under revision (TC 3-21) and to be written as an ISO standard. This suggestion was accepted, and Dr. Kohmoto was to re-write the terms of reference for his proposal accordingly. Thus, it appears that TC 6-18 is to be closed, and a new TC 6-39 created.

TC 6-36 UVR Protective Materials Used in Shading

A new chair was required for this committee. Dr. F. Denner of South Africa was proposed, and accepted this position. This discussion led to the issue of outdoor workers' exposure to solar radiation. The Indian delegate observed that this is particularly important in India because of its equatorial geography. TC 6-36 could consider including an exploration of this issue because clothing protection falls within its mandate. [This issue seems to me to overlap with existing standards and recommendations from the occupational hygiene professions. Maybe this isn't a topic that requires a new CIE effort, just a liaison with appropriate others.]

TC 6-38 Lamp Safety Standards

This TC is mired in a controversy because of disagreement between some TC members and others who are on IEC-TC76. There are contrary recommendations regarding lasers and LEDs as light sources. Adopting the IEC standards would mean the use of laser standards for general lighting. A different point of view would lead to the adoption of IESNA RP-27.1 and RP-27.3, which do not consider laser standards as applicable. LEDs are in use in many general applications; but some argue that an LED in a luminaire is not the same as a true LED because of the use of filters, diffusers, and optical design. The ongoing discussion of whether or not LEDs used in general lighting are coherent or noncoherent sources is delaying the completion of the report for TC 6-38 and its balloting.

4. New TCs.

See above for discussion regarding TC 6-39 *UV Radiation for Lighted Environment*, to replace TC 6-18.

Proposal for TC 6-40 *Unit for Minimal Erythral Dose* (Proposed by Dr. Cesarini).

This TC would clarify what is meant by MED, weighted by the action spectrum for melanin so that the MED is appropriate to skin type. This remark led to a debate about whether what was really meant was

to establish a minimum (beyond which damage invariably occurs), maximum (no one should have more than this dose), or standard (weighted for skin type) erythema dose. Standard erythema dose was agreed upon as the concept under discussion, but frankly it was not clear to me whether this new TC was established or not.

5. Liaisons

Existing liaisons with other organisations are to continue. Dr. Brainard is the liaison to the international photobiology society (whatever its proper name). Drs. Sliney and Cesarini are the liaisons for nonionising radiation (ICNIR). Other Division 6 members also sit on IEC TC34 and IECTC76.

6. Division Officers

Division 6 is in some disarray. There is a Secretary, Dr. A. Thomson, but little work passes through him. At present there is no official Editor for the division, but it appears that there should be one, particularly to have a liaison to the Division 7 Vocabulary Committee. At the New Delhi meeting it was decided that the DD should consult CIE procedures and decide upon what actions are necessary to regularise matters.

7. Future Meetings

1996 September 1-6, Vienna Austria - at the 12th International Congress for Photobiology
1997 - To be chosen in 1996. Proposals came from Lux Pacifica, Lux Europa, Australia (dermatology convention), or to join with the CIE mid-sessional meeting in Durban, South Africa (August or September).

November 25, 1995

CIE - CNC

ANNUAL REPORT - GENERAL ASPECTS OF LIGHT

Dr. -Ing. Michael Seidl, Division Director

Secretary - position vacant

Robert White, Canadian Representative

TC 7-03 Development of Lighting

The main task is to understand the trends of lighting systems in CIE countries including general lighting, energy consumption for lighting and the portion of lighting energy with respect to the total energy consumption. Little progress has been made and a short report will soon be issued.

TC 7-06 Lighting Terminology - Chair - Christine Hermann (Austria)

A meeting was scheduled for the New Delhi conference.

TC 7-08 Lighting Research Overview - Chair R. Vincent (USA)

The purpose is to determine if a global data base of current lighting research can be compiled and to determine lighting research needs. Comparison of software data bases and reporting systems are under investigation.

Reporter ship on Energy and Environmental Aspects of Lighting - Division Reporter P. Bleasby (USA)

Environmental issues of lamp disposal or other related pollution issues affecting the lighting industry are under review. This has a serious implication in all aspects of the lighting business from the lighting manufacturer to the end user. A report titled: "Energy and Environmental Aspects of Lighting" by P. Bleasby is available from R. White. Briefly it says - with respect to the US and Canada -

- ..power density standards (in the USA) have been found beneficial for driving the most efficient technologies in new buildings and in major renovations of existing building." This system requires approval officials to have knowledge of lighting design principles which are often not practical for small communities

- US and Canadian utilities are promoting Demand Side Management programs which subsidize the installation of energy efficient lighting which is cost effective to both the utility (reduced or delayed power station construction) and the consumer (reduced consumption and demand costs). As well an enormous impetus has been given to manufacturers of energy efficient products.

- In Canada, as series of lamp performance standards are being developed to coincide with the implementation dates of the US EPACT to prevent dumping of product into the Canadian market. "Canadian standards are being harmonized ...to US Regulations and will be implemented sometime in 1996." (Note that recent information from Phillips mentions implementation of fluorescent lamps on February 1, 1996 and incandescent reflector and PAR lamps on April 1, 1996. Lamps cannot be manufactured nor imported after the dates of implementation nor be eligible for sale in Canada after December 31, 1996.)

- Lamp disposal has been addressed in Canada although Ontario's solid waste test does not categorize lamps as hazardous. A new test will likely categorize the lamps as hazardous although no waste management plan has been developed.

If the above description is not accurate, please contact the writer or Mr. Bleasby to correct information about the Canadian situation.