



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

Canadian National Committee    Comité National Canadien



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## MINUTES OF THE 42ND ANNUAL CNC/CIE MEETING

1997-October-31

The 42nd annual meeting of the Canadian National Committee of the Commission Internationale de l'Éclairage (CNC/CIE) was held on Friday, October 31, 1997 at the Holiday Inn Northeast, Cleveland, Ohio, USA. This year, for the first time, the Canadian National Committee and the U.S. National Committee (USNC) met jointly to participate in a full-day technical session in addition to their respective annual business meetings. The first day (Friday) was spent in two parallel sessions with each National Committee meeting privately. The joint technical sessions, which included a tour of the General Electric Nela Park facilities, took place on Saturday, and Sunday morning. The conference theme was "New Developments in Lighting". The agenda for the Saturday conference is given in Appendix A. The Sunday morning closing session had as theme "The State of the CIE—After Durban", and was centred around presentations by Jack Hsia-President(CIE), Alan Robertson-VicePresident(CIE), Jacques Roberge-President(CNC/CIE), and Alan Lewis-President(USNC).

Prior to the beginning of the CNC/CIE annual meeting, Terry McGowan, 1997 USNC Conference Chairman, and Alan Lewis, USNC President, welcomed the CNC/CIE to the USA for this historic event and wished us a fruitful meeting, both for our annual business meeting and the joint sessions to follow.

**Note:** the following acronyms are used in this report:

CNC/CIE	Canadian National Committee of the Commission Internationale de l'Éclairage
NC	CIE National Committee
TC	CIE Technical Committee
CB	CIE Central Bureau (Vienna, Austria)
BA	CIE Board of Administration

### 1. Call-to-Order:

The meeting was called to order at 9:30 by J. Roberge, President. He invited all the attendees to introduce themselves.

Twelve Members and Advisory Members, and 1 guest were in attendance. The list of all attendees is given in Appendix B.

It was moved by A.R. Robertson, seconded by J.A. Veitch, that the agenda, as circulated by mail (Appendix C) be accepted. Passed.

## **2. Minutes of the 41st Annual CNC/CIE Meeting:**

A letter (Appendix D) was received from E. Wotton in which he declined the responsibility of providing CIE information in a Canadian context to the Canadian lighting press. He also requested information concerning the Division 4 report of W.K. Adrian. A copy of the letter was passed to W.K. Adrian for him to reply to E. Wotton concerning the Division 4 report.

S.M. McFadden moved, seconded by W.K. Adrian, that the minutes be accepted as circulated. Passed.

## **3. President's Report:**

J. Roberge presented his report, which is enclosed as Appendix E.

He pointed out that the CIE mid-term meeting took place in Durban, South Africa in conjunction with the South African National Committee on Illumination (SANCI) annual conference. He indicated that anyone wishing information concerning the technical report of the SANCI meeting could contact him.

The report concerning the CIE mid-term meeting in Durban resulted in considerable discussion concerning the CIE. W.K. Adrian commented that the CIE committee structure cannot survive as it is at present, citing the inefficiency of the committees as the primary cause, together with the problem of insufficient financing to fund CIE activities. He stated that people will pay for things which they need, and he wondered whether the CIE is providing what people need. He questioned the activities of the proposed Study Groups (see Annex 3 of the President's Report). A.R. Robertson indicated that whereas TCs are set up for a very specific purpose, Study Groups are intended to be a forum for open discussion. J.A. Veitch commented that this would be very useful in Division 6.

J. Roberge pointed out that the CIE finances are fine—during the past six years the CIE has almost cleared the deficits of the previous four years incurred when the CB was first created. A.R. Robertson added that the Finance Committee has done a great job with managing the CIE finances, but the concern of the BA is with long term strategic problems for future programs and activities. The CIE needs to do more work, and we need an enhanced CB to do this. In addition, many of the NCs are having trouble paying their annual membership fees to the CIE.

With respect to changes in the CIE, J. Roberge noted that Division 7 may be dissolved, largely due to its inactivity. This opened the question of new divisions within the CIE, with suggestions such as one for the problems of developing countries (A.R. Robertson).

With respect to the Durban meeting itself, J. Roberge indicated that parallel sessions are a problem, especially when the sessions are widely separated in distance, and when only a few people from a given country are able to attend the meeting and must try to cover all the meetings.

Concerning the Canadian invitation to hold the CIE midterm meeting (2001) in Vancouver (Annex 1 of the President's report), J. Roberge pointed out that this was conditional upon it being held in conjunction with the Lux Pacifica meeting to be held there, and that the CNC/CIE would incur no costs—Lux Pacifica would set it up as part of its conference preparations. Concerning the offer of the USA to hold the CIE Session 2003, there was general consensus of the attendees to this meeting that Canada would support their request.

W.K. Adrian indicated that he had submitted a report of his attendance at the CIE mid-term meeting in Durban to the NRC International Relations, and that anyone wishing a copy could request one from him.



#### **4. Secretary / Treasurer's Report:**

A.A. Gaertner presented his report, enclosed as Appendix F.

With respect to our voting on the Draft Standards, A.R. Robertson commented that it would be helpful in making our decision if the request for voting could include the comments of the Canadian representative on the committee who had developed the standard.

Concerning increased publicity for the CNC/CIE, T.M. Richardson suggested that the CNC/CIE should have a WWW site, and that he would be willing to help set it up.

#### **5. Publications Report:**

A.R. Robertson presented his report, included as Appendix G. He noted that at present we earn approximately \$1000.00 per year on our sales, and that he would like a discussion concerning the present pricing policy.

J. Roberge stated that he would like the 'Master Copy' idea to be further explored. This is a process by which the CB makes a Master Copy available to the NCs, who then can duplicate it for sales within their country, paying a certain fee to the CB for each copy produced. It was also suggested that we should consider electronic means of transferring these publications. J. Roberge requested that A.R. Robertson convey these ideas to the next CIE BA meeting. A.R. Robertson pointed out that the CB does depend on the revenue from publications to fund the CIE activities, and that the CB is keen to 'go electronic'.

J. Roberge noted that he would like to see the transfer of the CNC/CIE publication sales from A.R. Robertson to K.F. Lin to occur before January of 1998—A.R. Robertson is to set up the transfer meeting, with the members A.R. Robertson, K.F. Lin, T.M. Richardson, and J. Roberge.

The committee meeting broke for lunch at 12:10 and reconvened at 13:25.

#### **6. Reports from the Division Members:**

(Note: The CNC/CIE Division Member's Reports are attached as a separate document, i.e. they are not labeled with an Appendix number. This has been done to enable these reports to be made available to various individuals, independently of the Minutes of this Annual Meeting.)

##### **DIVISION 1 Vision and Colour**

**S.M. McFadden**

S.M. McFadden presented her report. She noted that she sensed that Division 1 has been trying to be more efficient in its activities. A.R. Robertson pointed out that the final report of TC1-34 is now available, and that this interim colour appearance model is a highlight of accomplishment for the CIE. S.M. McFadden asked if anyone would be interested in working with TC1-48, or in the work of R1-19 and R1-20.

##### **DIVISION 2 Physical Measurement of Light and Radiation**

**J.C. Zwinkels**

J.C. Zwinkels presented her report. She pointed out that TC2-23 requires more participation, asking for volunteers. She indicated that there will be a need to elect a new division editor. Concerning inter-divisional discussions, it was noted that Division 6 (TC6-34 and TC6-45) would like to discuss matters with Division 2.

She brought attention to the fact that H.W. Budde, a long-time member of the CNC/CIE, had resigned his membership in the two Division 2 TCs of which he is still a member—TC2-24 and TC2-29. In this regard, A.A. Gaertner, A.R. Robertson, and J.C. Zwinkels were requested to consider developing a CNC/CIE award to express our appreciation for his considerable work for the CNC/CIE.

### DIVISION 3 Interior Environment and Lighting Design

I.C. Pasini

I.C. Pasini presented his report. He indicated that the Division 3 WWW site should soon be operational. J.Roberge requested information concerning Canadian representation on TC3-16 and TC3-26. I.C. Pasini indicated that he would look into the matter.

### DIVISION 4 Lighting and Signalling for Transport

W.K. Adrian

W.K. Adrian presented his report. He indicated that a new TC concerned with visual acuity, actually formed two years ago, has now started up, and that he is a member of this TC.

### DIVISION 5 Exterior and Other Lighting Applications

J. Roberge

J. Roberge presented his report. With respect to Canadian input for evaluating the report of TC5-03 "Open Cast Mining", J. Love and T.M. Richardson agreed to obtain some contacts. As a possible resource, A.A. Gaertner agreed to send the address of D. Trotter to both J. Roberge and T.M. Richardson.

### DIVISION 6 Photobiology and Photochemistry

J.A. Veitch

J.A. Veitch presented her report, regretting that she was unable to attend the Durban meetings. Her report contains the edited Minutes of the Durban meeting, and she can supply more information to anyone who is interested. She noted that there were only two Canadians involved in Division 6 TCs—herself(TC6-11) and T.M. Richardson(TC6-41). She pointed out the difficulties which have arisen over appointing T.M. Richardson to the TC. Both T.M. Richardson and J.A. Veitch agreed to try to resolve the problems, and to refer back to A.R. Robertson and A.A. Gaertner if any further action is required.

### DIVISION 7 General Aspects of Lighting

R.W. White

As R.W. White was unable to attend this meeting, J. Roberge presented his report. He noted that the future of Division 7 is in doubt. J.A. Veitch indicated that she has done research into the work of TC7-08 and would like her results to be included in their report. She will contact R.W. White with this information, and also R. Vincent if necessary.

## 7. Nominations and Appointments:

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

### Members:

The Secretary noted that the two Member appointments recommended by the CNC/CIE at its 41st annual meeting were endorsed by A.L. VanKoughnett, Director-General of NRC-INMS, and both have accepted: K.F. Lin and R.W. White.

The terms of two of the present Members expire this year—A.A. Gaertner and T. Nilsson. A.A. Gaertner indicated his willingness to serve another term. J. Roberge stated that he had talked with T. Nilsson who has indicated his willingness to step down. J. Roberge has also talked with R.A. Smith of Fredericton who has indicated his willingness to serve, and M.K. Timmings added his support to the appointment of R.A. Smith, who has been active in the IES. The attendees to this meeting agreed that the names of A.A. Gaertner and R.A. Smith go forward to NRC-INMS as nominations for CNC/CIE Members for a 4-year term.

### Advisory Members: (See also item 15)

The Secretary noted that H.W. Budde, Debbie Doma(Takeuchi), P.K. Kaiser and M.J. Ouellette have resigned, or requested that their names be removed, from the CNC/CIE Advisory Member list. These were accepted with regret.

The Secretary noted that an offer has been extended to J. Diwan to become an Advisory Member. His membership was approved by the attendees subject to his acceptance of this offer. It was noted that G. Woo had moved to Hong Kong.

A discussion followed concerning publicising the CIE and its work. Several members volunteered to talk to their colleagues concerning potential involvement with the CIE. André Laperrière of Hydro Québec was suggested and approved for Advisory Membership if he is willing. J. Roberge offered to obtain his address for the Secretary.

#### **8. CIE Lighting Quality Symposium/Div.3 meeting, Ottawa, May 1998:**

J.A. Veitch presented her report(Appendix I) with a request for partial funding (\$550.00) of this meeting. The request was seconded by I.C. Pasini, and passed. Included was the first announcement for the CIE Symposium.

#### **9. CIE Midterm Session, Durban, September 1997:**

No further comments were presented on this item, which had already been discussed in items 3 and 6 above.

#### **10. CIE 24th Session, Warsaw, June 1999:**

The Secretary distributed information from the CB concerning the CIE 24th Session to be held in Warsaw, Poland, in June of 1999 (Appendix J). He drew attention to the *Call for Papers* and the request for input to suggested *Invited Papers* and *Workshops*.

Since the NCs are requested to review submitted papers before they are forwarded to the CB for consideration by the BA, it was decided that there be at least two reviewers for each submission. One of these is to be the Canadian Divisional Member of the CIE Division relevant to the subject of the paper, and the second is to be someone recommended by the Divisional Member. The Secretary is to send the papers to these two people for review. If the submission is from the Division Member, the President, Vice-President, and Secretary will decide upon the reviewers. To enable the final submissions to be received at the CB before 1998-April-01, the deadline for the preliminary submission of contributions to be received by the CNC/CIE Secretary was set at 1998-February-01.

A discussion followed concerning Workshops and Invited Papers. It was pointed out that workshops were intended to be discussion groups. Topics suggested were Erythral Action Spectra and Video Photometry, noting for the latter that both B.W. Tansley and K.F. Lin manufacture instruments in this field. W.K. Adrian indicated that he would consider submitting a paper on Vision and Age as a possible Invited Paper. A.R. Robertson volunteered to obtain guidelines for the content of both Invited Papers and Workshops. It was suggested that submissions for Invited Papers and Workshops contain the following: the topic, the rationale for the topic, a suggested speaker, with a reason for choosing this speaker. A.A. Gaertner, J. Roberge and A.R. Robertson, with the power-to-add, were chosen to be reviewers for these submissions. The deadline for receipt of these submissions by the Secretary was set at 1998-February-01.

#### **11. CIE Mid-term meeting, 2001:**

This item had been discussed above in item 3.

#### **12. CIE Business Plan:**

This item had also been discussed above in item 3. See Annex 2, 3 and 4 to the President's Report (Appendix E). The Secretary indicated that he had further information(Summary For General Assembly members, September 1997) available to those who were interested.

### 13. Other Business:

#### 13.1 Correspondence:

Amongst others, the following items of correspondence were noted:

1. A letter(1997-October-23) from H.W. Budde was read, indicating his past involvement with the CNC/CIE and CIE, and resignation from the CNC/CIE. Several items from this letter had already been noted in the Secretary's report and the Division 2 Member's report.
2. A letter from E. Wotton (Appendix D) was read. Several items from this letter had already been discussed above in item 2. J.A. Veitch noted that NRC-IRC publishes a newsletter of items of interest to the construction industry, and she volunteered to assist in placing CNC/CIE information into this publication.
3. J. Roberge noted our reply to the CIE CB concerning the nomination of J. Schanda as CIE President.

#### 13.2 Date and Place for next year's meeting:

Banff, Niagara-on-the-Lake, and Ottawa were suggested. It was decided to hold next year's meeting in Ottawa, and to have tours of several laboratories (INMS and IRC) on the afternoon preceding the meeting.

The date chosen was Friday, 1998-November-06, starting at 9:30. Tours of the laboratories would be set up for Thursday, 1998-November-05.

#### 13.3 Other Business:

**1. Travel Expenses:** J. Roberge brought forward a request from W.K. Adrian for financial assistance to pay for his trip to the CIE mid-term meeting in Durban(September 1997). A payment of \$300.00 was authorised by the attendees to this meeting. A further request for assistance to travel to the CIE 24th Session in Warsaw in June 1999 was postponed until the next CNC/CIE annual meeting.

**2. Fourth International Lighting Research Symposium:** W.K. Adrian pointed out that this symposium is to be held in Orlando, Florida in May 1998 (Appendix K), and requested that this announcement be included in the next mailing to the CNC/CIE membership. The estimated symposium registration fee is \$250 USA.

### 14. Adjournment:

The meeting was adjourned (late in the afternoon).

### 15. Appointment:

During the following course of the joint CNC/CIE and USNC meetings, a request was received to appoint Radosveta Topalova as an Advisory Member. An informal meeting of many of the attendees to the CNC/CIE annual meeting was called by J. Roberge, President. The appointment was approved.



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



## **LIST OF APPENDIXES**

- Appendix A: Agenda for the Joint CNC/CIE and USNC Technical Session.
- Appendix B: Attendees to the 42nd Annual Meeting of the CNC/CIE.
- Appendix C: Proposed Agenda for the CNC/CIE 42nd Annual Meeting.
- Appendix D: Letter from E. Wotton of 1997-September-24.
- Appendix E: President's report.
- Appendix F: Secretary / Treasurer's report.
- Appendix G: Publications report.
- Appendix H: List of CNC/CIE Members and Advisory Members.
- Appendix I: Request for Funding for CIE Division 3 meeting, Ottawa, ON, May 8, 1998.
- Appendix J: CIE 24th Session, Warsaw, June 1999 (NCCL 9706 from CB)
- Appendix K: Announcement of Fourth International Lighting Research Symposium

## APPENDIX A

### *New Developments in Lighting*

Agenda for the Joint CNC/CIE and USNC Technical Session

1997-November-01, Saturday

8:30	Registration	
9:00	Welcome	Dr. Rolf Bergman, Chairman
9:05	Behavioural Consequences of Lighting Quality: Research from the National Research Council of Canada	J.A. Veitch, NRC Canada
9:50	Errors in Measuring the Chromaticity of Illuminators for Color Appraisal	L.C. Cui, GretagMacbeth LLC
10:10	Revision of CIE Publication No.54, Retroreflection	J. Rennilson, Advanced Retro Technology
10:45	Mesopic Photometry: Issues and Implications	J. Bullough, Lighting Research Center
11:15	The One Remaining Step to Reach Excellent Lamplight	Bill Thornton, Prime-Color Inc.
12:00	Lunch	
13:15	Integrating Daylighting with Environmental Controls	I.C. Pasini, Public Works and Government Services Canada
14:00	Electronic Lighting Textbook	C. Belcher, University of Kansas
14:25	Astronomy and Light Pollution: Where Have the Stars Gone?	D.L. Crawford, International Dark-Sky Association
15:05	Fiber Optics: Fiction, Fact and Fantasy	S.R. Mangum, M.S. Lighting
15:35	Remote Source Lighting	G.R. Allen, GE Lighting
16:35	Discussion and Wrap-up	R. Bergman, Chairman
17:15	Tours of General Electric Nela Park facilities and the GE Lighting Institute	
19:00	Dinner at the GE Lighting Institute	

## APPENDIX B

### Attendees to the 42nd Annual Meeting of the CNC/CIE

1997-October-31, Friday

Werner K. Adrian	University of Waterloo
Arnold A. Gaertner	National Research Council (INMS)
K. Frank Lin	Lighting Sciences Canada
† James Love	University of Calgary
Sharon M. McFadden	Defense and Civil Institute of Environmental Medicine
Ivan C. Pasini	Public Works and Government Services Canada
Tim M. Richardson	Bio-Microtech
Jacques Roberge	Infranor Canada
Alan R. Robertson	National Research Council (INMS)
‡ Martyn K. Timmings	Canlyte
‡ Radosveta Topalova	guest
Jennifer A. Veitch	National Research Council (IRC)
Joanne C. Zwinkels	National Research Council (INMS)

† arrived 11:30 during discussion of item 4

‡ attended afternoon session

### Regrets

Marion G. Bassett	Professor Emeritus, University of Toronto
H.W. Budde	National Research Council (retired)
J. Allyson Chrysler	Lighting consultant
Debbie Doma	Lighting consultant
Byron Jordan	PAPRICAN
Peter K. Kaiser	York University
Barbara Kolesnik	UMA Engineering Ltd.
J. Bruce McArthur	Environment Canada
Thomy Nilsson	University of Prince Edward Island
Michael J. Ouellette	National Research Council (INMS)
Nikolay Stoev	Ontario Laser and Lightwave Research Centre
Brian W. Tansley	Carleton University
Dale K. Tiller	National Research Council (IRC)
Robert W. White	Duschenes & Fish Architectes
Ernest Wotton	Lighting consultant



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## CNC/CIE 42nd Annual Meeting Proposed Agenda

DATE: 1997 October 31 - Friday

TIME: 9:30 am to 5:00 pm

LOCATION: Holiday Inn Northeast  
Cleveland, Ohio

### PROPOSED AGENDA:

1. Call to Order and Approval of Agenda J. Roberge
2. Minutes of the 41st Annual CNC/CIE Meeting (Matters arising?)
3. President's Report 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 J.A. Veitch
  - Division 7: General Aspects of Lighting R.W. White
7. Nominations and Appointments
8. CIE Lighting Quality Symposium/Div.3 mtg, Ottawa, May 1998 J.A. Veitch
9. CIE midterm session, Durban, September 1997 J. Roberge
10. CIE 24th Session, Warsaw, June 1999
11. CIE Mid-term meeting, 2001 J. Roberge
12. CIE Business Plan J. Roberge/A.R. Robertson
13. Other Business
  - 13.1 Correspondence J. Roberge
  - 13.2 Date and Place for next year's meeting
  - 13.3 Other business
14. Adjournment



APPENDIX D

ERNEST WOTTON  
LIGHTING CONSULTANT & DESIGNER

September 24, 1997

Dr. Arnold Gaertner  
National Research Council of Canada Building M-36  
Ottawa, Ontario K1A 0R6

Dear Arnold,

I am afraid that it will not be possible for me to take part in the CIE meeting in Cleveland, October-November 1997. May I ask you to give my apologies to our colleagues.

Thank you for the Minutes of the 41st Annual CNC/CIE Meeting (November 8, 1996) from which I note (#9.2, Publicity) that I would be "an excellent choice for ... a correspondent" with the responsibility of providing news about CNC/CIE activities for publication in the lighting press. I must decline that responsibility. The job of correspondent calls for someone who is much closer to the technical activities of the CIE than I can be. I would have to rely on the Minutes of the CNC/CIE meetings for news and, as Jacques states in his President's Report, "over the past few years ... the technical content of our annual meetings was somewhat superficial."

Permit me to suggest an item for publication. I would like to learn and, I suggest the Canadian lighting community would also like to learn, what transpired at the New Delhi conference that is of interest and use to us. I assume that a number of members of CNC/CIE - possibly public servants - have been required to report to their employers on how their attendance at the Conference benefitted lighting in Canada. I think that such a report, which would probably need only minor editing, would be welcome by the lighting press.

Then in his report Werner states "It has been shown by two publications that the unit 'pupil lumen' promoted by S. Berman, Cal is no issue and does not need to be further discussed." It is not clear to me if this means that everyone agrees with the 'pupil lumen' concept or if the two publications - no references are given - show that the concept is not valid. If the latter interpretation is correct, then perhaps Werner would outline the arguments leading to the conclusion for publication.

Kind regards,

*Ernest*

Ernest Wotton PEng, CEng, FIEE, FCIBSE, FIES, HFAC  
78 Earl Grey Road Toronto Ontario M4J 3L5 (416) 491-5395

*May I please refer you to the Terms of Reference of the CNC/CIE (which, I suggest should be read at every meeting). Term No 3(d) reads:  
To establish the mechanisms for communicating to the Canadian lighting community the views of the CIE and information about activities of the CIE.*

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## APPENDIX E



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE  
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CNC/CIE  
PRESIDENT'S REPORT TO THE 42<sup>nd</sup> ANNUAL MEETING  
October 31, 1997

The main CIE event in 1997 was the mid-term meeting that took place in Durban, South Africa from August 31 to September 5 in conjunction with the annual conference of the South-African National Committee.

Only Dr Adrian and myself made it to Durban, out of an originally hoped-for contingent of five people.

This made it quite difficult for the two of us to cover all activities of interest. I managed to attend the Finance Committee meeting, the General Assembly meeting and its workshop on "Funding National Committees of the CIE", the Division 3 meeting, the last part of Division 4 meeting and TC 5.14, of which I am a member.

Dr Adrian attended a meeting of a sub-committee of the Board of Administration (dealing with the future of the CIE and its business plan), the first part of the General Assembly, a joint Division 4 and Division 2 meeting, the Division 4 meeting, chaired a meeting of TC 4.33 and attended TC 4.25 of which he is a member.

Of course both of us attended some of the SANCIs as well, when no CIE functions were taking place. Because of the fact that many CIE sessions ran in parallel, we unfortunately could not cover Division 6, nor Division 7 where nothing happened according to its director Dr M. Seidl. Division 7 may be dissolved, and the work of its two active (?) committees transferred to Central Bureau. Suggestions are welcome from CIE members regarding a new Division.

General Assembly Meeting.

The following annexes cover the main subjects discussed:

Annex 1: Condensed Executive Summary of the General Assembly minutes

Annex 2 : CIE President's report to the GA

Annex 3: Future State Visioning of CIE (W. van Bommel)

Annex 4: Report of the Vice-President Technical

Annex 5: Report of the Vice-President Publications (condensed)

The report of the General Secretary is not reproduced, since most of the important information given appears in our CNC Secretary's report.

You will note that Canada and Italy voted against the 1998 and 1999 budget because the proposed increases in N.C. fees exceed the ICSU inflation predictions. Our opposition was more on a matter of principle than money, since the excess 1998 increase over 1997 will cost Canada about \$125.00 more.

Canada also invited the CIE to hold its 2001 mid-term meeting in Vancouver, in conjunction with the Lux Pacifica meeting to be held then. USA and Turkey also made invitations for that meeting. No final decision was taken, but the general feeling appeared to favor Europe, where most CIE members reside, because of limited travel budgets.

The Polish National Committee is moving full-steam for the 1999 conference, and the organization seems to progress well.

Please note item 14 of annex 1, GA Elected Officers: the President's proposal to have four Vice-Presidents in the future was defeated, and D.Sliney was dropped from the slate in the election and H.S. Momak of India became a V.P.

Janos Shanda was defeated in his bid to become President, but was elected Secretary.

On the home front, it appears that CNC/CIE has forwarded more communications in 1997 than before to its members and advisory members. We should continue in that direction for 1998, keeping in mind the importance of disseminating CIE info outside our group, as suggested, rightly, in many instances.

Respectfully submitted by:



Jacques Roberge, Eng., President CNC/CIE

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\* area code (514) will change to (450) on 98/06/13

**Condensed Executive Summary of the Minutes  
of the  
GENERAL ASSEMBLY MEETING  
at the ICC, Durban, South Africa  
2 September 1997**

**1 Opening of the meeting**

The President opened the meeting at 9:20.

The roll-Call showed 23 National Committees present, sufficient for a quorum.

The President asked for a minute of silence to commemorate the colleagues who had passed away since the Quadrennial Session Meeting 1995.

**3-9 Report of officers**

W. Van Bommel, the President, the Secretary, VPT, VPP, K. Narisada, and the GS gave their reports. The GA unanimously approved that all IHS royalty income will in the future stay in the CIE Central Bureau.

**10 Discussion on the reports**

P. Soardo requested that CIE publishes a list of all Standards and Technical Reports that are in the final stage, this might help NCs to get support. The CB will put together a list of upcoming publications, including the target date.

**11 Finances of the CIE**

The CIE finances are sound. CIE has enjoyed a surplus in the last 6 years including a very significant one in 1996. Its reserves are presently equivalent to about 1.5 year of operating expenses. 1997 should generate a small surplus, and budgets for 98 and 99 have provisions that should result in a surplus as well.

11.5 CIE Budget for 1998 and 1999, vote on the budget

The proposed 1998 and 1999 budgets were approved, with 2 against (Canada and Italy) and 1 abstention (USA).

**12 Business plan discussion**

W. van Bommel raised the question of going directly to the stakeholders and ask them on their interests, asking also for funds.

W. van Bommel promised to shorten the Business Plan and send it out for NC use.

**13 Presidential terms of office**

Proposal of Warren Julian, Vice-President Publication: The President to be elected for six years with two as President-elect, two as President and two as Past-President. This would mean that some presidents would be installed at an intersessional but the work is more important than the ceremonials. This shorter time might attract more people and make the task more affordable for the less wealthy countries.



A proposal to reduce the terms of office had been shortly discussed in the BA meeting, but it needs to be refined, thus this item is withdrawn from the agenda.

#### **14 Election of Officers for the Quadrennium 1999-2003**

The final slate of officers, including further nominations from NCs, had been sent out with NCCL9704.

The GA elected the Officers for the next quadrennium as follows:

President-Elect for 1997-1999 and

President for 1999-2003 :	H.A. Lofberg
VP Technical:	W. Julian
VP Publications:	F. Hengstberger
VP vp:	W. van Bommel
VP vp:	H.S. Mamak
VP vp:	J. Bastie
Secretary:	J. Schanda
Treasurer:	M. Seidl

M. Seidl will take office right after the Midterm Meeting, following an appointment by the Board as Kurt Gmeiner is resigning from this position.

The outgoing Past-President and Treasurer thanked GA and BA members and CB for the pleasure of working with them and for all their support.

#### **15 Report on the preparation of the CIE Session 1999**

The Organising Committee gave their report. The Call for Paper and provisional time schedule will be sent to NCs early October.

#### **16 Time and place of the next General Assembly Meeting**

The GA will meet again on Wednesday, 23<sup>rd</sup> June 1999, at the Warsaw University of Technology.

#### **17 CIE Awards**

The President handed over to the representatives of the respective NCs the CIE Awards. 34 members were awarded.

#### **18 Any other business**

For the 2001 Midterm Meeting, invitations were received from the USA, and Canada. The Turkish National Committee expressed their interest in hosting the GA meeting 2001 in Istanbul.

For the Session 2003, J. Hardis mentioned that the offer from the USA is still valid. The NC of Hong Kong also sent a provisional bid.

This will be discussed further in Warsaw.

#### **19 Closing of the meeting**

The President closed the meeting at 16:00.

Directly following the GA meeting, a NC workshop on funding was held.

## President's Report to the General Assembly

Durban, South Africa

September 2, 1997

Fellow Delegates and honored guests:

Five hundred years ago in 1497, Vasco Da Gama sighted the "Land of Natal". Today, the Port of Durban has become one of the most modern ports in the world. On behalf of the entire CIE membership, let me express our sincere gratitude to South Africa's Organization Committee. It is through their tireless preparation and their hospitality that we have the pleasure of gathering here today for our CIE mid-term meeting.

Our 23rd Session in India proved to be extremely energizing. In keeping with CIE's tradition of always learning from experience and aiming for excellence, a survey was conducted to solicit feedback from those who participated in the 23rd session. Members of the Board of Administration carefully reviewed your thoughtful comments in September 1996. Later today, it will become evident from the report by Jan Grzonkowski, President of the Polish National Committee, that your valuable suggestions have been incorporated in the planning for the 24th CIE Session.

At the same time, members of the Board of Administration, with your support, endeavor to further CIE as a leading organization in the scientific and industrial community. In this report I will provide you the highlights of the progress we have made. Afterwards, other officers will give you more detailed reports about the areas of their respective responsibilities.

### 1. Establishment of A Long-Range Plan

To be an effective organization, CIE must pose itself as an active participant amidst of rapid advances in technology and changes in economic and political conditions. Over the years, many urgent matters demanded our immediate attention, yet we did not seem ever to have time as a group to think through and map out a comprehensive long-range plan for CIE.

The Netherlands National Committee had the foresight of having taken the time to develop a long-range plan for their organization. CIE subsequently modeled after their effort, and embarked on a two-day brainstorming and long-range planning workshop in September 1996. Vice President Wout van Bommel just presented to you the outcome of this highly productive workshop, that is, our business plan with our vision and plans for 16 specific actions. This plan has driven the work of the new Board, and will continue to serve as the blueprint for our work plan until year 2001.

### 2. Enhancement of Organizational Visibility

To further our liaison relationship with international standard organizations such as ISO and IEC, CIE General Secretary Christine Herman strives to maintain communications with her counterparts in ISO and IEC. She also represented CIE at the 60th IEC Annual meeting in Dresden, Germany. Additionally, Vice President Dr. Robertson is active in ongoing collaboration with ISO/IEC/CIE JTAG2 on image technology. Dr. Robertson, CIE Division 2 Secretary Dr. Yoshi Ohno, and I represented CIE at the March 1997 JTAG2 Meeting in Washington, D.C.

To pursue collaborative relationships with regional organizations, Vice President-Technical, Technical Manager, and Division 7 Director held a discussion with General Secretary of CEN (Europe) regarding the possibility of a Memorandum of Understanding to enhance collaboration and avoid duplicative efforts. Much work remains to be done in this area. In addition, the Illuminating Engineering Society of North America (IESNA) appointed three of its Vice Presidents to liaison with CIE. In response to our request for input into the CIE long-

range plan, IESNA, in September 1996, recommended 10 priority activities they wish to see CIE undertake.

Subsequently, Technical Manager Dr. Schanda completed an assessment of the status of these activity areas within CIE, and referred some of them to appropriate division directors or technical committee chairmen for follow-up. An update of these activities was provided to IESNA.

Consistent with the above Board and Central Bureau efforts, a number of Technical Divisions and National Committees have played a vital role in publicizing CIE activities with assistance from the Central Bureau in the form of supplying pamphlets about specific technical areas. Moreover, our standards, reports and other publications have benefited the scientific and technical communities worldwide. Many CIE members contribute to discussions on technical issues pertinent to the international lighting community such as, internet "lighting" group and "Lighting Future".

### **3. Roles in Emerging Technologies**

Vice President Dr. Robertson coordinates CIE's efforts in image technology. The April 1996 expert workshop, "Color On Image Technology", held in Vienna had 75 experts in attendance, and generated many action items for CIE Division 1 and 2. A second workshop will take place in November 1997 in Scottsdale, Arizona in the U.S.

With the enhanced efficiency of blue LED to approximate that of green, yellow, orange, and red LED's, LED's will have wide potential applications in the areas of interior, exterior, and transportation illumination, photobiology, medical diagnostic equipment and photolithography. CIE plans a LED workshop for October 1997 in Vienna.

### **4. Improvement in Information Dissemination**

A server was installed in Vienna to manage the CIE Home Page. At the request of the technical community, CIE has displayed the fundamental CIE colorimetric tables on the internet. CIE is keeping abreast the development of electronic publication to determine the appropriate time to utilize this means of publication. Further, most members of the Board of Administration and the Central Bureau are now communicating by e-mail, and as a result, information exchange and dissemination have been greatly facilitated.

### **5. Needs of Developing Countries**

At the 23rd Session in India, several technical committees were established to respond to the needs of developing countries. Some of the methodologies derived from these efforts may be expected to be applicable to developed countries in remote areas as well as secondary and lower level laboratories in these countries. As you are aware, a concurrent conference on developing countries is conducted at this site.

### **6. Realignment of Duties at the Central Bureau**

Starting January 1, 1996, Christine Herman began to head the CIE Central Bureau as General Secretary, responsible for the administrative aspects of the Central Bureau. She also chairs the Technical Committee in International Vocabulary. Also at the beginning of 1996, Dr. Janos Schanda, after 8 years of outstanding service to CIE as Executive Director, became Technical Manager for the CIE Central Bureau. He is in charge of technical aspects of editing, workshop and conference planning. He also serves as the Central Bureau's technical liaison with other organizations. This realignment separates the administrative and technical responsibilities within the Central Bureau.

In anticipation for Dr. Schanda's well-deserved retirement at the end of 1997, the CIE Personnel Committee began in September 1996 the search for his successor. The recruitment is expected to be completed in time for the transition.

## 7. Search for Additional Financial Support

Historically, CIE activities have been supported by membership dues and income from publication sales. With expanded activities, limited financial support, as well as already over-extended staff resources at the Central Bureau, CIE faces an acute need to seek additional funding sources. Division 4 Director Pieter Walraven approached UNIDO and the World Bank. This effort was not fruitful. He also surveyed members of the Board of Administration for information on potential governmental funds; whereas Vice President Wout van Bommel sought information on industrial funding sources. After the General Assembly, I invite you to join Division 7 Director Dr. Michael Seidl in a workshop on fund raising to share your experience and expertise in seeking and obtaining financial supports.

As you can see that the Action Plans have indeed guided the work of the Board in the past months. At this time, I would like to take this opportunity to pay a special tribute to our immediate Past President, Mr. Robin Aldworth. Robin has been a helpful colleague and a good friend who is always responsive to my frequent calls and requests for words of wisdom from him. Thank you, Robin, from the bottom of my heart. I know we can all count on your continuing support even after you leave the Board. To my fellow members of the Board of Administration, I thank you for your enthusiastic support for the betterment of CIE and your generous giving of your time and expertise. To General Secretary and Technical Manager of the Central Bureau, the Board thank you for your reliable and timely assistance. To the National Committees, the Board thank you for building a strong presence of CIE all over the globe. I have had 22 exciting and fun-filled months during which I learned a great deal from all of you. I look forward to welcoming the new President Elect to join this great team for the remainder of this Quadrennium. I am confident that we will have another productive two years to showcase at the 24th Session in Warsaw, Poland.



## FUTURE STATE VISIONING OF CIE

- a preparation for change -

The present structure and ways of working of CIE have been defined more than 20 years ago. Today, society changes much faster than ever before, particularly in terms of technology, economy and political conditions. This has also an impact on CIE and on the availability of human and financial resources.

In the Board I accepted the task of initiating a marketing strategy for CIE. It is quite evident that CIE needs to promote itself more and has to find new means to increase participation. For marketing it is essential to identify the market in terms of target groups. For CIE these could be: lighting designers and consultants, specifiers, manufacturers, service providers, universities (science and education), learned societies, measuring and testing laboratories, standard bodies, governmental bodies and international organisations. Of course, not all groups or persons in a group have the same interest in CIE or have similar resources for support. Efficient marketing of CIE is not feasible if we do not share the same "vision" as to what CIE should mean for the various target groups. We should be able to define what "stake" they should or could have in CIE. Only then we can make real "stakeholders" out of them.

To address these issues, CIE Board members participated in September of this year in a two-day "Future State Visioning" Workshop. We were guided through this workshop by a professional facilitator. The workshop consisted of a set of processes for determining what and where CIE wants to be by an imaginary future date. In fact, we defined a common CIE vision in some 20 statements. The actual situation of today is, at many points not (yet) that of that vision. From a confrontation of today's situation with the desired situation described in the vision, we defined issues. For these issues in turn we agreed upon 17 actions that are intended to move CIE closer to the situation described in the vision. Many actions are meant to identify what CIE can mean for its stakeholders and what the stakeholders can mean for CIE (win-win situations). Most of the Board members are responsible for one or more actions.

The results of the workshop are being condensed in a Business Plan. This will be used by the Board in the coming period and it will also be used for discussion with the General Assembly at its meeting in South Africa in 1997.

As an illustration some 10 statements out of the 23 used to define the CIE vision:

- The CIE is a financially independent organisation, funded by government agencies, scientific and technical institutions, industry, international bodies and its members.
- The CIE is *the* opinion leader employing modern technologies in gathering and disseminating up to date information and responding rapidly to the needs of society.
- Because of a shared image, world experts in lighting and vision are committed to CIE goals and attracted to participate in its work.
- Through an outreach to developing countries a more world-wide diversified CIE with enlarged membership has been achieved.
- Designers, specifiers, manufacturers and service providers get from the CIE timely standards; design guidance; education; the promotion of good lighting; access to science and technology and collaborative pre-competitive research. They provide the CIE with funding; human resources; access to what they know; recognition; and knowledge of what they need.
- Science, education and learned societies get from the CIE: opportunities for international research and co-operation; the exchange and transmission of knowledge; recognition and application of their results; support when applying for research funding; and support for teaching. The CIE gets in return: access to what they know; human resources; recognition; knowledge of what they need; and funding.

- Member owners (National Committees) get: recognition; publications for sale; influence within CIE; and information. The CIE gets: funding; human resources, recognition, knowledge of what they need, and access to what they know.
- The CIE and its Technical Committees collectively incorporate a broad, international base of scientific knowledge and, together with the lighting application community, forge solutions to evolving problems of CIE's partners.
- Under broad policies, established by the Board of Administration, the enlarged Central Bureau efficiently facilitates timely Division and TC work. Through CIE scientific experts and the Division approval process, scientific quality in publications is assured.
- The CIE strategy is to continue to build its prestige and maintain continuous interaction with its stakeholders

As said before the vision expressed in these statements is not yet reality. Sixteen actions are agreed upon to make the first steps towards the desired situation. The action names and corresponding names of the responsible Board members are given below. Of course, for most actions the input from many others than the action owner alone is needed

- Increase efficiency and image of TC work (H. A. Löfberg)
- Attracting experts for new work items (A. Robertson)
- Get employers' interest (A. Robertson)
- Acknowledge contribution of TC members in CIE publications (W. Julian)
- Reward system for CIE contributors (A. Slater)
- Publicising CIE activities more widely (W. Julian)
- Expert group for refereeing (W. Julian)
- Expert workshop (J. Schanda).
- Study Groups (K. Sagawa)
- Identify needs for standards (R. C. Aldworth)
- Developing Countries (F. Hengstberger)
- Government and international bodies as possible stakeholders (P. Walraven)
- Survey among potential funders (W. van Bommel)
- Interaction with stakeholders (W. v. Bommel)
- NC funding (M. Seidl)
- Revise membership system (J. Bastie)

At the end of the two-day workshop most participants, if not all, were satisfied with the result of it. We believe that by carrying out the actions, important steps will be set towards a bright future of CIE in the next millennium.

The end of the workshop signalled the beginning of a long road that we together have to go with much hard work for many persons having interest in the future of CIE. The support, help and input of many people will be needed. Only then can CIE gradually be changed successfully.

Wout van Bommel  
Vice-President

Hans Allan Löfberg  
CIE Vice President Technical

## VICE-PRESIDENT TECHNICAL

### Report to CIE General Assembly

When this report is drafted it is about 18 months since the Session in New Delhi. The Divisions are working hard to fulfil the programme decided on at their meetings in India. Some of the Technical Committees (TCs) have completed their task and produced technical reports or standards now being voted on or already published. At the General Assembly in Durban I will have a possibility to inform more about the activities in the seven Divisions.

We can only be grateful for the job the members are putting into the tasks in spite of the hard economical situation for many. In Sweden, as an example, the building activity is very low and this makes it difficult for industry to sell equipment for lighting and to support research. The forecast for 1997 is if possible even worse. At the same time we see a raising demand for more efficient lighting for all types of installations.

New technology is being introduced and the new slimmer fluorescent tubes and the new ways to produce light, as in the sulphur lamp, create new possibilities on the market. At the same time quality becomes even more important as the light sources have higher luminance and are also flickering more in some cases. One way to reduce the flicker problem is of course to use high frequency (HF) and the HF ballasts are really taking a larger proportion of the market. This also makes the possibilities greater for saving on electric energy.

In a reduced market with cost cuts in all places there is a risk for reduced quality in spite of the possibilities for both efficient and high quality lighting. The need for good guidance to designers and users of lighting is thus great and the CIE has a responsibility here that we must not forget. Standards together with ISO/IEC and with CEN is a way to get the knowledge spread but guides are at least as important.

## CEN

The co-operation with ISO/IEC is formalised in an agreement and the Board has tried to get a similar agreement with CEN concerning both drafting standards and using CIE reports and other material in the CEN standards. So far no formal agreement has been achieved but the discussions are going on.

For CIE it is important that work is not duplicated as it generally is the same group of persons from Europe taking part in the committees. It is also important that existing documents are used as references as much as possible. This helps the CIE image and the recognition of the CIE, which in turn can help in attracting new sponsors both for the central CIE work and the work in the TCs on specific projects. This leads into the work on a new CIE Business Plan.

## CIE Business Plan

The Board has adopted a business plan, as you have heard from the President, to improve the work in the CIE and its contacts with the world outside. One part of this is to improve the image of the CIE and this includes the efficiency of work in the TCs. As we rely on voluntary work as long as we don't have the financial means to pay for specific tasks, we must help the TCs as much as possible in their work. Delays created for instance by lack of resources, primarily from the chairman, must become known both within the Division and at the CB. If the work is stalled and the timetable seems unrealistic we must be prepared to either find new

members of the TC, including chairman if necessary, or accept to close the TC for the time being. If there is a strong demand still for the work the Division could have a Reporter to follow the matter and to prepare a new work programme.

Inactive TCs should be closed without particular hard feelings and hurt pride. In the business plan it is even said that the number of TCs should be drastically reduced. The basis for this is a feeling that many TCs are rather inactive and the work delayed so much that the image of CIE as an efficient organisation is damaged. The Divisions have got the task to look carefully into their list of TCs to check if there has been or is stand still in the work which leads to need for special considerations.

If we can prove that a large number of TCs are in fact active and have a realistic and agreed time plan the number might not be reduced so much at all. As a matter of fact new TCs are created all the time as the Divisions find new interesting problems to take on.

Effort will also be put into adjusting the Code of Procedure in order to make the work more efficient and with as little formal control as possible. The support from the CB to the TCs and Divisions will be even more needed if we shall achieve the speed of work that we are looking for.

# Vice-President (Publications)

## Midterm Report 1997 CIE Intersessional Meeting

### Warren G Julian

The report of the executive director details the publications produced since the New Delhi Session and the sales of those publications.

A goal of the CIE has been to reduce its dependence upon fees and dues by increasing its income from the sale of publications. However, that goal is yet to be achieved despite various initiatives of the past quadrennium and the first two years of this.

#### **The range of CIE publications**

The CIE produces a range of publications: Technical Reports; Standards; Proceedings; the CIE Collection; the *CIE News* and disks. The Central Bureau has produced a catalogue of publications which is available to National Committees and which can be copied onto National Committee Stationery.

The *CIE News* is a service to members and its A5 format improved its appearance and allows more information in each issue. The *News* is distributed by National Committees to their members and others. The *News* is also available electronically and some National Committees make use of the whole or part of the *News* in their printed and electronic newsletters.

Technical Reports are the outcome of most Technical Committee tasks, although some work appears in the *CIE Collection*. Some Technical Committees also produce *CIE Standards* supported by either an existing or new Technical Report.

The agreements that the CIE has with ISO and the IEC mean that the CIE is the obvious producer of standards on matters related to light and lighting. While the CIE might be the "obvious producer", it may not be the producer if it cannot achieve tasks within the time demanded by ISO or the IEC.

#### **More rapid publication**

One of the difficulties that many Technical Committees and some Divisions have, is that they do not have sufficient editorial resources to produce appropriately formatted (etc) Technical Reports and Standards. In the past this has greatly impeded the publication of Technical Committee work.

Two initiatives, from the last quadrennium, to remove this bottleneck were: to budget for editorial assistance (by the Central Bureau) and the other has been to shift the responsibility for the physical preparation of the final report to the Central Bureau. It has not been necessary to draw on the editorial funds. The Central Bureau has been very effective in finalising publications with the assistance of (variously) the senior officers and Technical Committee Chairs. There is now much less time in transforming a "publishable" report into a Technical Committee report than previously. In some cases, intervention by the senior officers has brought a publication to completion where a Technical Committee or Division has not been able to facilitate its completion.

I believe that the method has resulted in faster publication and with improved quality control and, again, I would like to thank all who have contributed to this success.

The CIE has been publishing "on demand" for some time and, as a result, amendments are easy to make, since little stock is held. A small change that was introduced after the mid-session meeting in Edinburgh was to add an amendments box on the title pages of any reports that have received minor amendments or corrections of errors. This has obviated the need for a new publication. The information provided includes the date of the amendment/correction, what it was and any comments.

### **CIE Standards**

As I mentioned earlier, the CIE produces Standards. National Committees can sell Draft Standards once they are published and available for review. This is similar to the process used by some national Standards organisations. The understanding is that the final version of the Standard may be different from the draft, however, it is a means of increasing the exposure that the draft has before it is finalised. I would like to remind National Committees that they should be publicising the existence of Draft Standards.

Standards that are endorsed by ISO or the IEC become joint publications and, if the sales are made by ISO or the IEC, the CIE does not benefit financially, although there may be spin-off sales of the Technical Reports which support the Standards.

### **CIE publications on CD-ROM**

In 1994 an agreement was signed with IHS (located in Denver, CO, USA) for a trial of publishing all CIE publications on CD-ROM. IHS is a supplier of IEC, ISO and the most important national standards on CD-ROM to major users of standards. It was hoped that this would increase the awareness of users to the existence of the CIE, since IHS would be selling to new customers rather than to those who now purchase from National Committees. The agreement includes the supply of the customers' locations so that the CIE Central Bureau can remit a fraction of the royalty income to the appropriate National Committees. The CIE receives 25 per cent of sales income.

The trial has been moderately successful and it is recommended that it be reviewed at the Warsaw Session.



### Translation policy and sales

The inter-sessional meeting in Edinburgh discussed the broad issue of publication sales and promotion, including various requests from National Committees to sell translations. The result was that the publications policy allows translation and publication by National Committees.

National Committees publishing in other than English must have a statement on the title page/cover that the publication is a translation by the National Committee of the official CIE (English) Publication. The National Committee can include diagrams, supplied by the Central Bureau, if it wishes to produce a complete publication or it can produce and sell the text only.

It is expected that National Committees will promote and sell only within their territory, however, it is reasonable that non-English versions could be sold to people in *non-member* countries that use the same language.

The policy, in formal terms is:

CIE permits the translation of the text only (without figures and tables) provided that the translation clearly states that it does not replace the official publication. NCs wishing to produce a translation are free to do so, they shall send 5 complimentary copies to the CB and have to sell the original publication along with the translation as a supplement. The CB is permitted to sell the translation with the original publication to third countries. — Extract from BA meeting 1992

NCs who wish to stay with the policy to translate only the text and sell the official CIE Publication together with the translated text, are welcome to continue. NCs who wish to translate the total document should request permission from the CB, who will supply a master copy of the art-work to be used and a full copy of the publication (at NC price). NCs will inform CB of their selling price and will pay to CIE a royalty of 20 % of this price for every copy sold. VPP and CB will work out details (supplying also cover sheets, wording to be used stating that the NC is responsible for the accuracy of the translation, in case of ambiguity the CIE version is the official one, etc.). — Extract from the BA meeting 1993

### Publish or perish

I now return to the point I made in the opening: the CIE should expect to generate more of its income from the users of the information it produces than from national membership fees and dues. The CIE has asserted its authority in light and lighting and now has formal responsibilities to produce (International) standards in a timely, efficient and broad-based manner.

This enthusiasm by the CIE means that the voluntary work of the hundreds of people involved in CIE Technical Committee activity has, in some cases, become critical as a result of demands to and by the ISO or IEC for light and lighting standards. The strategies referred to above are aimed at assisting Technical Committees and Divisions in the publication of Standards (and their supporting Technical Reports). However, the Central Bureau and the officers cannot produce Standards themselves (or undertake the work needed to produce the Standards).

### **The CIE Strategic/Business Plan and Publishing**

The CIE depends upon what appears to be a diminishing group of technically qualified and experienced people to do the work of the CIE. Perhaps the wider availability of CIE publications, on CD-ROM, printed locally and/or available in translation, will attract more people to the CIE's work. It is important that National Committees nurture those who might be new to the CIE so that the pool of knowledge and experience available to the CIE might grow.

Many of the publishing issues were discussed at the Board's Strategic Planning meeting in September, 1996. The Business Plan will be discussed at this meeting in Durban and I urge you to note the many issues and initiatives related to publications, either directly or indirectly.

### **The publishing future**

The various initiatives mentioned above are, I believe, temporary. I see the CD-ROM and much of the paper-based publishing being replaced by electronic systems. These will be part of the much-discussed IT revolution and the so-called Information Superhighway, about which little fact exists. However, I envisage that it will be a user-pays access system where there will be charges to look at and to copy information. This has major implications for traditional publishing and, especially, for the publishers of information (rather than entertainment). I expect that the CIE will "sign-up" with one or more access providers and that the CIE will receive income from people browsing and using CIE information. My guess is that by the time of the next Session, we will be discussing these expectations as facts.

Finally, at the end of this term, I would like to thank those who have assisted over the quadrennium, especially the Publications Board members, the staff of the Central Bureau and the President. The Technical Committees and the Divisions must also be thanked for, without their work, there would be no CIE publications.

## APPENDIX F



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

Canadian National Committee Comité National Canadien



### CNC/CIE SECRETARY'S REPORT TO THE 42nd ANNUAL MEETING

1997-OCTOBER-31

This report covers the period from 1996-November-08 to 1997-October-30

#### CIE MATTERS:

##### 1. Annual Membership Fee:

The annual membership fee of the CNC/CIE as a member of the CIE for 1997 is 90,813.00 Austrian Schillings. This is approximately \$10,316.00 Cdn. The NRC Public and International Relations Branch is responsible for making this payment. They are concerned over the continued increase in annual fees, particularly since their budget is frozen.

##### 2. CIE Midterm meeting:

The CIE midterm meeting took place in Durban, South Africa in the first week of September 1997. During this time the CIE Board of Administration, its subcommittees, the General Assembly, CIE Divisions 2,3,4,6, and 7, as well as many Technical Committees held meetings. Of our members, Jacques Roberge and Werner K. Adrian were able to attend. We look forward to their reports at our annual meeting, as well as further information in the Division Members' reports. Jacques Roberge was appointed as the CNC/CIE delegate to the GA meeting, with Werner Adrian as our appointed alternate with voting right, and Alan Robertson as our non-voting advisor. We regret that Alan Robertson was unable to attend the Durban meeting.

In conjunction with the CIE meetings, the South African National Committee on Illumination (SANCI) hosted, with the CIE, an International Conference on Lighting in Developing Countries (1 to 3 September 1997). Werner Adrian presented a paper at this conference.

##### 3. CIE 24th Session (Warsaw, 1999-June-24 to 30)

The time-table for this meeting has been published and a Call for Papers has been issued. The Board of Administration also has requested our input concerning Proposed Workshops and Proposed Invited Papers. These items are to be discussed at this meeting.

##### 4. CIE Draft Standards:

DS 005.4 *CIE Standard Illuminants for Colorimetry*. Copies of this draft have been sent to all CNC/CIE Members for final voting (before 1997-November-07). Version 5.2 was sent to us for comments in June 1996, and only one of our membership replied, with no negative comment. Version 5.3 was sent to us in February 1997 for voting. I received 9 replies, and our comments (all editorial) were forwarded to the Central Bureau along with our positive vote. The comments of all the National Committees for this vote resulted in a new version (005.4/E) which has now been sent to all NCs for final voting.

DS 006.3 *Road Traffic Light - 200 mm Roundel Signals Photometric Properties*. This draft standard was sent to all National Committees in February 1997 by the Central Bureau for evaluation and comment. Copies were sent to all CNC/CIE Members and made available to any Advisory Members and people on our general mailing list who wished to comment on it. Only one Advisory Member requested a copy. A summary of the four replies which I received were then forwarded to the Central Bureau.

DS 007.3 (1997) *Erythema Reference Action Spectrum and Standard Erythema Dose*. Copies of this draft have been sent to all CNC/CIE Members for their comments (before 1998-March-06). Any Advisory Members or non-members may receive a complimentary copy if they are prepared to provide comments for the Canadian submission.

#### 5. CIE Information:

In addition to the hard-copy information available in the *CIE NEWS*, press releases, etc. which are mailed to the membership, the Central Bureau makes available a wide range of information electronically on the WorldWideWeb (WWW) and can also be contacted by email. The CIE information has been set up on the WWW by H. Ikeda of Chiba University in Japan.

The CIE home page address is:

<http://www.cie.co.at/cie/home.html> .

The CIE Central Bureau email address is:

[ciecb@ping.at](mailto:ciecb@ping.at) .

Two of the CIE Divisions have set up their own web addresses:

Division 1's address is: <http://nml.csir.co.za/~cie1/>

Division 2's address is: <http://nml.csir.co.za/~cie2/>

#### 6. Mailings:

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

CIE NEWS # 40, December 1996

CIE NEWS # 41, March 1997

CIE NEWS # 42, June 1997

CIE NEWS # 43, September 1997

CIE Press Releases:

CIE Publication 123 (1997), *Low Vision, Lighting needs for the partially sighted*.

CIE Publication 124 (1997), *CIE Collection in Colour and Vision 1997*.

CIE Publication 125 (1997), *Standard Erythema Dose, a Review*

CIE Special Publication x012 (1997), *Proceedings of the NPL-CIE-UK Conference: Visual Scales; Photometric and Colorimetric Aspects*.

CIE Draft Standard DS 006.3 (1997), *Road Traffic Light - 200 mm Roundel Signals Photometric Properties*.

CIE Draft Standard DS 007.3 (1997) *Erythema Reference Action Spectrum and Standard Erythema Dose*.

## CNC/CIE MATTERS:

### 1. 42nd Annual Meeting.

This annual meeting is being held in Cleveland, Ohio as a joint meeting with the United States National Committee (USNC). In addition to the separate annual meetings, we will participate in a joint full-day technical session on Saturday, November 01, 1997 and a half-day closing session (Sunday) concerning the 'State of the CIE - After Durban'. We are grateful to Dr. James Love of the University of Calgary for acting on our behalf as one of the 1997 CNC/USNC Conference co-Chairmen.

### 2. Mailing Lists:

At present I maintain 3 mailing lists: Members(12), Advisory Members(41), General Interest(32). In general, the difference between the first two and the 3rd is that 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.

### 3. 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 (41st), two 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. Both have accepted. They are:  
K.F. Lin  
R.W. White.

#### Advisory Members:

- i. J.G. White of Transport Canada, Ottawa, has accepted our nomination as an Advisory Member.
- ii. Mr. Joseph Diwan, Technical Director of Research and Development at Consultex Inc., Alexandria, Ontario has been suggested as an Advisory Member. I have extended a conditional invitation to him, but have not yet received a reply.
- iii. Wolfgang Budde, Debbie Doma (Takeuchi), Peter Kaiser, and Michael Ouellette have resigned, or requested that their names be removed, from our Advisory Member list.

Respectfully submitted,



A.A. Gaertner  
Secretary, CNC/CIE  
Institute for National Measurement Standards  
Building M-36  
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## APPENDIX G



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

Canadian National Committee Comité National Canadien



### CNC/CIE Publications Report, October 1997

A.R. Robertson

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

	1995 (\$)	1996 (\$)	1997 (\$)
Balance forward	5211.20	4907.82	6613.02
Sales	7343.00	2303.00	2264.00
Interest	3.25	0.00	17.79
Payments to Central Bureau	(7637.13)	(591.30)	(1629.84)
Other expenses	(12.50)	(6.50)	(6.50)
Closing balance	4907.82	6613.02	7258.47
Debt to Central Bureau	(355.46)	(1560.81)	(890.35)
Effective balance	4552.36	5052.21	6368.12

Sales seem to have settled down at just over \$2000 per year, which represents a profit of about \$1000 per year.

Our pricing policy is to multiply the cost in Austrian Schillings by 0.246 to arrive at the Canadian dollar price. This compares to a true exchange rate (as of today) of about 0.117. I receive frequent complaints about the high cost of CIE Publications and about half the people who enquire never follow up with an order. With this in mind, I believe the CNC should again discuss whether this pricing policy is appropriate. For comparison, the USNC uses multipliers of 0.140 for members and 0.210 for non-members. In Canadian dollars, these translate to about 0.196 and 0.294 respectively. The Committee should also note that, in January 1997, the Central Bureau introduced a price increase of about 10% which I have not yet passed on to Canadian customers.

I have still not found time to document my procedures sufficiently to enable Frank Lin to take over responsibility smoothly. Again, I hope to do so soon.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	CIE Publications	97-10-29													
2															
3	Cash Flow														
4															
5	Date		Sales	Other Income	Payments to CB	Other Expense	Deposit	Cheques in hand	Bank Balance	Total Balance	Purchases (ATS)	Debt to CB (ATS)	Exchange Rate	Debt to CB (\$)	Effective Balance
6															
7	96-11-04	Forward						\$1,281.00	\$5,332.02	\$6,613.02		11427.00	0.13659	\$1,560.81	\$5,052.21
8	96-11-04	Vorteck	\$94.00					\$1,375.00	\$5,332.02	\$6,707.02		11427.00	0.13659	\$1,560.81	\$5,146.21
9	96-11-04	Lighting Sciences	\$74.00					\$1,449.00	\$5,332.02	\$6,781.02		11427.00	0.13659	\$1,560.81	\$5,220.21
10	96-11-04	Invoice #283						\$1,449.00	\$5,332.02	\$6,781.02	1,079.00	12506.00	0.13659	\$1,708.19	\$5,072.33
11	96-12-09	Interest (96-04-30)		\$4.67			\$4.67	\$1,449.00	\$5,336.69	\$6,785.69		12506.00	0.13659	\$1,708.19	\$5,077.50
12	96-12-09	Interest (96-10-31)		\$6.73			\$6.73	\$1,449.00	\$5,343.42	\$6,792.42		12506.00	0.13659	\$1,708.19	\$5,084.23
13	96-12-09	Deposit					\$1,449.00	\$0.00	\$6,792.42	\$6,792.42		12506.00	0.13659	\$1,708.19	\$5,084.23
14	96-12-09	5% discount on #283						\$0.00	\$6,792.42	\$6,792.42	-54.00	12452.00	0.13659	\$1,700.82	\$5,091.60
15	96-12-09	Exchange rate adjustment						\$0.00	\$6,792.42	\$6,792.42		12452.00	0.13089	\$1,629.84	\$5,162.58
16	96-12-09	Payment			\$1,629.84			\$0.00	\$5,162.58	\$5,162.58		0.00	0.13089	(\$0.00)	\$5,162.58
17	96-12-09	Commission				\$6.50	(\$6.50)	\$0.00	\$5,156.08	\$5,156.08		0.00	0.13089	(\$0.00)	\$5,156.08
18	96-12-12	Lithonia	\$143.00					\$143.00	\$5,156.08	\$5,299.08		0.00	0.13089	(\$0.00)	\$5,299.08
19	97-01-10	Optikon	\$82.00					\$225.00	\$5,156.08	\$5,381.08		0.00	0.13089	(\$0.00)	\$5,381.08
20	97-01-30	Xillix Technologies	\$295.00					\$520.00	\$5,156.08	\$5,676.08		0.00	0.13089	(\$0.00)	\$5,676.08
21	97-01-31	Invoice #016						\$520.00	\$5,156.08	\$5,676.08	2,184.00	2184.00	0.13089	\$285.86	\$5,390.22
22	97-02-11	Westaim Corp.	\$82.00					\$602.00	\$5,156.08	\$5,758.08		2184.00	0.13089	\$285.86	\$5,472.22
23	97-03-14	Inst. Nat. Optique	\$238.00					\$840.00	\$5,156.08	\$5,996.08		2184.00	0.13089	\$285.86	\$5,710.22
24	97-03-17	Lithonia	\$184.00					\$1,024.00	\$5,156.08	\$6,180.08		2184.00	0.13089	\$285.86	\$5,894.22
25	97-05-13	TIR Systems	\$90.00					\$1,114.00	\$5,156.08	\$6,270.08		2184.00	0.13089	\$285.86	\$5,984.22
26	97-05-26	Invoice #103						\$1,114.00	\$5,156.08	\$6,270.08	2,691.00	4875.00	0.13089	\$638.09	\$5,631.99
27	97-05-30	Vorteck	\$242.00					\$1,356.00	\$5,156.08	\$6,512.08		4875.00	0.13089	\$638.09	\$5,873.99
28	97-06-05	Inst. Nat. Optique	\$94.00					\$1,450.00	\$5,156.08	\$6,606.08		4875.00	0.13089	\$638.09	\$5,967.99
29	97-06-10	Deposit					\$970.00	\$480.00	\$6,126.08	\$6,606.08		4875.00	0.13089	\$638.09	\$5,967.99
30	97-06-10	Interest (97-05-01)		\$6.39			\$6.39	\$480.00	\$6,132.47	\$6,612.47		4875.00	0.13089	\$638.09	\$5,974.38
31	97-06-17	Invoice #133						\$480.00	\$6,132.47	\$6,612.47	237.25	5112.25	0.13089	\$669.14	\$5,943.33
32	97-06-26	DND / DGAPEM	\$245.00					\$725.00	\$6,132.47	\$6,857.47		5112.25	0.13089	\$669.14	\$6,188.33
33	97-07-29	UBC	\$186.00					\$911.00	\$6,132.47	\$7,043.47		5112.25	0.13089	\$669.14	\$6,374.33
34	97-08-12	Invoice #175						\$911.00	\$6,132.47	\$7,043.47	1,690.00	6802.25	0.13089	\$890.35	\$6,153.12
35	97-09-02	NCR	\$118.00					\$1,029.00	\$6,132.47	\$7,161.47		6802.25	0.13089	\$890.35	\$6,271.12
36	97-09-08	Transport Canada	\$97.00					\$1,126.00	\$6,132.47	\$7,258.47		6802.25	0.13089	\$890.35	\$6,368.12
37															
38	Total	Total	\$2,264.00	\$17.79	\$1,629.84	\$6.50					7,827.25				

	<b>CIE Publications</b>							
	<b>Stock list</b>	97-10-29						
ER	Exchange rate	0.114						
SF	Safety factor	1.1						
MU	Mark up	0.49						
	Multiplier	0.245882	(=ATS x ER x SF / (1 - MU))					
<b>No.</b>	<b>Title</b>	<b>Year</b>	<b>Cost</b>	<b>Price</b>	<b>Stock</b>	<b>Purchases</b>	<b>Sales</b>	<b>Current</b>
			<b>(ATS)</b>	<b>(CDN\$)</b>	<b>961105</b>	<b>since</b>	<b>since</b>	<b>stock</b>
						<b>961105</b>	<b>961105</b>	
1	Urban sky glow	1980	0.00	\$74.00	4			4
2.2	Signal colours	1975	0.00	\$120.00	3			3
12.2	Road Lighting	1977	0.00	\$94.00	4			4
13.3	Colour rendering	1995	539.50	\$133.00	0	2	2	0
15.2	Colorimetry	1986	481.00	\$118.00	1	2	2	1
16	Daylight	1972	0.00	\$120.00	5			5
17.4	Vocabulary	1987	2515.50	\$619.00	1			1
18.2	Physical photometry	1983	0.00	\$88.00	3			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. (indoo	1973	0.00	\$101.00	3			3
27	Luminaire phot. (stree	1973	0.00	\$107.00	4			4
29.2	Interior lighting	1986	598.00	\$133.00	1			1
30.2	Calc.&meas. (road ltg	1982	0.00	\$184.00	1		1	0
31.2	Calc.&meas. (road ltg	1983	910.00	\$224.00	0	2		2
31	Glare (road lighting)	1976	0.00	\$74.00	1			1
32A	Special road ltg (Fren	1977	0.00	\$101.00	4			4
32B	Special road ltg (Engli	1977	0.00	\$101.00	5			5
33A	Road ltg depn (French	1977	0.00	\$94.00	4			4
33B	Road ltg depn (Englis	1977	0.00	\$94.00	5			5
34	Road ltg installn data	1977	0.00	\$88.00	3			3
38	Char. of materials	1977	0.00	\$184.00	4			4
39.2	Surf.colours for signal	1983	0.00	\$120.00	4			4
40	Interior lighting calcs	1978	0.00	\$101.00	4			4
41	Light as true vis.quant	1978	344.50	\$88.00	4			4
42	Lighting for tennis	1978	0.00	\$74.00	6			6
43	Phot. of floodlights	1979	0.00	\$94.00	4			4
44	Absolute reflection	1979	0.00	\$107.00	2			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 roads	1979	0.00	\$120.00	4			4
48	Road traffic signals	1980	0.00	\$88.00	1			1
49	Emergency lighting	1981	0.00	\$62.00	3			3
51	Daylight simulators	1981	0.00	\$82.00	2			2
52	Interior lighting calcs	1982	0.00	\$184.00	4			4
53	Radiometers & photo	1982	0.00	\$82.00	3			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 hall	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	1			1
61	Tunnel entrance lighti	1984	0.00	\$120.00	3			3
62	Lighting for swimming	1984	0.00	\$74.00	2			2
63	Spectroradiometry	1984	435.50	\$107.00	2			2
64	Spectral responsivity	1984	0.00	\$107.00	3			3

No.	Title	Year	Cost (ATS)	Price (CDN\$)	Stock 961105	Purchases since 961105	Sales since 961105	Current stock
65	Absolute radiometers	1985	0.00	\$82.00	3			3
66	Road surfaces	1984	0.00	\$107.00	2			2
67	Photometry of sports I	1986	195.00	\$48.00	2			2
68	Exterior lighting	1986	435.50	\$107.00	4			4
69	Illuminance meters	1987	396.50	\$97.00	2			2
70	Meas. of luminous int	1987	383.50	\$94.00	2			2
71	Proceedings 1987	1987	1898.00	\$467.00	1			1
72	Retroreflectors	1987	435.50	\$107.00	2			2
73	Road markings	1988	435.50	\$107.00	1			1
74	Road signs	1988	682.50	\$168.00	3			3
75	Spec. luminous efficie	1988	299.00	\$74.00	2			2
76	Meas. of luminescenc	1988	435.50	\$107.00	2			2
77	Electric light sources	1988	617.50	\$152.00	1		1	0
78	Brightness-luminance	1988	812.50	\$217.00	2			2
79	Road traffic lights	1988	273.00	\$74.00	1			1
80	Observer metamerism	1989	273.00	\$74.00	2			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	2		1	1
84	Luminous flux	1989	422.50	\$104.00	1			1
85	Solar spec. irradiance	1989	383.50	\$94.00	2		2	0
86	1988 spec.lum.eff.fun	1990	253.50	\$62.00	2			2
87	Self-luminous display	1990	357.50	\$88.00	1			1
88	Lighting for road tunn	1990	364.00	\$90.00	1		1	0
89	Collection 1990	1991	422.50	\$104.00	2			2
90	Sunscreen testing	1991	279.50	\$69.00	2			2
91	Proceedings 1991	1992	1170.00	\$288.00	2			2
92	Lighting of urban area	1992	331.50	\$82.00	1			1
93	Road lighting / accide	1992	598.00	\$147.00	4			4
94	Floodlighting	1993	435.50	\$107.00	1			1
95	Contrast & visibility	1992	422.50	\$104.00	1			1
96	Electric light sources	1993	364.00	\$90.00	1		1	0
97	Maintenance/indoor	1992	299.00	\$74.00	2			2
98	Personal uv dosimetry	1992	299.00	\$74.00	1			1
99	Lighting education	1992	279.50	\$69.00	1			1
100	Night driving	1992	435.50	\$107.00	2			2
101	Parameters/colour diff	1993	253.50	\$62.00	1		1	0
102	File format-photometri	1993	331.50	\$82.00	2		1	1
103	CIE Collection 1993	1993	435.50	\$107.00	1		1	0
104	Daytime running lights	1993	253.50	\$62.00	1			1
105	Spectroradiometry	1993	299.00	\$74.00	1			1
106	CIE Collection/Photob	1993	422.50	\$104.00	2		1	1
107	Signal colours	1994	396.50	\$97.00	2		1	1
108	Daylight measuremen	1994	422.50	\$104.00	1			1
109	Corresponding colour	1994	279.50	\$69.00	2			2
110	Spatial dist. daylight	1994	364.00	\$90.00	1			1
111	Variable message sig	1994	422.50	\$104.00	2			2
112	Glare evaluation	1994	279.50	\$69.00	1		1	0
113	Retroreflective signs	1995	435.50	\$107.00	1			1
114	Collection - photometr	1994	396.50	\$97.00	2			2
115	Lighting of roads	1995	331.50	\$82.00	2			2
116	Colour difference eval	1995	279.50	\$69.00	2	2	2	2
117	Discomfort glare	1995	364.00	\$90.00	2			2
118	Collection - colour & v	1995	435.50	\$107.00	2			2
121	Goniophot. of luminair	1996	422.50	\$104.00	1		1	0
122	Colorim. of CRTs	1996	331.50	\$82.00	2		1	1
123	Low Vision	1997	910.00	\$224.00	0	2		2

No.	Title	Year	Cost (ATS)	Price (CDN\$)	Stock 961105	Purchases since 961105	Sales since 961105	Current stock	
123CD	Low Vision	1997	455.00	\$112.00	0			0	
124	Collection - colour & v	1997	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			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	\$58.00	0	1	1	0	
D006	Daylight AQC	1994	260.00	\$64.00	1			1	
D007	Corresponding colour	1994	422.50	\$104.00	0			0	
D008	Colour rendering	1995	260.00	\$64.00	0			0	
ISO10526	Standard illuminants	1991	208.00	\$62.00	2			2	
ISO10527	Standard observers	1991	390.00	\$101.00	3			3	
S003	Daylight	1996	214.50	\$53.00	1			1	
DS004.2	Signal colours	1996	140.00	\$34.00	-1			-1	
DS005.2	Colorim. Illuminants	1996	45.00	\$12.00	0			0	Note 1
DS006.3		1997	45.00	\$12.00	0			0	Note 1
x001	SLG-Div.5 Symposiu	1989	279.50	\$69.00	0			0	
x002	SLG-Div.4 Symposiu	1989	422.50	\$104.00	0			0	
x003	CIE-WMO Symposiu	1989	598.00	\$147.00	1			1	
x005	Proc.sem.computer p	1992	598.00	\$147.00	0			0	
x006	Japan CIE / Prakash9	1991	279.50	\$69.00	0			0	
x007	Proc.Symp.Colorimetr	1993	617.50	\$152.00	0			0	
x008	Urban Sky Glow	1994	396.50	\$97.00	1			1	
x009	Proc.Symp.Photometr	1995	650.00	\$160.00	2			2	
x010	Proc.Symp.Image Tec	1995	825.50	\$203.00	0			0	
x011	Proc.95 late papers	1995	422.50	\$104.00	0			0	
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				258	14	23	249	
	Notes								
	1. Printed at NRC from master								
	2. Sales include one copy lost in mail and written off								



## APPENDIX H



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	1999-12-31	Division 5, Finance Com.
Vice President	W.K. Adrian	Ontario	1998-12-31	Division 4
Secretary/Treasurer	A.A. Gaertner	Ontario	1997-12-31	
	K.F. Lin	Ontario	2000-12-31	
	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
	J.A. Veitch	Ontario	1999-12-31	Division 6
	R.W. White	Québec	2000-12-31	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

Eduard Alf	Ontario	R. Lakowski	British Columbia
Ian Ashdown	British Columbia	Brian Liddy	Ontario
M.G. Bassett	Ontario	P. Manning	Nova Scotia
J.(Joe) Bastianpillai	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
‡ Joseph Diwan	Ontario	Ralph A. Smith	New Brunswick
* Debbie Doma	British Colombia	Nikolay Stoev	Ontario
R.B. Gibbons	Ontario	Eli Szamosi	Ontario
C.M. Henville	Ontario	B.W. Tansley	Ontario
Byron Jordan	Québec	D.K. Tiller	Ontario
* P.K. Kaiser	Ontario	M.K. Timmings	Ontario
Roy Kaufmann	British Columbia	D. Trotter	Ontario
S.M. Kaye	Manitoba	James G. White	Ontario
A. Ketvirtis	Ontario	Lorne A. Whitehead	British Columbia
Barbara Kolesnik	Ontario	George Woo	Ontario
Jacques Lacasse	Québec	Ernest Wotton	Ontario

‡ = requires CNC/CIE appointment at annual meeting of 1997-October-31.

\* = have resigned / requested removal from CNC/CIE membership.

October 29, 1997

## APPENDIX I

TO: CIE Canadian National Committee

October 31, 1997

**RE: Request for Funding for CIE Division 3 Meeting, Ottawa, ON, May 8, 1998**

Submitted by: Jennifer A. Veitch, Ph.D.

**Rationale:** The annual meeting of CIE Division 3 will be held at the National Research Council of Canada in Ottawa on May 8, 1998. This date and venue were chosen to allow Division 3 members to combine the meeting with attendance at the First CIE Symposium on Lighting Quality, which will be held on May 9-10, also on the NRC campus. Members may also combine this trip with attendance at Daylighting '98, The International Conference on daylighting Technologies for Energy Efficiency in Buildings, on May 11-13 in Ottawa.

Division 3 annual meetings have in some cases been sponsored by the host organisation. Some aspects of the 1998 meeting are sponsored by NRC's Institute for Research in Construction: the space for the Division meeting and its associated technical committee meetings, as well as the co-ordination of the event and of the CIE Symposium on Lighting Quality. (Indeed, NRC/IRC is also sponsoring Daylighting '98 and a meeting of the International Energy Agency Task 21 that follows it.)

Division 3 Director Anthony Slater has asked me whether it would be possible for the Canadian National Committee assist by covering the costs of refreshments (coffee/tea breaks and lunch), which NRC/IRC has not agreed to cover. This aid would facilitate the attendance of some delegates by reducing their costs, and would also provide a hospitable welcome. A cost breakdown appears below.

### ***Estimated Costs***

(anticipated attendance: 40)

morning break	coffee/tea	\$54.00
	doughnuts	27.00
lunch	sandwiches	140.00
	side salads	128.00
	cookies	38.00
	soft drinks/juice	50.00
afternoon break	coffee/tea	54.00
<i>subtotal</i>		<i>491.00</i>
PST (8%)		39.28
<b>TOTAL</b>		<b>\$ 530.28</b>

Note. As the purchaser would be the Government of Canada (through NRC), there would be no GST charged.

I respectfully ask that the CNC consider this request favourably, and allocate \$550 for the purpose of providing this hospitality. The opportunity for Canada to welcome a CIE meeting is comparatively rare, and this instance would allow us to return the hospitality that we have received in other nations.





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

Central Bureau: Kegelgasse 27 · A-1030 Wien · Austria



**First CIE Symposium on Lighting Quality  
May 9-10, 1998  
Ottawa, Ontario**

**hosted by  
National Research Council of Canada / Institute for Research in Construction**

***FIRST ANNOUNCEMENT***

Lighting quality is high on the agenda for many in the international lighting community. It seems that every conference has at least one session on the topic, and every organisation has a committee dedicated to studying it. Join us in Ottawa, Canada, for the first-ever international effort to summarise what is known about lighting quality and to set a course for research to improve that understanding.

The symposium precedes Daylighting '98, The International Conference on Daylighting Technologies for Energy Efficiency in Buildings (May 11-13). Accommodation arrangements are being co-ordinated for those who wish to attend both events.

**Objectives:**

To review world-wide research, theory, and practice related to lighting quality:

- to identify the various components of lighting quality
- to identify issues that could be emerging from technological change (non-visual effects from high frequency operation, narrow-band phosphors, hazards)
- to critically examine current recommended practice
- to determine what research is needed and to set priorities
- to determine a means to involve users (designers, manufacturers, legislators) in the process.

**Format:**

Invited speakers, invited discussions, group discussions, plenary sessions.

**Outcomes:**

- Printed proceedings.
- Guidance for CIE and the international lighting community concerning the priorities for lighting quality research and practice.

**For information, contact NRC/IRC Client Services at (613)-993-0435**

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**Canada**



## APPENDIX J

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

Central Bureau: Kegelgasse 27 · A-1030 Wien · Austria

Central Bureau

Circular Letter  
to  
National Committees  
NCCL 9706

Phone: (+43 1) 714 31 87 0  
Fax: (+43 1) 713 08 38 18  
~~XXXXXX0400XXXXXX0400XXXXXX~~  
E-mail: ciecb@ping.at

1997-09-23

Dear Colleagues,

Our colleagues in Poland are already working hard in preparing for a successful 24th Session of the CIE in Warsaw, 1999-06-24 to 30. The success of the Session is, however, not only in the hands of the organisers but it depends to a large extent on the contributions, and those depend on you.

The survey on the New Delhi Session showed that most participants liked the layout with a CIE Conference part and with a Divisional Meetings part. Thus the Board of Administration proposes a similar layout with only minor amendments. Table 1 gives an overview of all events, both technical and administrative. Table 2 is the layout of the CIE Conference and Table 3 that of the Divisional meetings.

Table 1.

Overview of the Session Time-table, Warsaw, June 1999				
June	20	Sun	Follow-up on Business Plan	
	21	Mon	Division Directors & Finance Committee meetings	
	22	Tue	CIE Board	
	23	Wed	General Assembly	Cocktail
	24	Thu	Session	Welcome Cocktail
	25	Fri	Session	Banquet
	26	Sat	Session	Closing Ceremony
	27	Sun	available for TC meetings, tourist programme	
	28	Mon	Division and TC meetings	
	29	Tue	Division and TC meetings	
	30	Wed	Division and TC meetings	Farewell Cocktail
July	1	Thu	CIE Board meeting	
	2	Fri	Tentative BA meeting	

Table 2.

	<b>CIE Conference</b>	
Thu June 24	09:30 - 10:00	Opening by President, Official addresses etc.
	10:00 - 10:45	Invited paper
	10:45 - 11:00	Coffee break
	11:00 - 12:00	Presented papers. 3 parallel sessions; 2 papers in each
	12:00 - 13:30	Lunch break
	13:30 - 14:30	Presented Posters
	14:30 - 17:00	Workshops, 2 in parallel
	Evening	Welcome Cocktail, opera/concert performance
Fri June 25	09:00 - 09:45	Invited paper
	09:45 - 10:00	Coffee break
	10:00 - 11:00	Presented papers. 3 parallel sessions; 2 papers in each
	11:00 - 12:15	Presented posters
	12:15 - 13:30	Lunch break
	13:30 - 14:30	Poster display/Coffee break
	14:30 - 17:00	Workshops, 2 in parallel
	Evening	Official Banquet
Sat June 26	09:00 - 09:45	Invited paper
	09:45 - 10:00	Coffee break
	10:00 - 11:00	Presented papers. 3 parallel sessions; 2 papers in each
	11:00 - 12:15	Presented posters
	12:15 - 13:30	Lunch break
	13:30 - 14:30	Poster display/Coffee break
	14:30 - 17:00	Workshops, 2 in parallel
	17:00	Closing ceremony
	Evening	entertainment programme, cocktail or beer party

Table 3.

	<b>Divisional meetings</b>	
Mon 28 June	09:00 - 10:00	Introduction by President and VPT
	10:00 - 12:15	Division meetings (3 in parallel) / TC meetings
	12:15 - 13:30	Lunch break
	13:30 - 17:00	Division meetings (3 in parallel) / TC meetings
Tue 29 June	09:00 - 12:15	Division meetings (3 in parallel) / TC meetings
	12:15 - 13:30	Lunch break
	13:30 - 17:00	Division meetings (3 in parallel) / TC meetings
Wed 30 June	09:00 - 12:15	Division meetings (3 in parallel) / TC meetings
	12:15 - 13:30	Lunch break
	13:30 - 16:00	Division meetings (3 in parallel) / TC meetings
	16:00 - 17:00	Summary of Divisional Meetings, VPT; Closing of the Divisional part of the Session
	17:00	Farewell cocktail

Attached to this letter we are sending you copies of the 'Call for Papers' and forms for the 'Preliminary submission of contributions'. (Annex 1 and 2.) Please distribute them in your country, informing also the lighting and optics press on the subject. Please feel free to

photocopy the 'Call for Papers' and the 'Preliminary submission of contributions' form should you need more copies, or inform us and we will be pleased to send you further copies.

Please note that the *Submissions* with three copies of the *summary of the proposed paper* has to reach the Central Bureau **by mail** (or by e-mail) before **1st April 1998 latest**. (Experience has shown that faxed forms and summaries are sometimes difficult to read and copy, leading to errors and finally to the exclusion of the paper.)

As you know the intended speakers much better than the Paper Committee members do, it will help in selecting the best papers if your submission is accompanied with the evaluation prepared by your National Committee.

At every CIE Session the *Invited Papers* and the *Workshops* are the highlights of the meeting. We would like to shape the Warsaw Session to serve your requirements again and therefore invite you to help with selecting subject areas for the Invited Papers and the Workshops. Annex 3 and 4 are the Reply Sheets where we request you to give your opinion on these subjects: Please suggest subjects for Invited Papers (you are welcome to suggest a speaker as well) and subjects for Workshops. These recommendations should reach the Central Bureau before **1st April 1998**.

The Board of Administration will review your proposals and will try to put together a CIE Conference programme where all our attendants find many interesting papers.

Looking forward to your kind reply.

Sincerely yours,



Christine Hermann  
General Secretary



## The 24th SESSION OF THE CIE

24-30 June, 1999

Warsaw, Poland

Circular Letter to NCs

Vienna, 1997-09-23

### CALL FOR PAPERS

#### FORMAT OF THE SESSION

The 24th Session of the CIE will be held in Warsaw, Poland, from 24th to 30th June 1999 at the Warsaw Institute of Technology.

According to the proposed time table (see below) the Session will be divided into two parts:

- 1 The *conference* part from 24th to 26th June 1999 with invited papers, presented papers, presented posters, posters at the stand and workshops.
- 2 The *technical meetings* of the Divisions from 28th to 30th June 1999.

The Session will begin on 23rd June in the evening and will end on 30th June after the Divisional meetings with a Farewell Cocktail.

The *conference* part has provisions for three *invited papers*, 18 *presented papers*, 45 *presented posters* as well as a number of *posters* presented at the stand and up to six *workshops*. The presented papers, presented posters and the workshops will be given in three parallel sessions. For the posters presented at the stand ample room will be available.

	Conference				Divisional meetings		
	Wed 23 June	Thu 24 June	Fri 25 June	Sat 26 June	Mon 28 June	Tue 29 June	Wed 30 June
a.m.	GA	3 Invited Papers in Plenary Session 3x2 Presented Papers ) in 3 parallel 3x5 Presented Posters) sessions			Divisional meetings, up to 3 parallel sessions, and Technical Committee meetings		
p.m.	GA	2 Poster viewing sessions 3x2 Workshops		Closing Ceremony			
evening	Cocktail	Welcome Cocktail	Banquet			Street- lighting	Farewell Cocktail

## **CALL FOR PAPERS**

Prospective contributors are invited to submit papers dealing with new results in the field of light and lighting. The subjects of the papers should be relevant to the work and the terms of reference of the seven CIE Divisions and their Technical Committees. (For detailed information on domains of interest, Section 2 of the CIE Roster should be consulted.) Contributions published before will not be accepted. Papers dealing with questions of direct concern to the work of the Divisions will get priority.

### **PROCEDURE FOR SUBMISSION OF PAPERS**

Prospective contributors should submit the enclosed application form and a summary of their contribution in triplicate to the National Committee of their country. (In countries without a National Committee the submission should be made directly to the Central Bureau of the CIE: Kegelgasse 27, A-1030 Wien, Austria.)

The summary should be submitted in English with a minimum of 400 and a maximum of 600 words. It should be sufficiently specific and informative and should make clear the novelty the author wishes to describe, referring to results and practical applications. Based on this information the Board of Administration will make decision on the acceptance of the paper and on whether it will be given orally in a paper or presented poster session, or as a poster presented at the stand.

Each National Committee should set a deadline for receiving such submissions from contributors within their country so that the National Committee may scrutinize and preselect suitable papers.

The submissions accepted by the National Committees must be forwarded by the National Committees (or by the authors in countries without a National Committee) to arrive at the Central Bureau by:

**1st April 1998**

Authors will be informed on the decision of the Board of Administration by 1st August 1998.

After the acceptance of their papers authors will be provided with information indicating format and deadlines of the written contributions for inclusion in the Proceedings.





## THE 24TH SESSION OF THE CIE

24th - 30th June, 1999

Warsaw, Poland

### PRELIMINARY SUBMISSION OF CONTRIBUTIONS

Name of Author: Mr/Miss/Mrs/Ms.....  
(Please print)

Title / Position: .....

Organization or Firm: .....

Address for Correspondence: .....

.....

.....

Tel.: .....; Fax: .....; E-Mail: .....

I wish to make a contribution entitled:

.....

.....

The contribution will be presented in: ..... (Language)

(Note: English is preferred; simultaneous translation is not available for the Session)

I prefer to present this paper as a Presented Paper: ( )

Presented Poster: ( )

Poster presented at the stand: ( )

My paper is relevant to the work of CIE Division .....

Three copies of a summary are enclosed (please do not fax this form and your summary but mail it in time to be at your National Committee and/or the Central Bureau of the CIE by the deadline; late papers cannot be accepted).

Date: .... - ..... - ..... Signature: .....

(This form and the summary should be submitted to the National Committee of the author's country and forwarded by the National Committee to the Central Bureau [Kegelgasse 27, A-1030 Wien, Austria] to arrive not later than **1st April 1998.**)

## Reply Sheet

### Proposed Workshop items for 24th Session of the CIE, Poland

We suggest the following subject(s) for Workshops:

.....

.....

.....

Suggested Chairman:

.....

.....

.....

NC of .....

Date: .....

Signature: .....

Please return by 1st April 1998 latest to:

Christine Hermann  
CIE Central Bureau  
Kegelgasse 27  
A-1030 Vienna  
Austria

## Reply Sheet

### Proposed Invited Papers for 24th Session of the CIE, Poland

We suggest the following subject(s) as Invited Paper:

.....

.....

.....

Suggested speakers(s):

.....

.....

.....

NC of .....

Date: .....

Signature: .....

Please return by 1st April 1998 latest to:

Christine Hermann  
CIE Central Bureau  
Kegelgasse 27  
A-1030 Vienna  
Austria

## APPENDIX K

### Fourth International Lighting Research Symposium

Sponsored by

EPRI Lighting Research Office

Entitled

### VISION AT LOW LUMINANCE LEVELS

May 19, 20 & 21, 1998

Orlando, Florida

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<b>Dates:</b>	Speakers Review Meeting .....	Afternoon: May 19, 1998
	Symposium Reception and Open Discussions .....	Evening: May 19, 1998
	Symposium Proceedings .....	All Day: May 20, 1998
	Evening Working Session, Dinner, Speaker .....	Evening: May 20, 1998
	Symposium Proceedings .....	All Day: May 21, 1998
	Symposium Adjournment .....	5:00 PM: May 21, 1998

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- Topics:**
- Spectral effects of light sources on visual performance at low light levels
  - Effects of age on vision at low light levels
  - Color recognition at low light levels
  - Photopic, Mesopic, and Scotopic Vision: Basic Aspects, Theory, Applications
  - The Civil Twilight Envelope: Roadway Vision at dusk and dawn vs. nighttime
  - Transient Glare Effect
  - Existing light sources and their spectra
  - Security: light levels and spectra for detection vs. detail identification
- 

#### Invited Speakers (Current List)

- S. Berman, Lawrence Berkeley National Laboratory
  - A. Lewis, Michigan College of Optometry
  - L. Halonen, University of Helsinki
  - R. Levin, Osram Sylvania
  - J. Andre; D. Owens, Franklin & Marshall College
  - H. Schmidt-Clausen, Darmstadt University of Technology
  - K. Laxar, Naval Medical Submarine Research Center
  - M. Rea; P. Boyce, LRC, Rensselaer Polytechnic Institute
  - K. Higgins, Lighthouse, Inc.
  - G. Jackson, University of Alabama-Birmingham
  - W. Adrian, University of Waterloo
  - K. Sagawa, National Institute of Bioscience & Human Technology, Japan
- 

#### Location: At Walt Disney World Village

- **Grosvenor Resort** Complimentary transportation to Magic Kingdom, EPCOT Center, Disney Studios; across the street from Pleasure Island
  - **Stay at Conference Rates** \$99 per night (family occupancy) - Reservations: 1-800-624-4109
- 

#### For More Information & Registration Packet:

Contact:	EPRI Lighting Information Office	Phone: 1-800-525-8555
	Attention: Larry Ayers	Fax: 1-510-444-2072
	501 14 <sup>th</sup> Street, Suite 210	
	Oakland, CA 94612	



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



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**CNC/CIE DIVISION MEMBERS'**  
**REPORTS**  
  
for the  
  
**42nd Annual CNC/CIE Meeting**  
  
**1997-October-31**

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 and Government Services Canada  
A&ES, Technology Directorate  
Place du Portage 3, Level 8A2  
Hull, Québec  
K1A 0M3

Tel: (819) 956-3410  
Fax: (819) 956-3400  
Email: pasinii@pwgsc.gc.ca



#### **Division 4 Lighting and Signalling for Transport**

Dr. Werner K. Adrian  
48-1 Allen St. West  
Waterloo, Ontario  
N2L 6H2

Tel: (519) 579-7575  
Fax: (519) 579-6292  
Email:

#### **Division 5 Exterior and Other Lighting Applications**

Mr. Jacques Roberge, P.Eng  
600 de la Promenade  
Saint-Hyacinthe, Québec  
J2S 6R6

Tel: (450) 223-1667  
Fax: (450) 223-1731  
Email: jroberge@login.net

#### **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: jennifer.veitch@nrc.ca

#### **Division 7 General Aspects of Lighting**

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

Tel: (514) 879-1708  
Fax: (514) 861-6219  
Email: dfsarch@accent.net

**Division 1: Vision and Colour**  
**Report to CNC/CIE 42nd Annual Meeting**

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

Phone: (416) 635-2189  
Fax: (416) 635-2104  
email: sharon@dcim.dnd.ca

Annual Meeting of Division 1

The annual meeting of Division 1 for 1997 was held 23-24 May in Kyoto, Japan. Unfortunately, no Canadian representative was able to attend the meeting. Three Technical Committees, TC1-27, TC1-34, and TC1-42, also held meetings at that time. There were several changes to the membership. Prof. Kehlibarov of Bulgaria and Dr. Kokoschka of Germany both resigned, a new representative was appointed for Italy, Prof. Da Pos, and a representative from Turkey was appointed. Summaries of activities in Division 1 are based on the Activity Report published in March 1997 and a draft of the minutes of the meeting in Kyoto.

Progress in Vision Section

TC1-21: Testing of supplementary systems of photometry A fifth and final draft of a report is in preparation. Two photometric systems based on heterochromatic brightness matching ( $2^\circ$  and  $10^\circ$ ) have been evaluated by this TC. A request was made that colour appearance models be included in this investigation. Dr. Sagawa explained that these were not included for this specific work due to the complexity thereof, but would have to be considered for future work.

TC1-26: Individual variation in heterochromatic brightness matching Dr. Yaguchi reported that a draft report would be prepared by the end of 1997 on the first term of reference of this TC. The second term of reference, the development of a test methodology, was however difficult. As this TC was already seven years old, he suggested that the terms of reference be changed to remove part two:

To develop a simple test of individual characteristics for brightness perception in order to complete the work of this TC. The meeting felt that the second term of reference was still required. It was suggested that a reportership be established to continue this work. Terms of reference were reduced to:

To analyse existing data on heterochromatic brightness matching in terms of individual variation.

TC1-30: Luminous efficiency functions The report is almost completed; some editorial changes are still required. It was re-confirmed from the 1996 minutes that data would be published in 10 nm intervals and the work will not be delayed until TC1-38 published its report.

TC1-36: Fundamental chromaticity diagram with physiologically significant axes A report on the work of this committee was published in the proceedings of the CIE Experts' Symposium '96 "Colour Standards for Image Technology". As well, a detailed summary

of the work of this committee can be found in the Activity Report for 1997. A 7th draft of the final report has been circulated.

TC1-37: Supplementary system of photometry A simple model is being established which the chairman will propose shortly for consideration by the TC members.

TC1-40: Critical flicker fusion frequency A request was received from the Swedish National Committee to continue the work in this TC. A new chairman was being sought. Dr. Derefeldt or Mr. Lofberg would forward the name of a suitable chairman from Sweden to continue this work to Dr. Sagawa.

TC1-41: Extension of  $V_m(\lambda)$  beyond 830 nm No change from last year. The committee is still awaiting the results from TC1-36.

TC1-46: Concept and application of equivalent luminance The chairman has offered his resignation. No progress was made by the TC since its establishment in New Delhi in 1995. As it was felt that this work was still important and relevant, it was decided to continue with this committee. Dr. Sagawa proposed Dr. Nakano as a new chairman due to his expertise in this field. This change of chairman was approved by the meeting.

R1-02: Brightness-luminance relations The meeting agreed to close this reportership on recommendation from the Associate Director and Dr. Blommaert as there was no progress.

R1-12: Visual acuity No progress was reported.

R1-16: Visual Adaptation to complex luminance distribution Dr. Shinoda, the reporter, is quite active with experimental work relevant to the reportership at this stage. His report could be expected shortly.

### Progress in Colour Section

TC1-27: Specification of colour appearance for reflective media and self luminous display comparison It was reported that, following a recent TC meeting, it was decided to conduct more experiments to resolve inconsistencies amongst the results of different researchers. It is hoped to finish this work by the 1999 Quadrennium.

TC1-31: Colour notation and colour order systems This report is completed and has been published in Publication No 124, *CIE Collection on Colour and Vision*, 1997. The work of this TC is now finished.

TC1-33: Colour rendering A report was circulated for voting in 1996; however, agreement could not be found amongst TC members with regard to the number of reference illuminants to be used. Some lamp manufacturers requested the inclusion of various practical reference illuminants which could represent an enormous amount of reference illuminants due to the various fluorescent lamps existing and still being developed. The TC originally decided on the use of only 6 illuminants, including the most common reference illuminants. These are:

2700 K	4200 K
2950 K	D50
3450 K	D65

Drs. Hunt and Nayatani raised concern on the CIE transform used for the calculation. Dr. Pointer pointed out that the 6 illuminants were chosen as their chromaticities were lying almost exactly on the plankian locus, making them almost independent of the use of the u,

v transformation. Ms Alessi reported some concern about the lack of promotion of the CIE 1994 colour difference equation. Dr. Pointer pointed out that the main problem was not the method used for calculation, but the number of illuminants used, which did not relate to those used in practice by the lighting industry. Dr. Hunt added that the aim of the work was to represent a whole lot of phenomena by only one number; this could never be adequate or accurate. The problem was, however, that this number has been turned into a meaningful tool by the lighting industry. Better, scientific solutions to the problem do exist; however, the lighting industry was not concerned with the use of new systems as the existing system was extremely popular.

The meeting was requested to show support for a couple of suggestions to guide the chairman in future work of the TC:

- (a) The work of TC should be reported as a paper in the technical literature or in the CIE collection. The current calculation method specified in 17.4 should not change. Eleven attendees supported this proposal.
- (b) The committee should suggest an interim method based on latest CIE recommendations, using 6 reference illuminants. Two attendees supported this proposal.
- (c) To close the committee with no report and to establish a new committee conducting the required experimental work. It was pointed out that this was exactly the initial terms of reference of the TC and that it seemed as though the committee has drifted away from the initial terms of reference. There was no support for this proposal.

TC1-34: Testing of colour appearance models The committee has been extremely active since its establishment. An interim CIE model has been established. A simplified model called CIECAM97 combining various aspects of existing models is being formulated. A final report should be available towards the end of 1999.

TC1-38: Compatibility of tabular data for computational purposes A second draft is being circulated amongst committee members. It was emphasised that the committee was not responsible to draft or standardise tables of data, but the computational method and approach to be used in the calculation process. Although the Activity Report for 1997 indicated that this committee was making progress, the minutes of the meeting in Kyoto indicated that they were having some difficulty in reaching consensus.

TC1-43: Rod intrusion in metameric colour matches The committee has been unable to reach consensus regarding the method of calculating pupil diameter. The plan is to calculate the effects of rod intrusion using the limiting cases of diameter and reference methods of estimating pupil diameter. A set of metamers to various Munsell chips that will represent typical object colours has been compiled. The plan is to perform calculations during the next year.

TC1-44: Practical daylight sources for colorimetry A comprehensive report has been compiled and a lot of data has been collected with support from industry on the provision of data. The chairman was encouraged to conclude the report as soon as possible as there was an urgent need in industry for this work. A complete report of the work of this committee is included in the Activity Report for 1997 and is available on request.

TC1-45: Revision of CIE Publication No. 51 to include D50 simulators A report from this committee will be included in the formal minutes from the Kyoto meeting. Consideration is being given to expressing all specifications and results in CIELAB space. Currently, tolerances and the results of metameric assessment are expressed in different spaces. It has also been recommended that the D50 simulators be specified from 380 to 780 as

recommended by TC1-38. It is planned to recommend that the test method in Publication 51 be published as an international standard once the final report has been approved.

R1-04: Colour difference evaluation A report was presented. As this is a topical issue, the chairman was requested to add to the report and update it further and to request the Central Bureau to publish this in the CIE collection.

R1-11: Cognitive aspects of colour The final report should be completed shortly.

R1-13: Revision of Wyszecki and Stiles The publishers of the book are not too enthusiastic on its re-publication or of support from authors. The reason given was that various other books had been published since, making this re-publication obsolete. A final report is still awaited.

R1-14: Visual observation of blood-oxygen levels A progress report on this reportship will be available in the formal minutes of the Kyoto meeting.

R1-15: Lighting terminology Dr. Pointer reported that he now has 14 active members assisting him in this work, including a sub-committee in the USA. A report will be presented to the main committee TC7-06, hopefully by September 1997.

Prof. Terstiege pointed out that several committees in Europe are currently promoting a CEN draft standard, which did not promote the use of CIE terminology. Ms Herman reported that the Central Bureau was aware of this and was involved with discussion with CEN and also ISO on this issue. It was emphasised that international standardisation should receive priority over regional standardisation. Dr. Pointer will contact the organiser of the CEN committee and follow this issue up with him.

R1-17: Improved colorimetry A report was presented to the meeting (available in the formal minutes from the Kyoto meeting). This was done with the agreement of Dr. Thornton. It was concluded that the report should be made available for wider comment, after which Dr. Schanda would present a final report prior to the possible establishment of a TC. Members were requested to forward possible publication media to Dr. Schanda.

R1-18: The use of colour identification under various illuminance levels Dr. Ishida reported his progress to date. Difficulties were experienced finding published articles relating specifically to this topic. It was requested to continue the work for another year in order to collect more data prior to the establishment of a TC.

#### Progress in Visual Ergonomics Section

TC1-16: Lighting needs for the partially sighted The report had been published in Publication No 123 Low Vision. The TC has now completed its work. This report is also available on CD-ROM.

TC1-18: Disability glare A chairman's report has been published in the CIE collection. Mr. Vos is preparing a final updated report which will be submitted to the Central Bureau to be published in the CIE Collection. This TC was formally disbanded at the previous meeting.

TC1-19: Specification of visibility for real tasks A third draft is currently in circulation amongst TC members. It is hoped to complete this work by the next quadrennial meeting.

R1-03: Engineering applications of brightness scales Dr. Takeuchi reported slow progress due to a change in his job position. This work is ongoing.



R1-06: Transient adaptation A report was presented to the meeting. It was decided to ask Dr. Kokoschka to present a final report and to make a recommendation on the future of this committee and a chairman for a possible committee, should it be recommended.

R1-07: Visual fatigue It was decided to close this reportership.

As Dr. Kokoschka has formally resigned, the issue of Associate Director for the Visual Ergonomics Section was discussed during the meeting of Division 1. It was suggested that Dr. Derefeldt be approached as she is active in this field. As there was uncertainty, due to limited activity in the past about the future of this section, it was decided to ask Dr. Derefeldt to assume the position until the next quadrennium where a formal decision would be taken on its future.

### Proposals for New Reporterships and Technical Committees

1. Index to assess the quality of VDUs The establishment of an index to be used to assess the quality of a VDU was suggested. The intent would be to assess the capabilities of the display and not the quality of reproduction of that system. Dr. Pointer volunteered to pursue this proposal.

2. Practical viewing geometries A request for more practical viewing geometries which represented reality and were more useful to industry was presented. The chairman of TC2-39, who is pursuing viewing geometries, was approached. However, the work of that TC did not appear to overlap with this request. Dr. Pointer stated that he would keep the Division informed of possible future action after receiving more information on the problem.

3. Hue and lightness dependent correction to industrial colour difference evaluation The meeting approved the establishment of this committee.

Terms of reference: To investigate the hue and lightness dependence of industrial colour difference evaluation using existing experimental data.

Chairman: DH Alman (GB).

Members: RS Berns (US), A Robertson (CA), M Melgosa (ES), K Witt (DE), MR. Luo (UK), D Rich (US)

Committee number: TC1-47.

4. Revision of CIE Document 15.2 Colorimetry The meeting approved the establishment of this committee. A summary of the recommendations of a panel on CIE 15.3 is included in the minutes of the 1997 meeting of Division 1.

Terms of reference: To produce a revised edition of CIE document 15.2, CIE 15.3, taking into consideration other relevant CIE recommendations.

Chairman: J Schanda (HU)

Members: D Rich (US), M Pointer (GB), M Fairchild (US), P Alessi (US), Y Ohno (US), R Hunt (GB), K Witt (DE), Yaguchi (JP)

Committee number: TC1-48

5. Liaison with ISO/TC35: Paint and varnishes colorimetry ISO recently published three draft standards on this subject. As it is important for the CIE to liaise with ISO on matters such as this, it was agreed by the meeting to establish a TC in order to support ISO on this issue. The reason for establishing a TC in this particular instance (many other ISO standards exist also containing aspects of colorimetry) was due to the fact that these specific standards make use of CIE publications and used the information incorrectly. The Division has up to now had a liaison with ISO/TC35 through Prof. Terstiege. It was explained that



ISO did not pay attention to the liaison for matters like this and therefore the CIE had to establish a committee to pursue this with ISO. This would enable CIE to attend these meetings. The ISO central office has already agreed on the support from the CIE. The meeting felt that there should be a better relationship established between the CIE and ISO to try and resolve issues like this in future without the need to establish a committee. The CIE Central Bureau was requested to take his matter up with ISO in order to possibly give liaison persons more say in this regard.

Terms of reference: To cooperate with ISO/TC35 in their production of a series of ISO standards for the colorimetry of paints and varnishes.

Chairman: (To be decided by the committee)

Members: C Herman and J Schanda from the Central Bureau, H Terstiege (DE), K Witt (DE), M Pointer (GB)

Committee number: TC1-49

6. Specification on individual variation in heterochromatic matching The meeting approved the establishment of this reportership on recommendation from TC1-26.

Terms of reference: To report on the possibility to develop a simple test of individual characteristics for heterochromatic brightness matching.

Reporter: H Yaguchi (JP)

Reportership: R1-19

7. Visual performance in the mesopic range As a results of the recent conference on Visual Scales, the meeting approved the establishment of this reportership.

Terms of reference: 1. To survey researchers and needs for specifying visual performance in the range of mesopic vision. 2. To report to Division 1 whether a TC on some specific visual performance should be established.

Reporter: J Taylor (UK)

Reportership: R1-20

#### Next meeting

The 1998 meeting of Division 1 will be held jointly with the ISCC/OSA, in Baltimore, USA in October 1998.

#### Canadian Participation in Division 1

Based on the latest information available to me, Canada has representatives on 9 Technical Committees. The Canadian representatives are W. Adrian on TC1-19; A. Robertson on TC1-27, TC1-38, TC1-43 and TC1-47; W. Cowan on TC1-21 and TC1-37; and J. Zwinkels on TC1-44 and TC1-45.

**CIE DIVISION 2:**  
**PHYSICAL MEASUREMENT OF LIGHT AND RADIATION**

**Report to CNC-CIE, October 31, 1997**

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The most recent CIE Division 2 meetings were held in Durban, South Africa, on 3-4 September, 1997. Alan Robertson of NRC was delegated to represent Canada at this session but, unfortunately could not attend. The following is a summary of the main items discussed during the business meeting (courtesy of draft minutes received from D2 Secretary).

**Administrative Matters**

The Division 2 officers are:

Division Director - F. Hengstberger (South Africa); Associate Directors: N. Johnson (USA), T. Goodman (UK), G. Vandermeersch (Belgium); Division Editor - J. Moore. Secretary: Y. Ohno (USA).

Division 2 currently has 34 member countries. Canadian member: J. Zwinkels

The Division has established a website at: "<http://nml.csir.co.za/~cie2/>". This home page provides information on: organization, activity reports and division meeting announcements

**TC Meetings on September 3, 1997 in Durban, S.A.:**

The following seven technical committees held meetings:

- TC 2-16 (Rastello, Italy) Characterization of the performance of tristimulus colorimeters
- TC 2-19 (Johnson, USA) Measurement of the spectral coefficient of retroreflection
- TC 2-29 (Goodman, UK) Measurement of detector linearity
- TC 2-36 (Rennilson, USA) Retroreflection: Definition and measurement
- TC 2-37 (Ohno, USA) Photometry using detectors as transfer standards
- TC 2-39 (Rich, USA) Geometric tolerances for colorimetry
- TC 2-40 (Rattunde, Germany) Characterization of the performance of illuminance and luminance meters

Division 2 (D2) held a joint business meeting with Division 4 (D4) on Sept. 4, 1997 in Durban, S.A. N. Johnson reported on the D2 TCs related to D4 TCs: TC2-19, 25, 32, 36, and 39. Rennilson reported further on TC 2-36; in particular the problems with related CEN document on retroreflectance measurements. It was agreed that D2 and D4 should periodically meet jointly.

#### **TC reports received by the Division Editor:**

- **TC 2-34**      LED Measurements (K. Muray, USA) went to Division ballot. It received no negative votes and has been published as CIE Pub. 127.
- **TC 2-33**      CIE Standard Illuminants for Colorimetry (Mielenz, USA) - original title: Reformulation of CIE Standard Illuminants A and D65 has been prepared as a CIE Draft Standard and circulated to National committees for approval.

#### **Technical Committee Work in Progress**

<b>TC 2-04</b>	Secondary standard sources (J. Moore, UK)	Final document is about ready for TC ballot. No photographs will be included in report to avoid complaints by manufacturers.
<b>TC 2-10</b>	Photometry and gonio- photometry of luminaires (Vandermeersch, Belgium)	Report has been published as CIE Pub. 121. TC has been closed. D2 Director received a proposal from Chairman to change the title and scope of the report, to include lamps; the Director will send this proposal to CB.
<b>TC 2-11</b>	Gonioreflectometry of standard materials (J. Hsia, USA)	Chairman proposed closing this TC. Reasons: subject matter has been published in NIST Tech Note 1413 and proposed additional comparison between NIST and PTB is unlikely to occur in near future. The Chairman is to publish a short report in CIE News or Collection. TC will be closed.
<b>TC 2-14</b>	Measurement of reflectance and trans- mittance, including turbid media (P. Polato, Italy)	The 62 page draft report has been divided into 2 parts and final editing by D2 Editor has been completed. It will be sent for Division ballot.

TC 2-16	Characterization of the performance of tristimulus colorimeters (Rastello, Italy)	TC met in Durban. The current draft was discussed. Written comments from TC members are requested within next 2 months. Chairman will then prepare final draft for TC ballot.
TC 2-17	Simulated solar radiation (D. Kockot, Germany)	New draft "Solar simulators for testing purposes" has been prepared and circulated within the TC. Chairman was requested to circulate document to all D2 members for comment before TC ballot. After editing, CIE CB will convert document to PDF file and Secretary will distribute by e-mail.
TC 2-19	Measurement of spectral coefficient of retroreflection (N. Johnson, USA)	TC met in Durban. Third draft was discussed. Next draft will be sent for TC ballot. The intercomparison data (250 pages) will not be included in the report; it may be made available in disk form. Next meeting is currently not planned.
TC 2-22	Luminous flux of high-pressure sodium lamps (B. Garzo, Hungary)	A 2 page brief summary of this TC was retrieved and given to D2 Editor. The document will be published in CIE Collection. TC has been closed.
TC 2-23	Photometry of street-lighting luminaires (G. Vandermeersch Belgium)	Chairman, having just completed work on TC 2-10, will begin work on this TC. Collaboration with Division 4 is requested.
TC 2-24	Users guide for the selection of illuminance and luminance meters (K. Ganesha, India)	Proposed outline of the document has been circulated. New draft is being prepared, aiming for a practical guide to the use of illuminance and luminance meters in industrial, rather than scientific applications.
TC 2-25	Calibration methods and photoluminescent standards for total radiance factor measurements (J. Zwinkels, Canada)	TC held an ad hoc meeting September 15, 1997 in Baltimore. A 6th draft of TC report has been prepared. Next TC meeting is planned with D2 meeting in Boulder.

<b>TC 2-28</b>	Methods of characterizing spectrophotometers (J. Verrill, UK)	Document has 8 authors (2 Canadian). Third draft is being prepared for TC ballot by end of 1997.
<b>TC 2-29</b>	Measurement of detector linearity (T. Goodman, UK)	TC met in Durban to discuss latest draft. Revisions and additions are to be made to: detector types, presentation of results, references, and diagrams. Next draft is planned for December 1997.
<b>TC 2-30</b>	Diode array radiometry (P. Wychorski, USA)	Chairman requested resignation due to increased work load. Secretary will contact TC chair to retrieve draft document. A decision for further action will be made at the next D2 meeting in Boulder.
<b>TC 2-32</b>	Measuring retroreflectance of wet horizontal road markings (T. Bradshaw, USA)	The chairman, T. Bradshaw resigned in 1995. A new chairman, Mr. Hudson from 3M Company (USA), has been nominated and approved by D2. His appointment awaits approval by CIE BA.
<b>TC 2-34</b>	LED measurements (K. Muray, USA)	The final (4th) draft of the TC has gone to Division ballot (Sept. 21 deadline). No negative votes were received.
<b>TC 2-35</b>	CIE Standard for $V(\lambda)$ and $V'(\lambda)$ (Mielenz, USA)	Chairman, Secretary and G. Sauter met at NIST in October 1996 to discuss issues related to CIPM which were raised at ad-hoc TC meeting in Vienna. Sauter has agreed to rewrite the scope of the document for further discussion. Chairman has agreed to prepare a revised version of the document in response to Sauter's re-write and to circulate the document to TC members.
<b>TC 2-36</b>	Revision of CIE Publ. 54: Retroreflection (J. Rennilson, USA)	TC met in Durban to discuss the 6th draft, which is close to completion. Document is planned for CIE Pub. 54.2. Schanda raised a concern re the copyright with the CEN226 document. Although a CEN-CIE agreement is forthcoming, Chairman is to send the draft to CEN officially.

TC 2-37	Photometry using $V(\lambda)$ -corrected detectors as transfer standards (Ohno, USA)	TC met in Durban to discuss the 4th draft. Except for disagreement in the use of a few terms, the TC agreed on the technical content of the document. After solving the terminology issues, the next draft (5th) will be circulated for TC vote.
TC 2-38	Flare photometry (F.Denner, S.Africa)	Chairman has submitted resignation due to pressures of work and suggests that TC be closed. Interest in this area has reduced in the past few years. D2 agreed to close TC.
TC 2-39	Geometric tolerances for colorimetry (D. Rich, USA)	TC met in Durban and discussed an interim activity report. Relevant literature has been collected and reviewed. The current working program is to utilize ISO 5/1 and ASTM E1767, and to define specifications of reflectance factor (t/8, d/8, d/0), radiance factor (45/0) and transmittance geometries (0/0, d/0). Specifications will be developed using computer simulations and verified experimentally. It was recommended to liaise with TC 1-48 (rev.Pub. 15.2). Chairman will become a member of TC1-48.
TC 2-40	CIE standard: Characterizing the performance of luminance and illuminance meters (Rattunde, Germany)	TC met in Durban to discuss first draft which includes ~80% of proposed content. The next draft will include remaining material and be rewritten in ISO/CIE standards format. Chairman has requested written comments on current draft. Some errors in Pub. 69 are to be corrected in the document (Schanda). Liaison with OIML TC14 is being considered. Next meeting is planned for Boulder.
TC 2-41	Industrial photometry in developing countries (B. Bhattacharya, India)	In an attempt to find a solution to obtaining low-cost reliable standard lamps for sphere photometry, experiments have been conducted over the past year in an Indian laboratory to establish the reliability of indigenously manufactured lamps which



TC 2-41	continued	use components imported from developed countries. The results are encouraging and a draft report on these findings is under preparation.
TC 2-42	Colorimetry of visual displays (A. Hanson, U.K.)	Chairman has circulated the proposed contents of the TC report for comments. Chairman is maintaining strong links with other organizations working on VDU measurements and is presenting a paper on this TC's work at the upcoming CIE Symposium on Color Standards and Image Technology in Scottsdale.

#### Reporterships in Progress:

R 2-05	Visual gloss (J. Taylor, UK)	The subject has been determined not appropriate for a TC at this time. Continue monitoring the situation.
R 2-06	Standardization of measuring geometry for the colorimetry of metallic paints (C. McCamy, USA)	ASTM E12 is meeting twice a year. The reporter work should continue.
R 2-09	Absolute cryogenic radiometers (A. Parr, USA)	CCPR intercomparison is underway with about 12 national labs. The results will be available for the next CCPR meeting in 1999. At this time, there is not widespread usage and application of cryogenic radiometers by industrial or commercial firms. Consequently, there is not a pressing need for the CIE to take specific action. As the use of these devices matures, CIE may want to explore the possibility of developing standard measurement procedures. The reportership remains open.
R 2-15	Colorimetry of lustre pigments (Grosswang, Austria)	Closed.
R 2-16	Optical multimeters (R. Distl, Germany)	Closed.

<b>R 2-17</b>	Aviation photometry (Ohno, USA)	Report was given by Ohno and Bhagat. SAE (Society for Automotive Engineers) has completed the draft document ARP5029 (Measurement procedures for aircraft collision lights) and NIST has established calibration services for flash-photometers for anticollision lights. FAA (Federal Aviation Administration) is addressing needs for international harmonization in this area and for more knowledge of human vision effects for flashing lights (such as multiple flashes). Chairman will contact ICAO (International Civil Aviation Organization) to obtain information on their needs and prepare proposals for Divisions 1 and 2 for 1998.
<b>R 2-18</b>	OIML Matters (Sauter, Germany)	No report at this time
<b>R 2-19</b>	Emergency Lighting Luminaires (L. Bedocs, UK)	Closed.
<b>R2-20</b>	Vocabulary Matters (J. Moore, UK)	ILV is going to be revised under a committee chaired by C. Hermann of the CIECB. D2 has turned this reportership into a technical committee with Moore as Chairman.
<b>R 2-21</b>	Use of detectors as absolute transfer standards for spectroradiometry (N. Fox, UK)	No report at this time.

#### **Reports of Liaisons:**

**CCPR (Kohler)** Action has been taken to change the reportership from A. Parr to R. Kohler. Kohler reported that the BIPM is drafting a document on the "key intercomparisons" in order to establish a basis for international recognitions of equivalence. CCPR had a special meeting in Paris in June 1997 to discuss this issue, which L. Boivin of NRC (Canada) attended. The WG Chair (Parr) proposed quantities for the key comparisons which include: spectral irradiance (200-2500 nm), spectral responsivity (200-1000 nm, 900-1600 nm), luminous intensity/illuminance, luminous flux, spectral diffuse reflectance and spectral regular transmittance. NRC will be a member of the steering committees for spectral responsivity and spectral diffuse reflectance. The WG will meet at NEWRAD in Tucson. The next regular CCPR meeting will be in April 1999.

**ISO/ TC6 (J.Zwinkels, Canada)** The WG met in Jacksonville, Florida in September 1997. The major issues that were discussed were:

- ISO/ TC6 primary and authorized laboratories; in particular, the status of the recent NRC-PTB intercomparison of diffuse reflectance scales. The results of this comparison will be published in Metrologia (Volume 34, 1997)
- Absolute spectrofluorimetric measurements for whiteness calibration. NRC measurements on its newly developed reference spectrofluorimeter provided independent evidence for a change in the photometric level of fluorescent reference standards issued by STFI (Sweden).
- Indoor whiteness and ISO brightness; in particular, the fact that instruments calibrated using CIE whiteness (based on spectral data) do not necessarily agree when measuring brightness (based on broadband filter centered at 457 nm).
- Gloss measurements at 75° and 20°: ISO draft standards DIS 8254-1 and CD 8254-2 for the measurement of specular gloss at 75° and 20°, respectively, are in preparation. Canada's position is that TAPPI 480 om-92 become the basis for ISO/DIS 8254-1 and that DIN 54502 become a CEN standard for gloss at 75°.

ISO Draft Standard DIS 11475 "Paper and board - CIE whiteness, D65/ 10° (outdoor daylight) has been circulated for comments. J. Zwinkels forwarded comments by J. Schanda that CIE results and publications be acknowledged in the document.

ISO Draft Standard DIS 3688 "Pulps-Preparation of laboratory sheets for the measurement of diffuse blue reflectance factor (ISO brightness) is to be voted on at the Cape Town meeting. Canada's position is to accept this standard.

The next meeting of TC 6 will be November 4, 1997 in Cape Town, South Africa. B.Jordan (PAPRICAN) will be attending this meeting.

### **Proposals for New Technical Committees:**

**TC 2-44:** Vocabulary Matters. Moore (UK) as the Chairman. Reportership R2-20 has been converted into this technical committee.

### **Proposals for New Reporterships:**

**R 2-22:** Implementation of SI photometric units. Kohler (France) as the reporter. Moore proposed a new technical committee but D2 decided to establish it as a reportership because the subject matter is considered to be too immature to be a TC.

### **Other CIE Division 2 Business:**

Division 6 has requested Division 2 liaisons with the following TCs:

6-34 Photobiological lamp safety standard

6-45 Measurement of optical radiation hazard in the workplace

Election of New Division Director: asking for nominations by meeting next year.

### **Other CIE Division 2 Meetings:**

CIE Symposium and workshop on "Standard methods for specifying and measuring LED characteristics" was held in October 1997 at CIE CB in Vienna. This was very successful with more than 50 participants and with about 20 papers presented.

CIE Expert Symposium on Color Standards for Image Technology will be held in Scottsdale, Az, from November 21-22, 1997.

### **Future CIE Division 2 Meetings:**

- |                 |  |
|-----------------|--|
| 18-19 May 1998  | Boulder, Colorado in conjunction with CORM98 at NIST                                       |
| 28-30 June 1999 | Warsaw, Poland in conjunction with the CIE 24th Session. Joint meeting with D1 is planned. |

### **Other CIE Division 2 Notes:**

- The draft documents "Solar simulators for testing purposes" prepared by TC 2-27, and "LED measurements" prepared by TC 2-34, were received for review.
- 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)
TC 2-42	S. McFadden (DCIEM), R. Munger (U. of Ottawa)

W. Budde has resigned his membership on committees TC 2-24 and 2-29. See attachment.

Wolfgang Budde  
3099 Carling Ave. Apt.304  
Nepean, Ont. K2H 5A6 Canada

23. Oct. 1997

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Dear Arnold Caen + uen

You are aware of the fact that I am still the Canadian Delegate in two Technical Committees of the CIE:

TC 2-24 Users Guide for the Selection of Illuminance Meters  
TC 2-29 Measurement of Detector Linearity.

I would like to resign these two appointments because I have not had any communication from these committees for years and I am not really aware of the intricacies and new developments in the related fields. I have also probably forgotten too much to be of any serious help, and it is time that somebody younger and more up to date takes over. Moreover active personal participation in meetings of committees becomes nearly impossible not only because of limited travel funds but also because of serious hearing problems. In addition at my age it is time to lighten the burdens.

Would you be kind enough to look for a possible replacement and then let the two relevant chairpersons know of my resignation and the possible change?

This resignation also applies to my membership in the CNC/CIE. I just looked up some notes and found, that my membership in this committee started in November 1963, when I was invited to attend the annual meeting and was immediately elected as Secretary. And you know approximately the rest. Thirtyfour years! It was much work, but it was always interesting and rewarding and the contact with the members of the CNC was indeed a great pleasure and I enjoyed it. Will you please forward my thanks and good wishes to the members of the committee and my very best regards.

Good luck for your meeting together with the USNC. We had good contact with that group, when Franc Grum was its president and Gunter Wyszecski was still very close to the affairs of the CNC. Several times our two committees exchanged observers at these annual meetings. For obvious reasons I cannot attend this meeting but, please, convey my regards.

Thanks for your help and all the best to you

Sincerely  
Wolfgang

**CIE DIVISION 3 ACTIVITY REPORT FOR  
THE MEETING OF SEPTEMBER 4, DURBAN, S.A.  
Submitted by I. Pasini, Canadian Delegate to Division 3  
for CNC/CIE Annual Meeting, October 31, November 2, 1997  
Cleveland, USA**

The attached minutes were sent by the Division Secretary, Mr Dominique Dumortier, ENTPE, Lyon, France. I was unable to attend this meeting but Jacque Roberge did attend on my behalf.

I was contacted by Gerald Irvine, reporter for TC 3.6 Industrial Lighting and Safety at Work for the purpose of distributing this document to interested parties and presumably elicit comments and data on relationship of light and accidents. The document is based principally on the German experience and their own DIN standards and is an excellent foundation to build on using data from other countries. I contacted Statistics Canada and, after a fairly intense and convoluted search, I discovered that the office charged with this type of data collection and analysis has no record of accidents due to poor lighting. It appears that the way accident data is collected makes it easy to miss its possible relationship to lighting.

My next action is to send the document to key practitioners and agencies and solicit their input. Perhaps the CNC/CIE can contact Statistic Canada and discuss ways to improve statistical data on accidents on the workplace versus quantity/quality lighting.





## DIVISION 3

### NOTES OF THE MEETING HELD ON SEPTEMBER 4, 1997, IN DURBAN, SOUTH AFRICA.

Anthony Slater	BRE, Garston, UK	Director
Sueko Kanaya	Matsushita, Japan	Assistant Director
Dominique Dumortier	ENTPE, Lyon, France	Secretary
Clay Belcher	University of Kansas, USA	Editor
Robin Aldworth		CIE P.P
Odd Arnesen	Norwegian Technical University	Norway Rep.
David Carter	University of Liverpool, UK	Chair. TC 3.31
Geoff Cook	University of Reading, UK	UK Rep.
H.D. Einhorn	University of Cape Town, RSA	Chair. TC 3.01
Jan Ejhed	Göteborg University, Sweden	TC 3.31
Marc Fontoynt	ENTPE, Lyon, France	TCs 3.25 and 3.33
John Grundy	Duncansby Ltd, South Africa	RSA Rep.
Liisa Halonen	Univ. of Technology, Helsinki, Finland	TC 3.01
Robin Johannessen	Secretary Nat. Committee, Norway	Observer
Warren Julian		CIE V.P.P
Yasuko Koga	Kyushu University, Japan	TCs 3.15 and 3.25
Heinrich Kramer	Lichtedesign, Köln, Germany	Chair TC 3.20, 3.22
Hans Allan Löfberg	KTH-BMG, Gävle, Sweden	V.P.T
Masato Oki	Ashikaga University, Tokyo, Japan	TC 3.25
Jacques Roberge	Canada	Replace Nat. Rep.
Elizabeth Rozeva	Technikon, Natal, RSA	Observer
Ton Rutten	Univ. of Technology, the Netherlands	TC 3.25
Boris Sovic	Parliament of Slovenia	NK Rep.
Axel Stockmar	LCI, German	TC 3.31
Sadao Takahashi	Fukui Univ. of Technology, Japan	TC 3.28
Wout Van Bommel	Philips Netherlands	Observer

Next division 3 meeting should happen on May 8, in Ottawa, Canada. It will be followed by a CIE symposium on lighting quality (May 9 and 10) and an international conference on daylighting: «Daylighting'98» (May 11 to 13, see enclosed information).

## JUST TO REMIND YOU

1. If you have not done it yet, send the address update form. Let the secretary know about someone who is not receiving information from division 3.
2. Check the CIE lighting vocabulary and send comments or new terms to C. Belcher who is the division 3 reporter for the revision of the vocabulary.
3. Come up with suggested topics and speakers for the CIE symposium on lighting quality. Send this to W. Julian at warren@arch.usyd.edu.au
4. The call for papers for the CIE Warsaw conference will be out in November, the deadline for abstracts should be around March 1998.
5. Because of changes at the Building Research Establishment, A. Slater will not be able to stay as division director after the CIE Meeting in Warsaw. You are all invited to come up with names: division status requires at least two names. The new director should be chosen during the next meeting.
6. In November, division 3 will have its web pages. You are all invited to contribute to the content of the server by indicating what information they would like to see on it. We plan to put the minutes, the activity report, what about the division 3 roster ? Contact the secretary. As an example, you can have a look at the web server set up by TC 3.25 at <http://idmp.entpe.fr>.
7. C. Belcher, the division 3 editor, is also the moderator of a discussion list on lighting. You can subscribe to this list by sending an e-mail at [Lighting-Request@garnet.nist.gov](mailto:Lighting-Request@garnet.nist.gov). The only word contained in your e-mail should be: «subscribe». There is also, a site with various papers on lighting called: The Electronic Journal of Lighting. For more information, contact C. Belcher via e-mail at [c-belcher@ukans.edu](mailto:c-belcher@ukans.edu)

## NOTES OF THE MEETING

1. **Opening of the meeting.** Director Slater opens the meeting at 9:15 am and asks everyone around the table to present himself.
2. **Approval of the Agenda.** The agenda of the meeting is approved by all the participants.
3. **Apologies of absence.** Received from G. Debreczeni, R. Kittler, H. Nakamura, M. Van Ooyen, O. Shilovtseva, P. Tregenza.
4. **Minutes of the last meeting.** Anthony Slater apologizes for the fact that the minutes of the last meeting have been sent very late. Belinda Collins was not able to stay as division 3 secretary. He takes this opportunity to introduce D. Dumortier who has agreed to act as the new secretary of Division 3. He indicates that it is also a good time to update the division 3 roster, D. Dumortier has issued an address update form which all division 3 members must fill and return to him. If you know someone

who is not on the roster, please send his coordinates to the secretary. D. Dumortier announces that to improve communication between division 3 and the members, a web server will be created.

**5. Division membership.** There were no comments on the membership.

**6. Director's report.** A. Slater indicates that the CIE board has decided that aside from TCs which must produce a publication, «study groups» can now be created on a particular topic, without the need to produce a document. TCs can only produce either a «standard» or a «technical report». A. Slater reports on the 2 day workshop on the future of the CIE, which has resulted in an action plan. This plan has been summarized in the CIE news and described in a document which will be sent to National Committees.

**7. Technical Committee reports.** All TC chairmen and reporters should send their activity reports to the secretary at least two weeks before the meeting. Information on each TC can also be found in the activity report which from now on will be posted on the division 3 web server.

**TC 3.01: Glare for small and large sources.**

H. Einhorn reports that a meeting was held in Durban on September 3. 7 members participated. A report on the glare effect of small and large sources should be available for the next division 3 meeting. A. Slater suggests to include this report in the CIE collections.

**TC 3.11: Daylighting calculation methods.**

There has been no report from the chairman M. Navvab.

**TC 3.12: Daylight and solar radiation data for building performance.**

The new chairman S. Hayman has apologized for not being able to submit his report on time. He has indicated that he would be able to resume work on the TC within a month. R. Kittler has sent a note stating that TC 3.12 urgently needs a group of competent members and team activities to utilize IDMP results and apply TC 3.15 and 3.25 advances as well as TC 3.32 trials to calculate and standardize outdoor conditions. R. Kittler suggests that his colleague S. Darula become a member of 3.12.

**TC 3.15: Sky luminance models.**

The chairman K. Matsuura was not at the meeting. He has indicated that an informal TC meeting will be held in Kyoto, on October 9. R. Kittler will present the work done in collaboration with R. Perez on new sky luminance models.

**TC 3.16: Psychological aspects of lighting.**

Since the meeting in Lyon, little progress has been made. B. Collins had asked D. Tiller to work on the report and try to figure out some way to finalize the report so that division 3 can vote on it. C. Belcher was asked to contact B. Collins and edit the document. A. Slater indicates that the work should now be done quickly, otherwise it may become outdated, in which case, it will not be worth publishing.

**TC 3.19: Scale model photometry for interior lighting.**

There has been no report from the chairman M. Navvab.

### **TC 3.20: Lighting and architecture.**

The chairman H. Kramer, indicates that he has now received the contribution of all members. He is now in the position of editing the book which may take around 8 months. H. Kramer suggests that CIE focus more on architects, since they take most decisions on light. The book is trying to bridge the existing gap between lighting engineers and architects. A. Slater agrees that this is an important work, he is eagerly waiting for the first draft. A member of division 5 indicates that a similar situation happens in the field of exterior lighting, and thinks that a chapter could focus on exterior lighting. This book with about 180 color pictures is quite different from regular CIE publications, so A. Slater suggests to H. Kramer to contact the vice-president of publication.

### **TC 3.21: CIE/ISO Interior lighting standards.**

A third draft has been produced by the TC and sent to ISO. L. Bedocs, the chairman, is now waiting for comments which are due October 1997. If this draft is approved, it will be finalized, otherwise a new TC meeting will be held.

### **TC 3.22: Museum lighting and protection against radiation damage.**

The chairman E. Ne'eman has indicated that one meeting was held on August 17, in Seattle, following the IESNA conference, and that another will be held in Ottawa, on September 25 and 26. E. Ne'eman intends to finalize the full draft of the guide on «Museum lighting and protection against radiation damage» by the end of 1997. Then it will be formally submitted to the central bureau. M. Fontoynt asks H. Kramer (member of TC 3.22) whether there is a link of the TC with ICOM (International Council of Museum), which holds a meeting every year. He suggests that the TC should take part to ICOM meetings. A. Slater asks H. Kramer to feedback the comments at the next meeting of the TC.

### **TC 3.24: Energy aspects of lighting.**

There has been no report from the chairman: L. Zonneveldt. A. Slater suggests to the secretary to write to the chairman and ask whether the TC is still alive or not.

### **TC 3.25: Coordination and development of the International Daylight Measurement Programme and its data.**

A meeting of TC 3.25 was held in Durban. Four new IDMP stations have been created in India. The relative calibration of the IDMP stations is near completion. A web server dedicated to the IDMP has been developed by D. Dumortier, one of the two secretaries. Its address is <http://idmp.entpe.fr>. D. Dumortier presents its content: a complete description of 46 of the 52 IDMP stations with pictures and maps, a description of the history of the IDMP, explanations on how to set up an IDMP station, a presentation of TC 3.25 activities including the minutes of the last meetings and the complete list of members with coordinates and a «library» where members can present their work: papers, software developed for the IDMP.

A. Slater congratulates the TC for its excellent work. He asks H.A. Löfberg whether he thinks that it might be a problem for CIE, if members of the IDMP would start selling the data. H.A. Löfberg does not see any problem.

### **TC 3.26: Development of a protocol for post occupancy evaluation of lighting.**

There has been no report from the chairman: D. Tiller. The secretary indicates that he will send a note to him.

### **TC 3.28: Standard on calculation of utilization factors.**

There has been no report from the chairman: R.I. Bell. This TC may be closed at the next meeting.

### **TC 3.30: Hollow light guides.**

L. Whitehead is the new TC chairman replacing Prof. Aizenberg. A. Slater indicates that he will check if this change of chairpersonship has received agreement from the board. A TC meeting was held in Trondheim, Norway on September 10 and 11, 1996. A new meeting will be held in Nagoya, on October 16 and 17, 1997, just after the Lux Pacifica conference. The TC plans to finalize the official publication on the hollow light guides and discuss about recommended photometric measurement procedure for these guides.

### **TC 3.31: Electric lighting for real spaces.**

G. Cook, the TC secretary mentions that a meeting was held in Durban on September 3. 9 members participated. The bibliographic database of references in the subject area is complete and contains 65 items. The major area of activity has been the drafting of an interim report setting out the state of knowledge in the subject area. The draft report has been circulated for comment and modification to TC members. There is still some work to be done on the assessment of the depreciation of the reflective materials.

A. Slater congratulates the TC for its work. Someone suggests that the name of the TC might need to be changed because there is no reason to look only at the effect on electric lighting, daylighting is of course affected.

### **TC 3.32: Validation of algorithms for daylighting outdoors.**

There has been no report from the TC chairman M. Navvab.

### **TC 3.33: Test cases for assessment of accuracy of lighting computer software.**

This TC was created at the Lyon meeting in October 1996. The chairman is R. Mitanchey from ENTPE. M. Fontoynt who is also from ENTPE presents the objective of the TC, which is to create test cases which can be used as benchmarks against which software developers could assess their products. The TC will focus on electric lighting first. M. Fontoynt indicates that this TC is related to other ongoing activities within the IEA Task 21: «Daylight in Building», noticeably Task 21C which is the software validation subtask. Software that will be tested will include Lightwave, Lightscape, Artlandis. Test cases and results will be put on a server and made available to anyone. The TC is currently gathering members and its first meeting will be held in Ottawa, in May.

## **8. Reporters reports.**

### **R 3-02: Stage and studio lighting.**

Showlight'97 was held in Ghent, Belgium, from April 28 to 30, 1997. It was a great success. Mr Ackerman will be reappointed as reporter of the UK committee and is beginning to plan Showlight 2001. He is inviting offers of venues, preferably in Western Europe.



### **R 3-06: Accidents and lighting.**

The report entitled «Lighting and accidents cases at the workplace», written by Prof. H. Ruschenschmidt of Germany is completed. The conclusions of the report are that most accidents do happen in areas with low illumination levels. There is a need for a contact with Division 5 where similar work may have been done.

### **R 3-10: Maintenance of indoor lighting.**

The reporter L. Bedocs has not sent any progress report.

### **R 3-13: Lighting vocabulary.**

C. Belcher reports on the activities of the division 7 committee in charge of revising the lighting vocabulary chaired by C. Hermann. The current status is that no work has been done in the past year. At the 1996 division 3 meeting, in Lyon, C. Belcher passed a list of terms that included words he felt were poorly defined and words whose definitions he did not understand or questioned. He asked all division 3 members to provide input to that list, unfortunately he did not receive any answer.

H.A Löfberg is surprised that there was no new term proposed. A. Slater has sent new terms from CEN committee. CEN has tried to make some of the terms more understandable. It is decided during the meeting that C. Belcher should send again his questions and comments, but this time in a more formal version indicating for each word the old definition and his suggested new definition. If there are no comments and objections, that document will then be forwarded to Ms Hermann for action.

### **R 3-15: Lighting standards.**

S. Simos the reporter indicates that he has received about 2/3 of the contributions that he expected.

**9. Liaisons.** D. Dumortier reports on the Satellight European research programme, the objective of which is to create a database of solar radiation and daylight for Europe, on the basis of the Meteosat satellite images. This server will be available at the end of 1998.

**10. Review of division 3 publications.** H.A Löfberg tells that CEN is working on standard but has difficulty to agree with CIE standards. Even though, CEN usually uses CIE publications as references. There is a lot of work going on through CEN in Europe. A. Slater indicates that according to him, guides for commercial and industrial buildings are still needed. M. Fontoynt asks how many guides have been sold in the past. W. Julian says that on average, the number of publications sold by CIE per year is 25. He says that marketing is the problem, in most national committees, there is no activity. M. Fontoynt and J. Roberge suggest that CIE should focus on helping developing countries in finding unexpensive solutions for good lighting. Participants to the meeting indicate which standards are in use in their countries. They do not really feel the need for new guides. However, it seems that a TC could be created to develop guides specifically for developing countries. This could be done in collaboration with the South African National Commission of Illumination for instance.

**11. Future Work.** A. Slater indicates that B. Weiss has proposed a division 5 committee



on emergency lighting, however it seems that this is more a preoccupation of division 3. He suggests to appoint B. Weiss to the next meeting.

At the Lyon meeting, C. Jones had proposed a term of reference for a TC on lighting quality. She has indicated that a «light right consortium» will happen in San Francisco, in November. A. Slater underlines that this seems to be an area of importance to the division.

W. Julian indicates that CIE will organize a symposium on lighting quality around May 9 and 10, 1998, in Ottawa. The idea of the symposium is to review the indices on lighting quality, investigate the need for uniformity... W. Julian asks all members of division 3 to come up with suggested topics and speakers for the symposium. H. Kramer says that 3 chapters of his TC work focus on lighting quality. Mr Kramer agrees to make a presentation and also suggests to contact P. Dehoff.

Going back on Carol Jones, A. Slater suggests to have for now a study group on lighting quality. C. Jones will have to liase with the symposium on lighting quality and a TC could be created after that.

**12. Next meeting.** Two proposals are made for the location of the next CIE meeting: in August, in Texas, USA, in parallel with the IESNA meeting (proposal by C. Belcher) and in May, in Ottawa, in parallel with a CIE symposium on lighting quality and a daylighting conference «daylighting'98». After discussion the participants chose to meet in Ottawa.

Then A. Slater thanks all the participants, in particular Mr. Grundy, Mr Henderson from ICOM, for having organized this meeting and other division 3 TC meetings. He adjourned the meeting.

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6 October, 1997

## **Report on the Activities of CIE Division 4 "Lighting and Signalling for Transport" in 1996/97**

The last annual meeting of Division 4 was held in Durban, South Africa, from 1-10, September, 1997. There were important "Board meetings" of the CIE and a 2.5 day Symposium of the South African National Committee on Illumination SANCI. The topic was lighting in underdeveloped countries and the presentations were to a part substandard. The remainder of the time was devoted to Technical Committee meetings. The event was fraught with serious concern about the future of the CIE. It was openly argued that the CIE has no future in its present form. The Board decided a change and presented what was concluded by a study group directed to the particulars of such a change. One of the most important topics was the inefficiency of the TC's and the time needed to prepare a document that could serve as a basis for a ISO/CIE Standard. In contrast, the European standardization body CEN is much faster due to the fact that committees are given a constrictive deadline that has to be met. We have to face great changes in the near future also in respect to the financial structure of the CIE.

Basically the reported activities of the Technical Committees in 95/96 are the same, but progress has been made in several which should be reported here.

TC 4-15 Lighting of Roads for Motor and Pedestrians. In rather lengthy discussions such details as the gridpoints on road and sidewalks were defined as well as the final and verified calculation of Threshold Increments TI due to glare. In the  $L_{seq}$  calculation, however, age was so far neglected and the chairman was not prepared to consider this factor, as it would increase TI. The chairman R. Simons seems to be protective to the industry while P. Hautala, Finland, sees it as a challenge to Luminaire manufacturers to improve on their products. After all a step closer to the final draft report has been accomplished.

TC 4-36 Tunnel Lighting Quality Criteria. The title is misleading as the committee has to revise Document 80 and personal and national interests burden the work. In addition it has been felt that the chairman has some difficulties with leading and directing the committee. The director of Division 4 seems to be informed. He supported a meeting to be held in Ann Arbor, MI, mid November '97. The physiologically based method to obtain the adaptation of the entering driver should replace the preliminarily chosen approximation using  $L_{20}$  because of the inaccuracies occurring.

TC 4-36 Visibility Design for Roadway Lighting. This committee met in conjunction with TC 4-33 (discomfort glare) a master plan how to proceed with research had been presented and was well received.

TC 4-33 Discomfort Glare. After extensive studies of comparison between the CBE (C. Bennett, Kansas University) and the CIE System (deBoer, Adrian) a common formula was presented that allows to express discomfort glare in both systems. The report is nearing its final form, but actual confirming experiments on an experimental road fall victim to lacking funds.

Our South African colleagues did very well in hosting the meetings and kept the registration fees to a minimum, which was gratefully appreciated.



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

Canadian National Committee Comité National Canadien



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**CNC/CIE 42<sup>nd</sup> ANNUAL MEETING**

October 31, 1997 - 9:30AM to 5:00PM

Holiday Inn North East

Cleveland, Ohio

**DIVISION 5 ACTIVITY REPORT**

Date: October 31, 1997

**From : Jacques Roberge, Eng., Member, Div. 5, CIE**

600 de la Promenade

St-Hyacinthe, QC J2S 6R6

Phone: (514)\* 223-1667

Fax: (514)\* 223-1731

E-Mail : jroberge@login.net

**To : Members and Associate Members, CNC/CIE**

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Copy of the 1996 Division Director's report has been forwarded to the CNC list already.

The 1997 division meeting was held in Eindhoven, The Netherlands on May 16, 1997. Eighteen people attended, representing 14 countries, including myself for Canada. On that occasion I also attended a meeting of TC 5.14 with three other members and two guests, working on Draft 4.

The minutes of the May 1997 Division 5 meeting are quite extensive and represent the most up-to-date information available, since there was no other Division 5 activities in Durban, in September, other than a meeting of TC 5.14, which I attended with three other members and three guests. Draft 5 should be ready by the next meeting, scheduled for late May or early June 1998, and hopefully will be the final one.

The work of TC 5.03 "Open-cast Mine Lighting", is now complete, and the technical report is presently being voted on.

I will be pleased to provide additional details or information upon request.

Jacques Roberge

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\* area code (514) will change to (450) on 98/06/13

# CIÉ DIVISION 5

## Minutes of the Division Meeting Held on Friday 16th May 1997 at the Philips LAC, Eindhoven, The Netherlands

Present:	Beckford, Richard		(dv)	U.S.A.
	van den Beld, Gerrit			Netherlands
	Bjorset, Hans-Henrik	(Chairman, TC 5-08)		Norway
	van Bommel, Wout J M	(VP)	(m)	Netherlands
	Culley, Dennis		(m)	South Africa
	Di Fraia, Luciano		(m)	Italy
	Hargroves, Bob	(Secretary, Chairman, TC 5-11)	(m)	UK
	Horvath, Jozsef	(Division Director)	(m)	Hungary
	Jerleke, Jan-Erik		(m)	Sweden
	Lain, Steven			UK
	Lasinski, Marek		(m)	Poland
	Lecocq, Jacques		(m)	France
	Lofberg, Hans-Allan	(VP Technical)		Sweden
	Major, Gyula			Hungary
	Pollard, Nigel	(Chairman, TC 5-14)		UK
	Roberge, Jacques		(m)	Canada
	Rombauts, Patrick	(Reporter, R 5-05)		Belgium
	Stockmar, Axel			Germany

Note: (m) = Division 5 member  
(dv) = Delegated vote

### ACTION

#### 1. OPENING OF THE MEETING

The Division Director welcomed all delegates to the meeting and especially the two Vice Presidents, Mr H-A Lofberg and Mr W van Bommel.

Apologies were received from:

Ackerman, K			UK
Allegue, H M			Argentina
Bandyopadhyay, P K	(Editor, Chairman TC 5-03)	(m)	India
Dechat, F		(m)	Austria
Einhorn, Dr H D			South Africa
Lemons T M		+(m)	USA
Livingstone, J	(Reporter R 5-03)		UK
San Martin, R		(m)	Spain
Wittwer, E		(m)	Switzerland
Yoshida, H		(m)	Japan
Zhang, Hai-Cong		(m)	China
Zieseniss, C H			Germany

30

+ = vote delegated

**ACTION**

Changes in Membership

M Lasinski (Poland) was welcomed.

Also D Moroldo (Romania)  
 Dave K Y Wong (Hong Kong)  
 E Manzano Argentina)

Delegates introduced themselves to the meeting.

Agreement of the Agenda

Item 10 (date and name of next meeting) to be taken after item 3. Also after item 3, Mr Lofberg and Mr van Bommel to present an update on CIE Board activities.

**2. MINUTES OF LAST MEETING : NEW DELHI, NOVEMBER 1995.**

Minutes accepted. Any matters arising were covered in the agenda.

**3. DIVISION DIRECTORS' REPORT**

This had been circulated before the meeting. The Director summarised the report.



Under the reporter topic Semi-cylindrical Illuminance, J Lecocq stated he was not working on this subject.

The Director added some comments on the future of the Division : some committees are not active and others are close to completion. He said members must raise topics for study and, moreover, suggest people who will be active in this new work. This is essential for the future of the Division.

Mr Roberge emphasised how important the work of 5-12 and 5-15 is. The Division should concentrate first on progressing these items and ensure that there is full committee participation in the reports.

Mr Lecocq stated that there is no conflict between TC 5-09 and the corresponding CEN TC and work need not be delayed on this count.

Mr Beckford enquired as to the relative standings of CIE, ISO and CEN documents, Mr Lofberg explained that a CIE report can be adopted by ISO as a standard. However, CEN does not necessarily adopt CIE reports on lighting topics, although in principle it should. In some cases, though, CEN may alter or update CIE reports. Currently, there is effort to get CIE / ISO standards adopted by CEN, but to date not too successfully as discussion is very slow.

Mr van Bommel said he believed inactive TC Chairmen were the main problem in the Division.

The report was accepted unanimously.

Mr Lofberg reported on CIE activities in the Board:

- i) Dr Schanda is retiring. A new general secretary is being recruited.
- ii) Voting on the new Board will take place in September '97 at the mid-sessional meeting in South Africa. Further nominations can be made.
- iii) Board discussion on the future of the CIE was held at a workshop last September. In terms of its relationship to other bodies, few know about the CIE. Co-operation with people outside the lighting field is needed.

There is dependence of CIE on voluntary work and difficulties of time and funding. Greater recognition of benefits from the CIE is needed.

CIE is heavily reliant on TC Chairmen. Greater help from CIE Bureau is desirable for completion of report drafts.

Funding of CIE : need to get wider support, including from other bodies.

Suggestion to reduce number of TC's by 20% because of inactivity. On new work, it is essential to choose a Chairman who is suitable.

Mr van Bommel said that he has the task of Marketing the CIE. But CIE needs changing first. The Board of itself cannot make that change.

At the workshop, the ideal situation for the CIE in 5 years' time was put down in terms of "vision elements" and the related issues or problems eg;

*Vision* : CIE is a recognised standards organisation in its field.

*Issues* : time to produce standards, competition from other standards bodies.

*Vision* : CIE provides guides, conferences on all lighting topics.

*Issues* : technical reports take too much time to produce.

*Vision* : CIE is a financially independent organisation.

*Issues* : CIE needs far more funding than from just national committees.

An action list has been drawn up by the Board and will be discussed with the General Assembly in September '97.

D Culley spoke on the CIE mid-session meeting in South Africa and associated conference and TC meetings, to take place in September 1997.

#### 4. EDITOR'S REPORT

In the absence of Mr Bandyopadhyay, the Secretary stated that he believed no drafts had been edited since November 1995.

The Editor had written stating that he was a member of TC 7-06 "Terminology". He had sent comments on the definitions in the draft CEN/TC 169 N175 E "Lighting Applications - Part 1 : "Basic terms and criteria for specifying lighting requirements" in response to a request from CIE Central Bureau. As proposed at the meeting in India, a working party comprising the Editor, Division Director, Secretary and J Lecocq will contribute to the CIE Terminology. TC Chairmen should send proposals for new definitions to the Editor.

TC Chairmen

Review of Division 5 Publications.

In several older publications relating to the lighting of specific sports (eg., 42, (1978) Lighting for Tennis), service, and not maintained values are given. Revised values will be available from the TC 5-09 report. In the meantime the Central Bureau will be advised of the situation and the reports concerned. They may decide to add a note to these reports stating the situation.

J Horvath

CIE 83 : maintained values being agreed by TC 5-11.  
Overall revision being considered by new Reporter (see new work - item 8).

R A Hargroves

Remaining reports - no revision.

## 5. TECHNICAL COMMITTEE REPORTS

### TC 5-03 "Open-cast Mine Lighting" (P K Bandyopadhyay)

The report sent by the Chairman was given by the Secretary. See Appendix 1.

Mr van Bommel proposed that the Chairman be asked to prepare the report for voting. If the question of the glare formula is a problem, then it should be omitted and a simple statement of necessary precautions put in.

Mr D Culley said the report is too long and should be reduced by 30% by shortening the description of mining techniques. The Director will write to the Chairman on these points, giving a request for completion by September 1997 (Durban CIE meeting).

J Horvath

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

See report in Appendix 2.

Agreed that:

- i) Captain Per Gram is appointed advisor to TC 5-08 on floodlighting and visual conditions for helidecks.
- ii) Division 5 support Per Gram's suggestion that there is closer co-operation between IFALPA and CIE, requesting that the CIE Board discuss the issue and try to come to an agreement with IFALPA's acting Technical Director, Mr Tony Myers, UK.

H-H Bjorset

TC 5-09 "Illuminance Levels for Sports Events" (T M Lemons)

Director to write to T Lemons asking him now to complete the document (see minute item 3).

J Horvath

TC 5-10 "Exterior Security Lighting" (P C Joye)

There has been no progress by the Chairman.

It was decided that this subject should be transferred to a Reporting Topic and that the current TC 5-10 should be disbanded.

The Reporter will review the wide range of this topic and select aspects appropriate for a TC. Reporter also to look for prospective members of a TC.

P Schwarz (HU) was appointed the Reporter. (R 5-06).

J Horvath

D Culley offered to assist and serve on a TC.

TC 5-11 "Practical Design Guidelines for Sports Lighting Installations for Television and Film" (R A Hargroves)

The Chairman gave a summary of progress since November 1995 (see Appendix 3). Circulation for committee voting is scheduled for September 1997.

R A Hargroves

TC 5-12 "Obtrusive Light" (A J Fisher)

No communication from Dr A Fisher.

*Actions:* i) The Director to write to Dr Fisher urging action.

J Horvath

ii) All members to collect comments on Draft 3 (August 1995) from their countries and send to N E Pollard (UK) who will forward them to Dr Fisher.

All Members

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

The draft report had been circulated for National voting. Of the 17 votes received, 16 were in favour of publication and 1 against. Several comments also received have since been incorporated in the report. The negative vote (from Germany) was because CEN is covering the same topic in CEN TC 169/WG2 and Dr Weis had asked for the CIE / ISO draft to be circulated to CEN for comment, with the aim of harmonising the two.

However, it was then realised that the voting procedure had not been carried out according to the CIE Code of Procedure for Standards. The draft should be sent to National Committees, rather than members, and should be handled by the CIE Central Bureau.

*Action is:* The draft to be sent to the Editor and then the report and details of the voting to be sent to CIE Central Bureau to handle the voting procedure.

J Horvath

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

Details of the report content were given in New Delhi at the last Division meeting.

The report on current progress is in Appendix 4.

The aim is to have a draft for TC voting available at the next Division meeting in Spring 1998.

TC 5-15 "Tolerances in Lighting Design" (A J Fisher)

No action since the New Delhi meeting by Dr A Fisher. The Director will write or phone pointing out that there is no draft after 2 years and that the Division expects a draft report to be available within the next 12 months.

J Horvath

## 6. REPORTERS' REPORTS

R 5-03 "Lighting of Sports Events for High Definition TV"  
(J Livingstone)

The main report was presented at the meeting in New Delhi. This reporting topic was continued and Mr Livingstone's further report is included as Appendix 5 (as telephoned to the Secretary).

It was agreed that this reporting task is completed and the Director will write to Mr Livingstone to thank him for his work.

J Horvath

Mr Livingstone had also, in his report to New Delhi, made strong criticism of CIE 83. A new reporting topic was established to ascertain world-wide opinion on the need to update CIE 83. (R 5-07). Reporter is R A Hargroves.

R A Hargroves

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

Report attached (see Appendix 6)

A report will be written for the CIE collection and Mr Rombauts will continue as Reporter.

## 7. LIAISON OFFICERS' REPORTS

A Stockmar reported on liaison with CEN TC 169:

WG2 : Lighting of Work-places

WG4 : Lighting Application - Sports Lighting : values of CIE 83 have been taken but with x 0.8 factor to make them maintained values. J Roberge and W van Bommel recommended the adoption of 0.8 on CIE 83 values. The TC 5-11 report reproduces the CIE 83 table of values, but the TC will decide whether they will revise this table for the new publication.

R A Hargroves

## 8. WORK PROGRAMME

- i) TC's dissolved - TC 5-10 : Exterior Security Lighting.
- ii) New topics suggested:
  - a) City Beautification and Light Planning
  - b) Emergency Lighting in Exterior Lighting
  - c) Fibre Optic Applications in Outdoor Lighting



- d) Apron Lighting
- e) Dimming of HID Sources in Outdoor Lighting
- f) Glare in Dark Areas
- g) Glare in Indoor Sports

N Pollard suggested a) should be combined with Publication 92 (Floodlighting). W van Bommel urged effort on most important areas, especially those TC's already established which need increased effort. Emergency

Lighting and Dimming (energy saving) should be included under specific applications.

Apron Lighting : possible liaison with ICAO.

Members to consider these topics and their necessity for a TC or Reporting topic and if so, who might carry them out.

All Members

### iii) Reporting Topics : Changes

- R 5-03 Lighting for HDTV : Completed
- R 5-06 Exterior Security Lighting : New (P Schwarz)
- R 5-07 Review of CIE 83 : New (R A Hargroves)

## 9. CIE-ISO/IEC STANDARDS

A letter (attached as Appendix o) from the Vice President Technical was noted.

All Members

## 10. DATE AND VENUE OF NEXT MEETING

Invitations received for:

Naples	September 1998	Prof. L Di Fraia
Montreal	Spring 1998	Mr Roberge
Barcelona	Spring 1998	Mr San Martin
Budapest	September 1998	Dr Horvath

Voting showed late Spring was the preferred date and Barcelona the preferred venue.

The Director will request R San Martin to organise a meeting. If this is not possible, then Budapest will be the second choice.

Noted by N E Pollard that week 15-18 June '97 is a UK Conference.

Proposed date between last 2 weeks May and first 2 weeks in June.

Subsequently advised that there is a Swedish Conference in 2nd week of June.

# 11. ANY OTHER BUSINESS

None.

# 12. CLOSE OF MEETING

The Director thanked Philips Lighting and Mr van Bommel for their hospitality in providing all the facilities for the Division and TC meetings.

## CIRCULATION TO:

Those present +

### Apologies

K Ackerman  
H M Allegue  
P K Bandyopadhyay  
F Dechat  
H D Einhorn  
T M Lemons  
J Livingstone  
R San Martin  
E Wittwer  
H Yoshida  
Zhang Hai-Cong  
C H Zieseniss

### Other Division 5 Members

D K Y Wong  
E R Manzano  
P A Baxter  
M Philippot  
I Roizenblatt  
N Vassilev  
L Monzer  
P Nilanen

J Gudum

B Weis

Y Di Segni

P R McNickle

J H Audestad

Dan Moroldo

C Chamchoi

M Serefhanoglu

G V Boos

S Neumuller

P C Joye

### Vice President Technical

H-A Lofberg

### Other T C Chairmen

A J Fisher

P C Joye

### CIE Central Bureau

J Schanda



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

Central Bureau: Kegelgasse 27 · A-1030 Wien · Austria

Hans Allan Löfberg

Gävle 1997-02-08

To Division Directors  
Division Members  
Liaison Officers

Vice President Technical  
Centre for Built Environment  
KTH  
Box 88, S-801 02 Gävle  
Sweden  
Tel: +46-26-147800  
Fax: +46-26-147801  
e-mail: lofberg@bmg.kth.se

Dear Colleagues,

<b>PRIORITAIRE</b>	<b>A</b>	<b>PORT PAYÉ</b>
SENDER: MBI PO Box 141 S-190 46 Stockholm-Arlanda Sweden		<b>STOCKHOLM</b> <b>UTRIKES</b> <b>NM 4</b>

Need for Standards

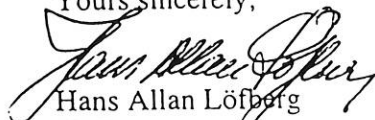
From the December Issue of CIE News you will have read the leading article on "Future state visioning of CIE". One of the action items concerns "Identifying needs for standards" and part of this discussion included our current procedure for reviewing progress on the preparation of these publications.

The purpose of this letter is to remind you that the model agenda for Division meeting (4.2) which appears on page 28 of the Code of Procedure for Divisions and TCs (1992) includes item 11 "CIE-ISO/IEC Standards". This is intended to cover both progress reports on current standard preparation within the Division together with the identification of potential new standards, particularly from emerging technologies not traditionally associated with the CIE. It is important that all Division members consult national and international colleagues on this latter aspect of standards preparation before each Divisional meeting.

The Board of Administration is considering other proposals in this area which will be presented to the General Assembly, but in the meantime I am sure you will agree that we should fully and effectively implement existing procedures in this important area of CIE activities.

Thank you for your co-operation.

Yours sincerely,

  
Hans Allan Löfberg  
VPT

Copy to CIE CB and BA

REPORT ON TC 5-03 "OPEN-CAST MINE LIGHTING"

(P K Bandyopadhyay)

Terms of Reference

Study procedures and prepare a guide for the design of lighting for open-cast mines.

Type of Publication

Guide.

Members

Pranab Bandyopadhyay	India
Peter Baxter	Australia
Peter Davies	South Africa
Zhang Hai-Cong	China
Roger Hemp	South Africa
P S van Oosten	Australia
James Peay	USA
Tim Shotbolt	Australia

Of the TC members, only Mr Zhang Hai-Cong is actively interested in this guide. He gave a positive letter ballot on Draft 2.0 and since then gave a set of photo negatives on the machines and working place of open-cast mines in China.

Messrs. Baxter, Davies, Hemp and Peay have retired and there is no response from their home addresses. Messrs. van Oosten and Shotbolt also have not responded.

The draft 2.0 was circulated to all Division 5 members before the last Division 5 meeting during the 23rd Session of the CIE. Although no written comment was received before the meeting, members present in the well attended meeting felt that the draft was practically final.

*Two major questions came up during the discussions:*

- a) Applicability of the glare equation to mine surfaces. The glare calculations depend on background luminance, which is practically nil at the mines. Other light sources in the field of vision could be more relevant.

- b) To state the area over which uniformities and levels of lighting apply. Is precision of values in the report compatible with the mobile nature of the lighting? Only one uniformity value should be given.

Dr A Fisher mentioned that he would attempt to find some answers to these.

Professor Dr Bruno Weis has written expressing his willingness to find some experts in Germany to send some comments.

As it is hardly possible to get any more input from within the TC, it is desirable that expert Division members help in resolving these questions, before the draft could be sent for voting.

## APPENDIX 2

Report to CIE Div. 5 meeting, Eindhoven, 16th May 1997.

From TC5-08 Lighting for offshore gas and oil structures, by the TC chairman.

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

TC chairman:	Bjorset, Hans-Henrik,	NO
TC members:	Askeland, Richard J. ,	NO
	Brown, Rod W.,	UK
	Cochran, Robert R.,	UK
	Elsebutangen, Olav,	NO
	Fine, Mitchell D.,	USA
	Malland, Jan van,	NL
	Weis, Bruno,	DE
Advisor:	Gram, Per,	NO

A totally inactive member has been deleted from the list. Three former contact persons ("advisors") have also been deleted from the list.

Capt. Per Gram is helicopter pilot with Helicopter Service A.S. since 1976 and is the Norwegian Pilots Association's Director to the International Federation of Airline Pilots' Association (IFALPA). He has been very active internationally, representing the pilots organizations. He participated in the joint meeting 26th Sept. 1994 in Liege, Belgium, on the issue floodlighting of helidecks. TC 5-08 asks for the Div. 5's approval of the changes in the TC- member and advisor list.

### TC meetings:

In 1995, March 30-31 TC meeting in Glasgow.

1995, November, only the TC chairman took part in the CIE Session in New Delhi, so no TC meeting could be held.

In 1996 no TC meeting could be held.

In 1997, May 14 a TC meeting was held in the RAI Conference Centre, Amsterdam.

Dr. Pieter Walraven's kind assistance made it possible to hold the meeting at the RAI Centre. Next meeting to be held in the week 43, October 1997 in Rotterdam.

### Activity and comments:

The technical report (TR): Several of the 13 chapters are ready for circulation and comments, however, the circulation should wait until more of the chapters are finished, so they could be read in connection. During the work we take much care looking into what is relevant in other publications and standards from CIE, IEC, ISO, CEN, as well as important national publications. In general, only international publications are referred to in the TR, while important national publications will be included in the bibliography.

Still, there is no answer to the problems regarding the floodlighting of helidecks. A lot of time and effort has been spent on this issue, however, it may perhaps not be possible to find a secure procedure for control measurement of helidecks floodlighting systems installed to be in accordance with the ICAO standard. We have, as reported earlier, shown that the ICAO standard on helideck floodlighting is not relevant and is based on incorrect measurements of a simulated set up of a helideck a few years ago.



There is also no answer found with regard to the calculation and control measurement of disability glare. It may be that recommendations on disability glare in offshore lighting must be limited to verbal advice.

Through the last few years the offshore technology has developed enormously. For instance, the drilling process can be steered by the driller and his assistant from an isolated drillers booth without any persons on the deck or in the rig. The activity is going on in deeper and deeper waters, 1500 m and more, with floating platforms or ships and subseas installations for drilling and production. Drilling with coiled tubing in lengths of 5 000 m, coiled on big drums, allows horizontal drilling reach of 7 - 8 km.

This new technology leads to changes in equipment and installations, also regarding the lighting : For example, more and more use of luminaires for fluorescent tubes with bi-pin sockets and electronic ballasts are being used.

Information: The TC chairman presented a paper on the TC5-08 activity at the CIE Session '95 in New Delhi.

Per Gram has confirmed that he is willing to act as "Advisor" for TC5-08 regarding lighting and visual conditions for helicopter pilots. Further he suggests that CIE and IFALPA should try to establish a close cooperation. The TC5-08 assume that Div 4 and 5 will support this suggestion. Per Gram is willing to be the liaison for IFALPA if they appoint him.

By a letter of 20th January 1997 the Div. 4 Director, Pieter Walraven, informs that :  
"....At a strategy discussion of Div. 4 at Poitiers last fall there were strong voices to have aviation, as one of the transport sectors, more into the realm of Div. 4.... Anyhow, I wonder whether a narrower cooperation between the Div. 4 and 5 in the area of helicopter lighting would be a good point."

The TC chairman has answered that the TC5-08 was established and has worked with close contact to Div. 4 and would be only happy to welcome, if available, an active expert from Div. 4 as member of TC5-08. If a close cooperation between CIE and ICAO could be established, a number of issues within Div. 4's working area should be taken up. If Div. 4 makes a decision to take "Aviation" into its working programme, it may convince ICAO that CIE is willing to cooperate on a serious basis.

Recently the CIE Executive Director, Janos Schanda, informed the TC chairman that the ICAO's Visual Aids Panel will have a meeting in Montreal this June and that CIE will be represented. He raised the question : "Would it be appropriate to send an advanced short report on the helideck activity or not ..... to keep the ICAO people aware of the fact that CIE is still alive." TC5-08 hopes that this matter could be discussed at the Div. 5 meeting in Eindhoven.

Hans-Henrik Bjorset.  
TC5-08 chairman.

REPORT ON TC 5-11 "PRACTICAL DESIGN GUIDELINES FOR SPORTS  
LIGHTING INSTALLATIONS FOR TELEVISION AND FILMING"

(R A Hargroves)

Some details of the aim and layout of the report were given at the Division meeting in India. Since then some amendments to the report have been made, but it was not possible to complete the preparation of the draft for committee voting during 1996. The amended version was therefore circulated as draft 5 to the committee earlier this year. On 15th May 1997 a TC meeting was held at which a number of outstanding points were settled (eg., complementary nature of CIE and CEN documents regarding calculation and measurement grids) and actions agreed to progress the report through to a version suitable for committee voting. Preparation of diagrams is the biggest job, but a target of September '97 has been set for committee voting. It is not anticipated that there will be any major comments, so the report should then progress quickly to National voting and publication by next year.

One question that arose concerns maintained illuminance values. CIE 83 (and other reports) quote service illuminance and values may need modifying for maintained illuminance. This needs consideration by the Division.

CIE DIVISION 5TC 5.14 Maintenance of outdoor lighting systems

A meeting was held on the 15 May 1997 during the Division 5 meeting in Eindhoven, The Netherlands.

Four committee members were present: Nigel Pollard (Chair)  
Steven Lain (GB)  
Axel Stockmar (DE)  
Jacques Roberge (CA)

and two guests: Luciano di Friaia (IT)  
Ad de Visser (NL) - Reporter for Division 4

Luciano di Friaia offered the TC a "mathematical model" for Maintenance Factor (MF) as shown earlier in the week as a poster paper to Lux Europa which was accepted and would be added as an appendix.

It was noted that the term MF while well understood and accepted, was currently "obsolete" according to the CIE Vocabulary. It was therefore agreed and subsequently endorsed at the Divisional meeting, that the chairman write to the Editor who is feeding such views on the CIE Vocabulary to TC 7.06

With regard to the tables, those for lamps were to be updated to :

- a) IEC lamp codes
- b) split S and Q lamps to above and below 149 watts
- c) input new data from current CEN work expected Sept'97.

With regard to the luminaire table, a request was put out at both the TC and DM for any more up to date data known which could, if suitable, be added.

The text of the document was then discussed up to page 12/36.  
One notable modification was the decision was to add "equipment disposal"(D) to the formula for the economics of servicing.

The current modifications would be put into a draft 4a and the work continued in Durban at which a TC meeting would be arranged with Division 4.

It was hoped that following this meeting, and receiving of the lamp lumen and survival data via CEN, that the draft 5 could be sent out for TC voting and ready for divisional voting by June 1998.

REPORT ON R 5-03 "LIGHTING OF SPORTS EVENTS FOR HDTV"(J Livingstone)

It will be well beyond the year 2000 before HDTV become available generally. There is not the demand. Competition for consumers' money is very high and it is likely digital TV is going to eclipse HDTV.

Even then, with camera sensitivity improving, current levels of lighting will be about right : there will not be any dramatic effect on lighting requirements.

It is better to have flexibility in the lighting schemes so that extra lighting can be added if necessary for any special requirements of CTV ie., lighting switchable for different sports and / or extra hanging points for multi-functional stadia indoors.

On his own position as Reporter, John Livingstone is willing to keep the reporting job for the short-term, but he is retired now and losing contacts and Division 5 should look for someone else.

CIE Division 5 Reportership R5-05  
*"Semi-cylindrical illuminance"* (Patrick Rombauts)

## 1. Results of inquiry

Individuals from different countries were sent a questionnaire.

### 1a. Use of the concept of Semi-cylindrical illuminance ( $E_{sc}$ ) in Codes of good practice, Recommendations, Standards, etc.

*Sports lighting* : DK (Danish Standard 707) ( $E_{sc}$  on ground level towards TV cameras); Sweden

*Residential, urban, public lighting* : CEN TC 169/226 (Road lighting - Alternative method), CIE TC 4.34 "Urban lighting" (CIE Publication 92), B, F, Finland ("Road Lighting Standard"), Japan (JIEC-006 (1994) "Outdoor Lighting Standard for Pedestrians"), NL, South-African Bureau of Standards ("Lighting of Public Thoroughfares"), UK (British Standard BS 5489 Parts 3 and 9)

*Park (decorative) lighting*

*Car parks lighting* : D

*Interior lighting* : Cylindrical illuminance (Japan)

*Stage lighting*

### 1b. Ongoing or planned research

- ♦ Kawakami (Japan)
- ♦ CETE Rouen-France (J. Menard, MC Montel) : Report "Visibilité des Piétons"
- ♦ Rombauts (B)

### 1c. Comments

- ♦ Most respondents find  $E_{sc}$  an interesting concept. K. Kawakami finds it a very valid index for TV broadcast, for an estimation of faces' brightness and for making up defects occurring with vertical illuminance.
- ♦  $E_{sc}$  is not very well discriminating from other, classical illuminances with symmetrical lighting (as in sports lighting).
- ♦  $E_{sc}$  is difficult to measure in practice.
- ♦ In interior lighting, the cylindrical instead of the semi-cylindrical illuminance (see interreflections) is used for recognition (Kohji Kawakami-Japan).

## 2. Proposed actions

To produce a Report for the CIE collection

2a. Literature survey

2b. Use of  $E_{sc}$  in different countries, presence in standards, etc.

2c. Research activities :

- ♦ Comparison of  $E_{sc}$  with other lighttechnical parameters like  $E_v$  (for sports, residential, pedestrian and interior lighting).  
Balance between  $E_{Horizontal}$ ,  $E_{Vertical}$  and  $E_{sc}$  (see Kawakami).
- ♦ Mechanism of recognition of humans in residential areas (sociological study) and the relation with  $E_{sc}$  (and other parameters). Looking for describing parameters, representing ability to assess one's intentions.

## 3. Recently published related material

- ♦ C. Cuttle "Cubic Illumination" in LR&T Vol. 29 No. 1 (1997)
- ♦ J. Lecocq "Visibility in road lighting : ..." LUX-Europa Amsterdam (1997)

16/5/1997



**CIE DIVISION 6, Photobiology and Photochemistry  
Report to the Canadian National Committee  
October, 1997**

Delegate: Jennifer A. Veitch, Ph.D.  
National Research Council of Canada  
Institute for Research in Construction  
M-24, 1500 Montreal Road  
Ottawa, ON K1A 0R6  
*jennifer.veitch@nrc.ca*

## **1. D6 Communications**

Communications within Division 6 improved during 1997, with more information circulated more regularly from the DD directly and through CB. However, it proved to be impossible to collect information about Canadian membership on TCs because no central list of TC members exists for Division 6. The explanation I received from the DD was that TC members are selected by their Chairs, who are not required to report their membership while the TC is working. This system, although it gives flexibility to TC Chairs, does not make it easy to nominate our members to TCs, and can create confusion. For example, in 1996 I nominated a Canadian to TC 6-41 and received confirmation from the Chair that he would be added to her list of TC members; but, to my knowledge he never heard further. This TC has now completed its work, apparently without the input of our delegate.

As part of its efforts to revitalise CIE, it is my sincere hope that operations at this level will be improved. The difficulty in determining what is happening, who is working, and how to become involved, is a major frustration to this delegate and is an impediment to CIE progress.

## **2. Division 6 Annual Meeting**

The Division 6 meeting was held in Durban, South Africa, in conjunction with the mid-term CIE meeting. I was not able to attend, but have written this report based on the minutes circulated by Division Director Dr. David Sliney. (Despite attempts, it proved not to be possible for another member of the Canadian delegation to attend on my behalf.) I can provide a complete copy of the D6 minutes to anyone who requests them.

### **Completed TC Reports**

Language and graphics preparation had held up the completion of several reports from D6 TCs, but the DD has taken action to resolve these problems. Three TCs were completed and balloted this year:

- |         |   |
|---------|---|
| TC 6-26 | UVA1/UVA2 (Cesarini)--awaiting publication in the next CIE Photobiology collection, and additionally, TC Chair, Dr. Cesarini, requests publication in a photobiology journal: approved if CIE retains copyright |
| TC 6-27 | Standard Erythral Action Spectrum (McKinlay, CB) in draft standard  |
| TC 6-40 | Standard Erythral Dose Unit (Diffey)--TC Report (rationale & draft standard combined original TC 6-27 action spectrum   |

The work of both TC 6-27 and TC 6-40 to developed into a combined recommended CIE Draft Standard as well as the technical Report from TC 6-40.

The following reports are now in the hands of DD6 and in a final editing, graphical completion stage and are soon to be forwarded to the CB in Vienna:

- |          |   |
|----------|---|
| TC 6-14, | Blue Light Hazard (Kohmoto--required rewrite and new figures)   |
| TC 6-21  | UV and Cataract (Sliney--required update)   |
| TC 6-24  | UV-A Sunscreen Testing (final draft held up opposing positions on standard technique, but report of status of science to be the report. |
| TC 6-25  | Spectral Weighting of Sunlight--original TC did not furnish a report; new report prepared by new TC Chair Stephen Wengraitis            |

- TC 6-30 Eye Protection--final report completed; TC Chair, Dr. Wong requests publication in a photobiology journal: approved if CIE retains copyright
- TC 6-32 UV Skin Cancer Action Spectrum--modified SCUP action spectrum with constant value from 340 to 400 nm approved by TC, in final edit by Dr. Frank deGruijl
- TC 6-33 Immunosuppression--original TC report considered too technical by CB; Dr. Fred Miller, USFDA/CBEH, is rewriting for broader audience understanding
- TC 6-34 Testing Protocols for UV Carcinogenesis Testing--Report finished and received on 2 September in DD6 office
- TC 6-35 UV Air Disinfection--Report finished by TC Chair, R. Vincent and artwork submitted by being scanned and reworked
- TC 6-36 UV Shading Materials--Francois Denner indicated continued interest, but requested appointment of a new TC Chair
- TC 6-37 Light and Retinal Disease--incorporating new animal data, even though editing was completed--Slincy
- TC 6-38 Photobiological Safety of Lamps--in final re-formatting at CB for circulation to BA; new standards effort recommended
- TC 6-41 UV Index [WMO/WHO/ICNIRP]--Weatherhead submitted final copy; ready for circulation
- Report: High resolution erythral action spectrum--reporter: A. Anders, completed report and paper was delayed for editing

#### ***TCs Closed without Reports***

- TC 6-04 Photobiological terms, etc.--the information in this list of terms drafted by Mr. Muelemans was transferred to TC 7-04 for appropriate use. The information is available on computer disk from the CB.
- TC 6-17 Spatial and Temporal Effects on Human Behaviour--another publication--a book--had been published by L. Ronchi and this material was now available in the general literature.

#### ***TCs Making Progress***

A complete list of active TCs and their titles is available on request.

#### ***New Work Proposals***

The minutes of the D6 meeting in Durban include the discussion leading to these recommendations to the Board of Administration, but do not include the precise Terms of Reference for these new proposals.

##### ***TC 6-43 UV Water Disinfection***

Chair: Dr. Jain (India)

Members: Richard Vincent and others to be nominated

##### ***TC 6-44 Illuminators for treatment of Infant Hyperbilirubinemia***

Chair: Mr. L.A.G. Monard (S.A.)

Dr. Pratesi (I)

Myron L. Wolbarsht (USA)

Kim Jailink

*TC 6-45 Optical Radiation Hazard Measurements in the Work Space*

Chair: Dr. Harald Siekmann (D)

Members: A. Barrett, HSE (UK)  
Brose, BG FE (D) \*  
Brueggemeyer, NLOe (D) \*  
Colin Driscoll, NRPB (UK)  
G. Hee, INRS (F)  
Maila Hietanen, FIOH (SF)  
Jossen, SUVA (Switzerland)  
K. Kohmoto, Toshiba (J)  
Marion Morys, Solar Light (USA)  
Ott, BAuA (D) \*  
David Sliney, USACHPPM (USA)  
Bjorn Tengroth, Karolinska (S)  
Ulf Wester, NIRP (S)  
Teresa Goodman (U.K., CIE Div 2 Liaison)

*TC 6-46 Standard Action Spectrum for UV Disinfection*

Chair: Ed Nardell (or First) (USA)

Members: Rolf Bergman (USA)  
Myreck Peak (USA)  
Richard Vincent (USA)

NOTE: Other members outside the USA are being sought.

*TC-6-47 Photobiological Lamp Safety Standard*

Members: Rolf Bergman (USA) -- TC Chair  
Peter Drop (NL)  
Maila Hietanen (F)  
K. Kohmoto (J)  
Robert Levin (USA)  
Karl Schulmeister (A)  
David Sliney (USA)  
Ernst Sutter (D; IEC TC76 Liaison)  
Teresa Goodman (U.K., CIE Div 2 Liaison)

November 1, 1997

**CIE - CNC**

**ANNUAL REPORT - DIVISION 7 - GENERAL ASPECTS OF LIGHTING**

**Terms of Reference:** To study and evaluate activities in terminology, education, economics of lighting and to provide information on the development of light sources.

<b>Division Director :</b>	Dr.-Ing. Michael Seidl	Germany
<b>Editor of the division:</b>	Mr. John T. Grundy	South Africa
<b>Division Secretary:</b>	vacant	
<b>Canadian Representative:</b>	Robert White	
	c/o Duschenes & Fish Architectes	
	Suite 404	
	1425 René-Lévesque West	
	Montreal, QC H3G 1T7	
	Tel: (514) 879-1708	
	Fax: (514) 861-6219	
	Email: dfsarch@accent.net	

**1. Minutes of the division meeting in Durban, South Africa:**

The minutes have not been distributed yet. During a telephone conversation, Dr. Seidl reported that there has been little activity and almost no correspondence during the year. Dr. Seidl advocated, with little discussion, that because of the inactivity of the Division it should be disbanded at the next meeting in Warsaw and the activities of the two TCs be handled by the Central Bureau. Dr. Seidl will resigning to become CIE Treasurer. If the Division continues, it will be filled at the 1999 Warsaw CIE Quadrennial meeting. Proposals for future activities and the Director of the Division were solicited.

**2. TC 7-06 Lighting Terminology - Chair: Christine Hermann (Austria)**

Ms. Hermann has established a data base at the central bureau. Ms Hermann reported that work is proceeding slowly due to uneven responses from the various divisions. All Divisions are encouraged to respond to her request for new terms to be incorporated in the CIE vocabulary.

**3. 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. Over 41 organizations from five (5) national committees have submitted responses to proposed format. The information will be put on the CIE Web site. Division pages were to be coordinated to achieve a uniform look in a recent meeting in CIE headquarters. It is proposed to have a research hot button on the web page which would link to various organizations conducting research of interest to that division as well as other CIE divisions. Dr. Clay Belcher has agreed to help setup a beta site (for pilot testing before linkage to the CIE website) of existing research information.

**4. Reportership on Energy and Environmental Aspects of Lighting - Division**

Reporter: P. Bleasby (USA)

Mr. Bleasby's report titled: "Energy and Environmental Aspects of Lighting", will focus primarily on the lessons learned in North America and Europe and is to be published in the CIE collection.

**5. Education for Developing Countries** This was a major topic of discussion at an open forum of the SANCI meeting and could become a TC if there is interest.

