



Division 3: Interior Environment and Lighting Design

Notes of the meeting held on May 8, 1998, in Ottawa, Canada.

D. Dumortier, A. Slater, May 18, 1998

Anthony Slater	BRE, Garston, UK	Director
Sueko Kanaya	Matsushita Electronics Corporation	Associate Director
Dominique Dumortier	ENTPE, Lyon, France	Secretary
Odd Arnesen	IGP/Unit, Trondheim, Norway	Norway Rep.
David Carter	University of Liverpool, UK	Chair. TC 3.31
Geoffrey Cook	University of Reading, UK	UK Rep.
Marc Fontoynt	ENTPE, Lyon, France	France Rep.
Warren Julian	University of Sydney, Australia	CIE VPP
Richard Kittler	Slovak Academy of Science, Bratislava	Slovakia Rep.
Yasuko Koga	Kyushu University, Fukuoka, Japan	TCs 3.15 and 3.25
Heinrich Kramer	Lichtdesign, Köln, Germany	Chair. TC 3.20, 3.22
Hans Allan Löfberg	KTH-BMG, Gävle, Sweden	CIE VPT
Richard Mitanchey	ENTPE, Lyon, France	Chair. TC 3.33
Hiroshi Nakamura	Kochi Womens University, Japan	Japan Rep.
Ivan Pasini	PWGSC, Ottawa, Canada	Canada Rep.
Geoffrey Roy	Murdoch University, Australia	TC 3.33
Simon Simos	Simos Lighting Consultants	Switzerland Rep.
Dale Tiller	National Research Council, Canada	Chair. TCs 3.16, 3.26
Radosteva Topalova	University of Waterloo, Canada	G. Irvine
Lorne Whitehead	University of British Columbia, Canada	Chair. TC 3.30

Next division 3 meeting will happen in Warsaw, Poland, just after the CIE quadrennial conference. The meeting should begin in the afternoon of Monday June 28, 1999 and last until the afternoon of Tuesday June 29.

EXECUTIVE SUMMARY

1. Check out the division 3 web server. Its address is <http://ciediv3.entpe.fr>. It has been developed by the division secretary: dominique.dumortier@entpe.fr. It is still under development, so it is open for comments and suggestions.
2. Among other things, the web server will contain minutes of past meetings, invitation, agenda and travel information for future meetings. **This is the last time that the minutes are sent via regular mail.** If you do not have access to e-mail

and to the Internet, we urge you to do so, Internet connections are getting cheaper and cheaper. The invitation to the next meeting will be sent via e-mail and all related information will be posted on the web site.

3. 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. The complete division roster will soon be made available on the web server in the section called «members». You will then be able to check if you are in the roster and if your coordinates are the right ones. If this is not the case, send an e-mail to the web master (for now the division secretary) who will modify them.
4. Following discussions in Ottawa, the board of division 3 will change significantly after the CIE meeting in Warsaw: (1) Marc Fontoynont from the National Engineering School of State Public Works (ENTPE), in Lyon, France, will be the new division director, (2) Dominique Dumortier from ENTPE, in Lyon, France, will be the new associate director for daylighting, (3) Geoffrey Cook from the University of Reading, in the UK, will be the new division secretary; (4) Sueko Kanaya will stay as the associate director for artificial lighting.
5. About 5 TCs have planned to finalise their report and submit it for the Warsaw meeting. These are TC 3.16 (Psychological aspects of lighting), TC 3.20 (Lighting and architecture), TC 3.22 (Museum lighting and protection against radiation damage), TC 3.26 (Development of a protocol for post occupancy evaluation of lighting) and TC 3.30 (Hollow light guides). **It is reminded to the chairmen, that TCs which have been inactive for one or two years will definitely be closed at the Warsaw meeting.**
6. TC 3.25 has a new chairman: D. Dumortier who succeeds H. Nakamura.
7. Reportership 3.06 has a new reporter: R. Topolova, who succeeds G. Irvine.
8. TC 3.24 and TC 3.28 are now disbanded because of prolonged inactivity.

NOTES OF THE MEETING

1. Opening of the meeting. A. Slater opens the meeting at 9:05, on Friday May 8. He thanks Jennifer Veitch of the National Research Council of Canada, who has organised the division and the TC meetings. He also thanks the Canadian National Committee who have sponsored the refreshments. Then, he asks everyone around the table to present himself.

2. Approval of the agenda. A. Slater presents the agenda which has been modified to allow Dale Tiller (TC 3.16 and 3.26) and Lorne Whitehead (TC 3.30) to present the work of their TCs in the first part of the morning. A presentation of the division 3 web server is also added to the agenda. These changes are approved by all the participants.

3. Apologies of absence. K.R. Ackerman, C. Belcher, B. Collins, E. Einhorn, J. Ejhed, D. Gall, R. Henderson, D. Kendrick, R. Lintermans, K. Matsuura, M. Navvab, E. Ne'eman, N. Ruck, T. Rutten, S. Takahashi, P. Tregenza, Y. Uetani and H. Willey.

4. Minutes of the last meeting. A. Slater asks for comments on the minutes of the last meeting. There are no comments from the participants of the meeting. D. Dumortier, the division secretary indicates that the minutes of the Durban meeting and this meeting, will be downloadable directly from the web site of division 3.

5. Division membership. A. Slater welcomes those attending division 3 meeting for the first time.

6. Division director report. A. Slater reports that since the Durban meeting, last September, the main activity has been the organisation of the Warsaw meeting. Regarding the activities of the division 3, 75 abstracts have been received. Selection of papers, for presentations and posters, will be made at the Division Directors meeting and CIE board meeting in Vienna, in June.

7. Division 3 web server. D. Dumortier presents the division 3 web server. Its address is: <http://ciediv3.entpe.fr>. At the Durban meeting, he had asked C. Hermann to organise a division secretary meeting in order to co-ordinate secretary activities, particularly the development of the division web servers. This meeting happened in October 1997. The content of the server is based on the discussions at this meeting. It contains 8 sections: «what we are», «news», «wanted», «meetings», «activities», «members», «publications» and «links».

The «what we are» section describes the objectives of the division 3 and its strategy. The «news» section gives information on upcoming events, new publications... The «wanted» section lists various subjects which are of interest to the division, but which have been left without TCs or reporterships. The «meetings» section, as its name implies, contains detailed information of upcoming meetings, and minutes of past meetings. The «activities» section contains a summary of all current TCs and reporterships of the division. By clicking on the TC number or on the reportership number, you access a page containing a full description of the TC or the reportership: date it started, date it is supposed to end, list of members, summary of activities... If you need a complete activity report, this is the page that you will need to print. The «members» section contains information on all division members: names, addresses, fax, phone, e-mail... If you know someone who is not receiving news from the division, check if he is on this page and if the information we have is right, if not ask for modifications. The «publications» section, as its name implies, contains all the products from division 3. The «Links» section contains liaisons, projects and links to other web sites, all in relation with the activities of our division.

Since the server has been developed just before the Ottawa meeting, some of these sections are not complete. If you would like to provide information to help us in making the server better, feel free to do it. D. Dumortier will be in charge of the server until the Warsaw meeting, send him all the necessary information. **TC chairmen and reporters are also invited to check the information contained in the «activity» section.**

We remind you that there is a discussion list on lighting. You can subscribe to this list by sending an e-mail at lighting-request@garnet.nist.gov. The only word contained in your e-mail should be «subscribe».

M. Fontoynt suggests that the address of all CIE division web servers be formatted the same way and appear as subdirectories of the CIE main site. D. Dumortier says that he will talk to C.Hermann about this matter, he will also ask her to set up a link to the division 3 server, on the CIE main page and to indicate the server address on the CIE news. Finally, he says that the members will be warned as often as possible of the major modifications made to the server.

8. Technical committee reports. All TC chairmen and reporters who have not done it yet are requested to send their activity report as soon as possible. **All TC chairmen and reporters are requested to check the information found on the web server.** Some of this information might be erroneous or incomplete, so please send modifications to dominique.dumortier@entpe.fr.

Even though, D. Tiller and L. Whitehead were first at presenting the progress of their TCs during the meeting, the activity report below follows TCs numerical order.

TC 3.01: Glare for small and large sources. H. Einhorn has indicated that the TC has prepared a draft report which has been sent out to TC members. Members have been requested to comment on the report before April 28, 1998. So far only a minority has replied. Once modified (if necessary), this report could then be sent to C. Hermann for ballot around the board and the division.

TC 3.11: Daylighting Calculation methods. No report was received from the chairman M. Navvab. If no significant progress is announced by the chairman, before the Warsaw meeting, the division will have to find a new chairman, or the TC will have to be closed.

TC 3.12: Daylight and solar radiation data for building performance. No report has been received from the chairman S. Hayman. If no news is received from the chairman, before the Warsaw meeting, the TC will be closed.

TC 3.15: Sky luminance models. The chairman has indicated that he has received several documents from the TC members. R. Kittler has produced a paper called «Modelling daylight conditions under a new set of standard skies» written in collaboration with R. Perez. D. Kendrick made comments on Kittler's paper and on the calibration of IDMP measurements. An informal meeting was held in the afternoon of October 9, 1997, for discussion on the concepts behind the sky luminance models presented by R. Kittler and by N. Igawa who presented a report called «Sky luminance distribution between two CIE standard skies».

A. Slater indicates that the clear and overcast skies have now become CIE/ISO standards. He adds that the TC should finally reach an agreement on new models for intermediate conditions and prepare a draft for the Warsaw meeting.

TC 3.16: Psychological aspects of lighting. D. Tiller, the TC chairman is now finally editing the document which had been approved at the New Delhi meeting. This document (about 40 pages) should be ready for balloting by June. D. Tiller asks whether the CIE would agree that this report become available directly on the Internet. W. Julian indicates that the CIE has still no intention to distribute publications via

the Internet. This TC will be closed at the next Warsaw meeting, however the division may pursue an update of this work through a reportership.

TC 3.19: Scale model photometry for interior lighting. There has been no report from the chairman M. Navvab. If no activity is shown before the Warsaw meeting, the TC will be closed.

TC 3.20: Lighting and architecture. H. Kramer indicates that he has finalised a first draft of the publication which contains an additional chapter on light quality. He has brought it to the meeting. He says that this publication will be quite different from all other CIE publications, since it really takes into account the architect point of view on lighting. The final publication should be ready by the Warsaw meeting. Since the publication is planned to include more than a hundred colour pictures, H. Kramer should contact the vice-president of publications. To reduce the cost, a CD-ROM could be used to publish the document with full color pictures.

TC 3.21: CIE/ISO Interior lighting standards. A TC meeting was organised at the University of Lancaster, on April 8, 1998. 6 members took part to this meeting, together with a new member nominated by TC 159/SC5 Ergonomics. The committee was informed that the ISO TC 159/SC5 had also completed an inquiry on the 3rd draft, in 1997. The results reported in October 1997 was: 11 in favour, 2 against and 1 abstention. The TC then reviewed the structure and the details of the draft. The position now is that a fourth draft is in preparation and expected to be available in July 1998 for balloting in the TC/Division and Board. The draft will also be sent to ISO for a parallel balloting by members.

W. Julian indicates that an ISO/CIE standard must be suitable to the economy of all countries, therefore defining a range of values rather than a fixed value would be more appropriate. H.A. Löfberg stresses the fact that this is an important matter to the CIE.

TC 3.22: Museum lighting and protection against radiation damage. The TC will meet after the division 3 meeting on May 14 and 15. The final drafts of all sections of the guide will be reviewed during the meeting. Later the drafts will be edited by the editor P. Gabriel, into one complete document. This draft will then be circulated to all TC members for final comments. It is planned that the final draft of the guide will be submitted to the central bureau before the CIE session in Warsaw.

TC 3.24: Energy aspects of lighting. There has been no report from the chairman. A. Slater says that if L. Zonneveldt (the TC chairman) does not provide a report of significant activity before the end of June, the TC will be definitely closed. Because this is a subject which is of interest to the division, it will be posted into the «wanted» section of the division web server. If you are interested in this subject, if you have some spare time to lead a technical committee, let us know about it.

TC 3.25: Coordination and development of the International Daylight Measurement Programme and its data. The TC met the day before the division meeting. The chairman H. Nakamura who recently retired from the University of Kyushu, expressed the wish to quit from the chairpersonship. He proposed D. Dumortier as the new chairman. D. Dumortier agreed. Y. Koga stays as the TC secretary.

These changes are approved by all the participants to the division meeting. D. Dumortier will have to contact C. Hermann to complete the procedure obtaining CIE board approval.

The IDMP network is still expanding: four new stations have been created in India and two others are supposed to be in the work. One may also be created in Thailand. Two Swedish stations have ceased operation in March 1998. The stations in Sydney, in Lisbon, and in Freiburg have resumed operation. During the meeting, D. Dumortier presented the results of the questionnaire which was sent to all members in March. The purpose of this questionnaire was (1) to strengthen the TC web server by updating and improving the information presented on it, (2) to draw a complete summary of IDMP activities since its inception in 1991. A total of 28 questionnaires have been received. This amounts to a 80% return rate. A complete report summarising the results will be sent to all those who answered the questionnaire. As a result from the questionnaire, the TC has defined two major actions for the coming year: a new calibration plan and a data exchange programme (based on voluntary contribution) which will lead to the production of a CD-ROM of IDMP data.

TC 3.26: Development of a protocol for post occupancy evaluation of lighting. D. Tiller, the chairman indicates that the objective of this TC was to describe methods for questionnaire surveys in buildings. A draft of the report has now been produced. This draft will be circulated within the TC in the coming months. Its final version may be ready for the Warsaw meeting.

TC 3.28: Standard on calculation of utilization factors. Since there has been no report from the chairman. This TC is closed and this subject will be moved to the «wanted» list.

TC 3.30: Hollow light guides. L. Whitehead, the TC chairman, describes the TC activities. A CIE publication is in the work. It will include recommendations on photometric measurement procedure and 5 of the 20 case studies which had been planned previously. The draft should be circulated within the TC at the end of the summer. A. Slater asks whether the 15 case studies which have not been included could be part of another publication. L. Whitehead indicates that unfortunately, most of these case studies are incomplete. Then he concludes in saying that there could be two future actions for the TC: (1) improve the efficiency of light guides, (2) characterise the daylighting performance of light guides.

TC 3.31: Electric lighting for real spaces. D. Carter, the chairman, presents the activities of the TC. Work has now moved forward to a point where the structure of the final report and the content is being developed. Initially, this work is being carried out by the chairman before circulation to all members. The TC expects to produce a final report for the year 2000. A. Slater suggests that the work of this TC could be of interest to the new TC 3.33, and that D. Carter should become at least one of its corresponding member.

TC 3.32: Validation of algorithms for daylighting outdoors. There has been no report from the TC chairman: M. Navvab. A. Slater urges M. Navvab to show that some work has been done or to propose a new chairman.

TC 3.33: Test cases for assessment of accuracy of lighting computer software. This TC had his first meeting the day before the division meeting. The chairman R. Mitanchey describes the objective of the TC: 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. R Mitanchey indicates that the TC has now more than 10 members. Many are part of the IEA task 21: «Daylight in building», noticeably subtask 21C, which is the software validation subtask. One of the first activities of the TC has been to review the literature on the subject.

M. Fontoynt stresses the fact that the TC could easily result in a lot of work, therefore the TC should make sure that its action items can be fulfilled within a year. W. Julian thinks that the work of the IEA Task 21 should not be lost. CIE could insure the perennity of the work performed within the IEA. Therefore, some IEA task reports could become joint publications CIE/IEA.

9. Reporters reports.

R 3-02: Stage and studio lighting. Mr Ackerman, the reporter, is preparing Showlight 2001, he is inviting offers of venues preferably in Western Europe.

R 3-06: Accidents and lighting. In a letter that he wrote to the division director, G. Irvine indicates that the report written by Prof. H. Ruschenschmidt and colleagues concerning industrial accidents and lighting has been translated from the German by Prof. Gubler and Prof. Topalova of the University of Waterloo. The complete report has been posted on the Internet at <http://www.irvine-engineering.com> and sent to about 20 CIE members. G. Irvine regrets that no link has been established from the CIE web site, to the page where the report has been posted. A. Slater says that there will be a link on the division 3 web server, in the «publications» section. In his letter, G. Irvine proposes that the reporter responsibility be assigned to Prof. Dr. Radosteva Topalova who has been associated with the Canadian CIE and is working with the IESNA Industrial Lighting Committee on the Lighting Handbook revision. All participants agree to the change of reporter. A. Slater thanks G. Irvine for his work.

R 3-10: Maintenance of indoor lighting. The reporter L. Bedocs has not sent any progress report.

R 3-13: Lighting vocabulary. Once again, there has been no significant progress made on the revision of the lighting vocabulary. Therefore, C. Belcher, the reporter, is invited to send to the division secretary, the list of terms that include words that he feel are poorly defined or whose definitions he does not understand or question. This list should include old definitions and new ones. The secretary will send the list for comments to all division members.

R 3-14: Lighting quality. This reportership has led to the organisation of the CIE symposium on lighting quality starting the day after the division meeting. No doubt that the symposium will result in new ideas for technical committees on lighting quality.

R 3-15: Lighting standards. S. Simos, the reporter, indicates that he has received information from 15 countries. He is ready to start another call for information to increase this number. He will first need to receive an updated list of CIE delegates from the secretary.

10. Liaisons. M. Fontoynt 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. The database will be available through the Internet via a web server. The server is currently being developed at ENTPE. It will open officially on January 1, 1999, at <http://satellight.entpe.fr>.

11. Discussion on the change of director(s). A. Slater (division director) and P. Tregenza (associate director for daylighting) have announced their intention to quit their position on the occasion of the next CIE conference, in Warsaw. Following the call for nominations in the invitation to the Ottawa meeting, the Japan and South African committees have recommended Sueko Kanaya as new director for the division. However, S. Kanaya has expressed the wish to stay as associate director for electric lighting. On the other side, discussions with the CIE board and other delegates have led to the recommendation of M. Fontoynt as division director and D. Dumortier as associate director for daylighting. M. Fontoynt and D. Dumortier agree. Geoffrey Cook from the University of Reading, UK, proposes to be the new division secretary. These changes will take effect at the Warsaw meeting. M. Fontoynt thanks A. Slater for his remarkable work. A. Slater thanks P. Tregenza for his excellent work as associate director for daylighting.

W. Julian and H.A. Löfberg indicate that in the future, the division should be more careful in creating technical committees which may become quickly unproductive. They recommend to start with a reportership and then move to a TC.

12. Review of division 3 publications and future work. As a result of discussions during the last division meeting, in Durban, South Africa, A. Slater suggests to create a reportership on «Lighting in developing countries». Rob Henderson, from South Africa, has agreed to be reporter. This would be R 3-16. It is approved by the participants to the meeting.

A. Slater mentions that there is also some work to do on new guides for interior lighting, since TC 3.21 provides standards but no guidance to set up the standards.

A. Slater also indicates that new ideas for TCs or reporterships will undoubtedly arise from the CIE symposium on lighting quality which will begin the next day. M. Fontoynt asks whether it would be possible to create a new TC before the next meeting in Warsaw. A. Slater says that this would be possible. I. Pasini thinks that one first thing to do about lighting quality would be to demonstrate that lighting quality is important. H. Kramer thinks that proving the effectiveness of lighting quality will take forever.

A. Slater asks whether there are publications in the division 3 which are out of date. H.A. Löfberg answers that there are indeed some publications which would need to be modified, two of them dated before 1978, noticeably one focusing on the calculation of utilisation factors. R. Topalova agrees to report on this subject by comparing the three methods of calculation: the CIE, the Cavity and the British methods. This reportship is R 3-17.

H. Kramer indicates that he would like to see the division work more on the difference in quality between natural and artificial light.

13. Next meeting. The next meeting will happen in Warsaw at the same time as the CIE quadrennial conference. The conference will happen on Thursday June 24, Friday June 25 and Saturday June 26. The division 3 meeting is tentatively scheduled from Monday June 28, in the afternoon, to Tuesday June 29. The TC meetings could take place either during the conference, on Sunday June 27, or on the morning of Monday June 28. The division meeting is planned to last longer than a day to allow small presentations by TCs or reporters.

Finally, the Warsaw conference provides some space for six half-day workshops, 3 in parallel, during two afternoons. W. Julian suggests to organise a workshop on «progress in software» which would be directly related to the work of TC 3.33. H. Kramer suggests to organise a workshop on «lighting and architecture». A. Slater suggests that a workshop on «lighting in developing countries» be organised. The conference programme needs to be ready by June. Each workshop could begin with a small number of presentations to start the discussion.

14. Closure of the meeting. A. Slater thanks all the participants to the meeting, J. Veitch and I. Pasini for having organised the meeting. Then, he adjourns the meeting.

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