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INTERNATIONAL COMMISSION ON ILLUMINATION
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DIVISION 6
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Shu Takeshita Japan (NC rep)
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Apologies:

Bob Angelo USA
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Terje Chistensen Norway
Werner Jordan Germany
Kohtaro Kohmoto Japan
Karl Schulmeister Austria
Ann Webb UK
Steve Wengraitis USA

1. Welcome by Director. The meeting started at 9:02am and DD John O'Hagan welcomed everyone to the meeting before asking for introductions from those present.

2. Approval of Agenda. The group approved the agenda.

3. Approval of Minutes of Division Meeting, Montreal, June 2012. The minutes of the last meeting held in Montreal during 2012 were approved.

4. Progress Report from Director. As Martina Paul from Central Bureau was present and available for questions for the first hour of this meeting this item was given over to a presentation of news from CB followed by discussion.

There has recently been a consultation by TC chairs and other parties within CIE on a new Code of Procedure. One of the main amendments has been on the issue of unanimity for technical committee votes. In all cases the vote should be guided by scientific principles, but the Board has decided to separate the requirements for technical reports from those for standards. For technical reports the principle of unanimity has been replaced by one of consensus, defined by the absence of sustained opposition with a two-thirds majority required by TC members, only the authors (not advisers) having a vote.

Sliney clarifies details that a minimum of 5 countries are required to be involved, but it is possible that an (old) TC may only have two authors who can vote.

Minutes of the CIE Division 6 Meeting
Paris, France
9 am, 17 April 2013

In Attendance:

Rolf Bergman	USA
Fabio Bisegna	Italy (NC rep)
Mario Blumthaler	Austria
Jean-Pierre Cesarini	France
Jens Chistoffersen	Denmark (NC rep)
Gilberto Da Costa	Brazil
Beat Gerber	Switzerland (NC rep)
Antonie v/d Hanel	Netherlands
Thorbjörn Laike	Sweden
Tongsheng Mou	China
Gertjan Muda	Netherlands
John O'Hagan	UK (DD, NC rep)
Martina Paul	CB
Luke Price	UK
Luc Schlangen	Netherlands (NC rep)
David Sliney	USA
Andy Smedley	UK (DS)

Martina Paul: an ISO TC on Light and Lighting has been formed which CIE has decided to join. One weakness until now is that CIE standards are sometimes not properly channelled if there is not a mirror committee in ISO. Involvement in the new ISO TC is a new model where the CIE secretariat holds the chair of the ISO TC which should bring the benefits of strong coordination with ISO, CIE being able to provide input for immature TCs and all CIE standards being processed under the fast track system.

Vincent enquires about coordinating new work items from ISO on CIE side. MP states that will be able to check new work items coming through the system, so will contact Divisions and TCCs as necessary. Vincent has info on relevant ISO work which he will pass to DD6 O'Hagan.

Sliney comments on IEC TCs 34 and 76. Notes that there is concern from IEC side that ISO is poaching work. DD6 O'Hagan gives further details.

DS clarifies details of review procedure with Martina Paul. In first instance the report should be passed to the original TC chair if still active, or an alternative expert found. The situation is straight forward for simple, minor comments, but more complex for major comments. In this case a new TC should be formed (as is being done for the revision of S009).

Luc Schlangen asks what shadow committees are in ISO TC. More details to follow on 2 July.

5. Secretary's Report. DS notes that plans to use this agenda item to deal with some short notices, so can quickly move onto dealing with TC business.

The Division currently has a total of 285 contacts on the D6 circulation list. DS should be notified of changes in details, new additions etc.

The D6 portion of the CIE website is now mainly kept up to date by Central Bureau staff, but there are certain pages which are under the control of the Division. If there are any areas which you feel require alterations please just get in touch with the DS and the necessary changes will be made.

DS reminds everyone about the Webex system, a voice over IP system with the added capability to share electronic files and view remote desktops. It is particularly useful for TC work as it removes the

need to travel. For further information please contact Central Bureau.

There are a few changes to D6 NC reps during the last year:

Belgium: Thomas Conniasselle has taken over from Rik ROELANDTS

China: Tongsheng Mou takes over from Yang MING

Croatia: D6 has a new NC representative of Damir Dracic

Czech Republic: Milena Jiraskova has stepped down and as yet we do not have a replacement

Italy: Fabio Bisegna has taken over from Guiseppe MIGALE

Malaysia: D6 has a new representative, Chang Kee KWONG

Norway: Terje Christensen has taken over from Kjell Inge Daae

Romania: Constantin Ion taken over from Georgeta RASINA

Sweden: Thorbjörn LAIKE replaces Per NYLÉN

Slovenia: Katja REBEC replaces Rasa URBAS

DS notes that D6 has no NC representative from the following countries: Czech Republic, France, Greece, India, Israel, New Zealand, Singapore, the Slovak republic and Ukraine

Jean-Pierre Cesarini states that involvement in CIE can be difficult in France as medical doctors cannot be paid for travelling, and Sliney notes that TC members can be encouraged to be NC representatives. Vincent comments that can use Webex to lower participation costs as no travel budget is required. Martina Paul agrees. DD6 O'Hagan points to Code of Procedure for rules on being nominated as a NC representative.

DS Smedley also notes that has held the post for last 6 years and plans to step down, with this his last meeting as Division Secretary. Has already spoken to DD6 concerning this and finding a successor. DS notes that a possible candidate has already been found, but that is planned to put out a call to the Division for other candidates before holding a ballot of the NC representatives.

DD6 provides further details on procedure: no quorum is needed, so could be balloted at Paris meeting, but notes that candidate is also from same institute as DD6 and DE6. One option is that DE6, who is happy to carry on, could stand down.

6. Editor's Report. DD6 provides report in DE's absence. DE has no drafts in his inbox. All those received have been sent back to the TCC with comments, or onwards to CB for approval.

7. Progress Reports from Technical Committee Chairs. Reports on TCs were provided by the TCC or a proxy where present. Only currently open TCs are listed below.

Please note that the CIE Code of Procedure requires TCs to submit an activity report in advance of the annual meeting to include a review of TC members, a review of work carried out during the last year and a work plan with dates and milestones to complete the technical report. If no activity report is received then the TC will be considered for closure.

Action items are highlighted in yellow. TCs identified for closure are highlighted in red. Where the Division feels that TCs highlighted as "to be closed" should still remain the subject of a technical report, there is, of course, the option of reopening the subject.

6-08 Guidelines for Obtaining Action Spectra (TCC: Sliney). The final draft of this TC has been submitted to DE. The last TC vote only resulted in one response. Voting issues have continued, but should be out soon. DS to provide TCC with current email addresses for two members before rebalot.

*-Action: DS to provide email addresses;
TCC Sliney to rebalot*

6-21 Low Level UV-A Cataract (TCC: Sliney). Has been seen by DE and required references completing. Sliney states that didn't realise had been returned. DD6 O'Hagan notes that as work is not recent, report may be out of date. TCC to check that latest draft is up to date.

*-Action: Sliney to complete refs
and check report is up to date*

6-25 Spectral Weighting of Solar Ultraviolet Radiation (TCC: Wengraitis). Published as CIE 151-2003 and currently being updated to include Vitamin D action spectrum. DE has commented and returned to TCC Wengraitis. DD6: shouldn't be controversial. Sliney will get in touch with Steve Wengraitis to finalise.

*-Action: Sliney to contact Wengraitis;
Wengraitis to address DE's comments and return*

6-28 Standardization of Sunscreen Testing (TCC: Césarini / Osterwalder). TCC Uli Osterwalder was waiting on input from 6-24 before working this TC, although no contact has been received since 2010. Cesarini notes that TCC Osterwalder is in Paris and that there is a need for an international standard, but no consensus on a method. Cesarini stated that Osterwalder is very involved and that he will speak to him about making contact. DD6 notes that if there is no report and no consensus on a method, then TC should be closed.

*-Action: TCC Osterwalder to update
Division on progress / closure candidate?*

6-36 UV Protective Materials Used in Shading (TCC: Nel-Sakharova). A report was presented in 2011 to say that the work was nearly complete, but no further information or contact has been forthcoming. Division NC representatives recently balloted for closure with a positive vote (YES: 11; NO: 0; ABSTAIN: 2).

-TC Closed

6-37 Light and Retinal Disease (TCC: Sliney). DD6 met with TCC Sliney recently to discuss. Sliney will review TCMs and rebalot. May need to consider a minority opinion of one of the TC members, but can proceed under new rules.

-Action: Sliney to review TCMs and rebalot

6-42 Lighting Aspects for Plant Growth in Controlled Environments (ATCC: Navvab). An activity report has been received and TC is proceeding. Completion of a final report has been scheduled by the end of 2013.

6-44 Illuminators for Treatment of Infant Hyperbilirubinemia (Vacant). The draft report was reviewed by Mike Lynn and Graham Hart in 2012, who work in this area in the UK. At the last Division meeting it was decided that Graham Hart and Mike Lynn should take this forward by way of closure of TC6-44 and reopening as a reportership. A ballot of D6 NC representatives was held recently with a positive outcome (YES:11; NO: 0; ABSTAIN: 1). Note: the work done by members of the TC6-44 is to be acknowledged in the report. Cesarini questions whether LEDs will be included. DD6: reporters have expertise to know about relevant points, and will move quickly.

-Action: Hart and Lynn to proceed with reportership

6-45 Optical Radiation Hazard Measurements in the Workplace (TCC: Angelo). A draft has been circulated to TC members and some comments have

been received; there are ongoing issues with balloting and reaching a consensus. A key issue is the inclusion of exposure limits. Schulmeister says that the ones that are being used at present are out of date. Sliney notes that they are only example exposure limits, and that ICNIRP limits are needed for S009 anyway. Sliney has responded to all comments from Schulmeister. DD6 to follow up and check that all comments have been addressed in latest draft.

-Action:DD6 to check exposure limit comments have been addressed in latest draft

6-48 Typical Minimal Erythema Doses (TCC: Beer and Miller). DE's comments have been addressed and draft has been sent to Peter Zwick at CB for approval / balloting.

6-49 Infrared Cataract (TCC: Okuno). Activity report received with completion scheduled for 2013/14. DS has suggested Webex to assist completion (before 2013 deadline). Sliney sees no reason why shouldn't complete by end of 2013.

6-50 Photodegradation of Pharmaceuticals (TCC: Tønnesen). Issues concerning merger of two published scientific papers to produce CIE report. Option of a TN was suggested, but now not possible in this case. TCC has contacted Division stating that would prefer to close. A Division ballot has recently been held on closure with a positive outcome (YES: 10; NO: 1; ABSTAIN: 2).

-TC Closed

6-52 Proper Measurement of Passive UV Air Disinfection Sources (TCC: Vincent). TCC Vincent has hard copies of report which he expects to be completed by end of year. Asks for input from interested parties. Vincent explains that the report describes goniophotometry of UVC germicidal installations, e.g. for bird flu. A paper on the subject is available in the centennial conference proceedings.

-Action:comments to Vincent; to be completed by end of 2013

6-55 Photobiological Safety for LEDs (TCC: Horak). Lack of support and difficulties with reviewing latest draft experienced over last few years. TCC Horak notes that report would need updating and could be closed. D6 ballot of NC representatives recently held on closure: positive result (YES: 8; NO: 3; ABSTAIN: 2). DS to file latest draft with CB. Vincent asks if draft can be obtained from CB. DD6 understands that it can be, by request. Cesarini says was sent to Brussels, but

LEDs were grouped into modern economical lighting. Found that LEDs were classified properly - Risk Group 2 and 3. Also circadian effect noted. DD6 says issues should be compared on same basis. Mou says this is valid for general lighting, but issue in toys. DD6 says toy industry will manage by not having high output sources. Cesarini notes potential problem due to close proximity when passing shop fronts and Mou notes sensitivity if on medication. Bergman has draft from 2011, will read again and comment to see if can be taken forward.

-Action:DS to file latest draft with CB
-TC Closed

6-61 Measurement of Radiation Using the Phytometric System for Plant Applications (TCC: da Costa). Da Costa presents work. Asks interested parties to email him if want to receive copy of report. Presents relative quantum efficiency curve $P(\lambda)$, similar to $V(\lambda)$ by CIE, but for standard leaf. $SPD \times RQE$ gives phytometric flux, then in turns irradiance, exitance, radiance etc. Advantages for greenhouse luminaire calculations. Have drafted paper. Blumthaler raises point that conversion from lux to phytometric units depends on lamp. Bergman agrees, stating that is basically conversion for type of lamp, but worked for GE and expects manufacturers to be very interested if have quantification method. Issue raised whether have enough members and countries (only 3 at present). Sliney questions whether there might be differing opinions in the plant community. DD6 says if don't get enough members, could be TN. Offer of contribution from Sweden, Netherlands and Finland.

-Action:comments to Da Costa; TC to proceed to completion

6-62 Action Spectra and Dosimetric Quantities for Circadian and Related Neurobiological Effects (TCC: Cooper). No progress report received from Cooper. Cesarini notes that Cooper is busy, and Sliney states that there is an ISO TC considering this subject.

6-63 Photobiological Strategies for Adjusting Circadian Phase to Minimize the Impact of Shift Work and Jet Lag (TCC: Lockley). No progress report received. More activity is anticipated in coming year. DD6 relates the method he used to minimise jetlag provided by Lockley. Luc Schlangen (present) also involved in TC. Sliney will be meeting Lockley next month, and so will speak on this subject.

-Action:Sliney to speak with Lockley about TC progress

6-xx/1-67 The Effects of Dynamic and Stereo Visual Images on Human Health (D6 rep: Sliney) Joint TC with D1. D1 noted in late 2011 that if no progress would be closed in 2012, but TC was given a second chance after a redraft of ToRs. DS has chased TCC Ujike to ensure Sliney gets a copy of any report.

-Action: TCC Ujike to include D6 rep Sliney in any communications

6-64 Optical Safety of Infrared Eye Trackers Applied for Extended-Durations (TCC: Sliney). TC had voted in 2011. DD6 spoke with Sliney recently concerning progress. Sliney will get in touch with TC secretary for a list of TCMs, review and ballot.

-Action: TCC Sliney to review TCMs and ballot

6-65 Photobiological Dosimetry for Low Level Laser/Light Phototherapy (TCC: Lyon). TCC would prefer to close TC at present due to lack of support. Division ballot on closure held recently with positive outcome (YES: 8, NO: 2; ABSTAIN: 3).

-TC closed

JTC-3 Rationalising UV Units (TCC: McKenzie). Proposed by then-DD Webb at 2011 meeting. Progressing rapidly and had completed TC vote before last year's meeting. Has been passed to DE for CIE editing and comments addressed. DE has sent report onto CB for next stage of balloting / approval.

-Action: to continue through approval process

6-66 Maintaining summer levels of 25OH vitamin D during winter by minimal exposure to artificial UV sources; requirements and weighing the (dis)advantages (TCC: Webb). TC was proposed in principle at last year's meeting. A TCC has since been found and a Division ballot to open the TC has been held. Could be very controversial (say Cesarini and DD) as hard to find the balance. Also Gerber says other options including diet should be considered. Cesarini notes that in France there is a recommendation that artificial UV for tanning should be banned. Fought by industry, although DD6 O'Hagan says spectrum is wrong for Vitamin D anyway. DD6 notes issues with banning, as opens up home-use. Query over whether was approved by BA as no work schedule was supplied [update: further to the meeting it was confirmed that this TC has been approved, but a work schedule was pending].

-Action: TC to begin work

JTC-4 Visual, Health, and Environmental Benefits of Windows in Buildings during Daylight Hours (TCC: Knoop; no D6 co-chair). Proposed by D3 in 2012 and subsequently agreed by D6. Both Divisions balloted since last meeting with positive outcomes. No offers for D6 co-chairmanship, although several will attend meeting this afternoon. To be considered by all attending.

-Action: all D6 members to consider chairmanship

JTC-5 Joint Technical Committee to Revise CIE S009/IEC 62471 (TCC: O'Hagan). Proposed at last year's Division meeting to update S009. Will meet in Paris day after Division meeting. Complicated as joint with D2 and also with IEC TC34 and 76. DD6 O'Hagan will be TCC to give some weight in IEC and D6. Mature draft already based on S009. Has been restructured and updated as of 2011. Needs revisiting, but challenge is that standard relevant to products (unlike most of CIE work). At tomorrow's meeting have to decide split of work program between IEC and CIE. CIE will deal with risk groups and measurements to determine them. Labelling and user information requires handing over to IEC. Would like more specific rationale behind risk groups as current one is sometimes misunderstood. DS to obtain email address for potential Japanese member so can be included in communications and set up on collab tools.

-Action: TC to proceed; DS to obtain contact details

8. Progress Reports from Reporters

R 6-37 Definition of UV wavebands (Sasaki). Draft has been commented on by DE and returned to Reporter who has addressed points raised. Sliney mentions that proposal was made several years ago in US. Decided to be review of limits, but not to change them. However report shows use of differing limits in various publications. Conclusion is that should use CIE limits. Cesarini says medically limit is 320nm as safer as further from Hg line at 313nm; a boundary at 315nm would be too close. If draft is final version needs to be balloted by NC Reps.

-Action: DE to confirm that is ready for balloting

R 6-40 A survey of action spectra in the scientific literature: 19XX – 200X (Schmalwieser). Part 1 of a long report was provided to DE in 2009, and Part 2 is progressing. Main issue is how to publish as if costed by pages, price may be prohibitive.

R 6-41 The issues of vitamin D kinetics (Teretskaya). Recent contact from reporter indicating that report will be completed by end of

April 2013. If necessary set deadline for possible closure next year. [update after meeting: draft received from Terenetskaya as promised].

-Action: Terenetskaya to send draft to DE

R 6-42 Report on the 1st International Workshop for Action Spectra of Non-Image Forming Photobiological Effects of Light, IWAS 2013 (Price). Proposed in Montreal and recent ballot of Division to open was positive (YES: 12; NO: 1). DD explains that German lighting industry paid for experts to come together to discuss action spectra for non imaging forming processes. No industry present. O'Hagan attended as DD6. Output will be scientific paper. Agreed that CIE report will be available free online. Paper to ready by June. Also spreadsheet being developed to convert between power-based and quantal units. Paper to be open access, possibly in Nature Neuroscience. Cesarini queries whether non image forming includes skin (No).

-Action: reportership to proceed as per schedule

R 6-43 Illuminators for Treatment of Infant Hyperbilirubinemia (Hart and Lynn). Progress dealt with under closure of TC6-44.

9. Progress Reports from Liaisons with ICNIRP, CEN, WHO, IEC and ISO

Vincent offers to investigate issue of liaison in WHO. ADD6 Schulmeister is our liaison with ICNIRP. In the absence of Schulmeister, DD6 gives details of the revision of the ICNIRP guidelines for laser and broadband optical radiation. These are expected to be published in Health Physics journal in late 2013 and will be free to download from the ICNIRP website.

10. Dissolution of TCs and reporterships

This agenda item was mainly dealt with as part of item 7 (above).

11. Proposals for new TCs and Reporterships

DD O'Hagan notes that Kohtaro Kohmoto would like to reopen TCs 6-39 and 57. Vincent suggested that give firm deadline. DS notes that there is a suggestion under the new Code that each expert is only chair / reporter of one TC at a time to assist with completion. Bergman not sure of the benefit of action spectrum interpolation as discussed for TC6-

57. Sliney not sure that TC6-39 is much benefit. DD proposes to open action spectrum reportership, with deadline of end of 2013. No negative votes.

-Action: Kohmoto to proceed with action spectrum reportership

Bergman notes that blue light issue with LEDs doesn't go away. Says worth investigating w.r.t. blue light as LEDs going to stay.

Sliney notes a two-fold blue issue. In an experiment with amber, blue and clear canopies over lab animals the circadian rhythm gets distorted. Clear physiological effect is seen. but unless stay indoors all the time, less of an issue. Cesarini comments that there is a particular issue with lights illuminating upwards especially for children as they have lens that is more transparent at blue wavelengths. Should be aware of angle in specific conditions e.g. theatres and car headlights.

DD6 notes that under IEC TC34 if a manufacturer wanted to supply blue light then could be Risk Group 2, but as want to sell them tend to ensure they are Risk Group 1 or Exempt.

No real proposal.

DD6 notes that other conference issue relevant to D6 was flicker.

12. Division Officers

DD6 notes that he is half way through first term, so could do second, if no other offers, but Division needs to have a plan for replacement.

Further to the DS stepping down names of any potential candidates should be sent to DD6, and likewise if anyone interested in being DE they should get in touch with DD O'Hagan.

Finally both Division ADDs Schulmeister and Kohmoto have indicated a desire to continue in their posts.

13. Future Meetings.

At the last meeting Tongsheng Mou offered Division 6 to hold its 2014 meeting in China for next year, but CIE has been invited by Malaysia to run Lighting Quality and Energy Efficiency conference in 2014 (23-26 April). Three Divisions have also planned to

meet in conjunction with this meeting and Division 6 has also been invited to hold its annual meeting in Kuala Lumpur. We have the opportunity to run a workshop to cover benefit of optical radiation as ICNIRPs revised guidelines as well as IWAS report will both be complete. DD notes lots of interest in lighting in the region and so could well be a better option with improved turnout. Bergman agrees.

Sliney says used to alternate between photobiology conferences and those organised by CIE. DD6: but got little additional interest from holding last year's meeting in conjunction with ASP.

In any event the 2015 D6 meeting will be held in conjunction with the quadrennial meeting in Manchester, UK.

DD6 reminds those present about other meetings relevant to Division 6 being held over the remainder of the week.

Sliney asks that Webex be used if possible for future meetings.

15. AOB

None raised.

16. Adjournment and Closing Remarks

DD thanked everyone for attending and the meeting was adjourned at 12:42 pm.