

CIE Mid-Term Meeting, León, Spain, May, 2005

Vice-President (Technical) Report to the General Assembly

The CIE has had an active start to the current quadrennium of technical activities that resulted in new CIE publications, new or revised Standards and new CIE Congress/Symposium publications.

There have been three symposia so far in the quadrennium; with three planned.

Divisional activity resulted in publications as noted above and as detailed in following Divisional reports. As a result TCs that completed their tasks were dissolved. New work has resulted in the creation of new TCs at about the same rate as the dissolution of old ones.

The Divisional Directors had proposed changes to the Session format used in San Diego, to permit a greater number of presented papers and to introduce formal poster presentations at the posters. This was accepted by the Board and implemented for the Session. And was successful.

Concerns raised regarding CIE Technical work include: the need for greater participation from developing countries; the need to attract and retain young researchers to the CIE (the Board addressed this issue and after a long discussion on a proposal for a VP for this purpose, decided against it, however, nomination for a VP has been made by the French NC and has been circulated for the GA meeting); succession planning for the administration of the CIE Divisions.

The concern regarding the slowness of the revision of the International Lighting Vocabulary (which commenced seventeen years ago, upon the publication of the last edition) has been addressed by the Board and General Assembly meetings in San Diego and considerable progress has been made. It is hoped to finalise this at a meeting during the Leon congress.

I would like to thank the CIE Central Bureau for its hard work in support of the CIE Technical work, the Divisional Directors, the TC Chairs and the hundreds of people who form the TCs. Without their work and the support of their employers, the CIE would not be able to achieve its goals.

Finally, I would like to thank the new Divisional Directors Sharon McFadden, Nigel Pollard and Anne Webb for their leadership and success in filling the shoes of three previous long-term directors.

Any new matters arising from the Divisional Directors' Meeting or the Board will be reported verbally to the General Assembly.

Warren Julian
VPT, March, 2005

Divisional Directors' Reports

Division 1 — Mid-term report 2003-2005 (Sharon McFadden)

Officers

- Ms Sharon McFadden - Director
- Dr. Françoise Vienot – Associate Director Vision
- Dr. Michael Pointer – Associate Director Colour
- Dr Yasuhisa Nakano – Secretary
- Dr. Ellen Carter – Editor

Technical Committees and Reporterships

Proposed at the 2003 meeting of Division 1 and approved by the Board of Administration:

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

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

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

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

TC1-65 Visual appearance measurement (Colour Section)

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

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

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

R1-33 Colour-difference evaluation (Colour section)

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

R1-34 Indoor daylight (Colour section)

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

Proposed at the 2004 meeting of Division 1 and approved by the Board of Administration:

TC1-66: Indoor daylight illuminant

The terms of reference are to prepare a CIE recommendation on an Indoor Daylight Illuminant and a corresponding Indoor Daylight Source, considering the needs of the partner international standards organisations. The Chair is János Schanda HU. Initial members are Byron Jordan CA, Tony Bristow SE, Peter Clarke GB.

R1-35: Irregularities in $y_{bar}10(L)$ (V)

Terms of reference are to document the irregularities in $y_{bar}10(L)$ and, if necessary, recommend the formation of a Technical Committee to consider possible modifications. The Reporter is Pieter Walraven (NL). *R1-36: Action Spectra for Glare (V)* The terms of reference are to summarise the literature on the subject and make a recommendation for terms of reference for a Technical Committee. The Reporter is Judith Fekete (HU).

R1-37: Definition of the Visual Field for Conspicuity (V) The terms of reference are to summarise the literature on the visual field for conspicuity and make a recommendation for terms of reference for a Technical Committee. The Reporter is Nana Itoh (JP).

Possible new Technical Committees:
TBD.

Closed at the 2003 meeting of Division 1:

TC1-26: Individual Variations of Heterochromatic Brightness Matching (H Yaguchi)
Dr. Yaguchi requested to close this TC. Some of the work carried out under this TC was transferred to Dr. Yaguchi's Reportership R1-19 - Specification on Individual Variation in Heterochromatic Matching.

R1-24 Colour Appearance Models: (M Fairchild)

Following the publication of a Technical Report describing the new color appearance model, CIECAM02, as part of the work of Division 8, this Reportership was closed and the work was transferred to Division 8.

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

The report from this Reportership was attached to the 2003 Activity Report 2003. It can be downloaded from the website.

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

Dr. Schanda reported that, after careful investigation, he concluded this issue was the responsibility of Division 8.

Closed at the 2004 Meeting of Division 1:

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

This TC was reopened at Vésprem. At the 2003 meeting, it was agreed that if a draft report was not produced by the next meeting, the TC would be disbanded. Shortly before the 2004 meeting, the Chair submitted his resignation. Thus, Division 1 agreed unanimously to close this TC.

R1-15: Lighting Terminology: (M R Pointer GB)

The ballot of those ILV terms that Division 1 was responsible for has been completed successfully. Further revisions and new terms will be handled by TC1-64.

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

It was decided to close this reportership.

R1-34(C) Indoor Lighting: (J Schanda HU)

The reporter recommended that a new Technical Committee be formed to develop a new indoor illuminant and source to replace illuminant C. Thus the Reportership was closed and a new TC, TC1-66, was approved by Division 1.

To be closed at 2005 meeting of Division 1.

TC1-52 – report published.

TC1-48 – report published.

TC1-53 – Standard published.

TC1-55 – Turn into reportership

R1-11 – report published.

R1-23 – report completed.

New Publications

The following reports have been published since the 2003 meeting:

CIE 15.3:2004, Colorimetry, 3rd ed. 2004.

CIE 160:2004, A review of chromatic adaptation transforms, 2004.
CIE DS 012.3/E:2004, Standard method of assessing the spectral quality of daylight simulators for visual appraisal and measurement of colour, 2004.

Symposia

Held:

Expert Symposium on: LED Light Sources: Physical Measurement and Visual and Photobiological Assessment, Tokyo Japan, 7-8 June 2004. Held jointly with Division 2. Proceedings published.

Planned:

CIE Expert Symposium on Vision and Lighting in Mesopic Conditions, 21 May 2005, Leon, Spain, in conjunction with the Lighting in the XX1 Century Conference and Mid-term meeting of the CIE. organized by TC1-58.

Proposed:

CIE Expert Symposium on 1931 Colorimetric Observer - Then and Now, 16-17 May 2006, Ottawa, Canada, in conjunction with the 75th Anniversary meeting of the ISCC and meeting of Division 1.

CIE Expert Symposium on Visual Appearance, September 2006, Paris, France.

Meetings

2004: Tokyo, Japan, 8,9 June, with Division 2.

2005: Leon Spain, 16,17 May, during Mid-term meeting of CIE.

2006: Ottawa, Canada, 18,19 May, in conjunction with expert Symposium.

2007: Beijing, China, in conjunction with quadrennial.

Other Achievements, Issues, etc

The report from TC1-38, Compatibility of tabular spectral data for computational purposes, has been balloted successfully. The acting chair is currently addressing the comments.

The first part of the standard on Colorimetry, CIELAB, being prepared by TC1-57, is almost ready for ballot.

The Associate Directors for Division 1 will have held those positions for 12 years as of 2007. This issue will be addressed at the 2005 meeting of Division 1.

I have conducted an informal review of all the currently available publications that were produced by Division 1. I have asked the other officers to do the same..

Appendix 2 Division 2 — Mid-Term Report 2003-2005 (Teresa Goodman)

1. Terms of reference

- To study standard procedures for the evaluation of UV, visible and IR radiation, global radiation and optical properties of materials and luminaires.
- To study optical properties and performance of physical detectors and other devices required for this evaluation.

2. Administrative matters

Teresa Goodman (UK) was appointed for a second term as Division Director at the 2003 CIE Session in San Diego. She has three Associate Directors, whose responsibilities are divided approximately as follows:

Sources and detectors – Georg Sauter (DE)

Materials – Norbert Johnson (US)

Luminaires – Guy Vandermeersch (BE)

Yoshi Ohno is the Division Secretary and Jim Gardner replaced John Moore as Division Editor in 2003.

The following new Technical Committees commenced work during the period 2003-2005:

- TC 2-56(S) *CIE/ISO standard on retroreflection measurements* (chair: C. Miller, USA)
TR: To prepare a CIE/ISO standard on the measurement of retroreflective materials based on CIE Publication 54.2
- TC2-57 (S) *Revision of CIE S014-2* (chair: A. Robertson, Canada)
TR: To revise CIE Standard S014-2 (Colorimetry Part 2: CIE Standard Illuminants) to include Illuminant D50
- TC2-58 *Measurement of LED radiance and luminance* (chair: K. Kohmoto, Japan)
TR: To prepare a CIE Technical Report setting out recommended measurement methods for the luminance and radiance of LEDs, taking particular account of the specific requirements of relevant photobiological safety standards
- TC2-59 *Characterisation of imaging luminance measurement devices* (chair: P. Blattner, Switzerland)
TR: To prepare a Technical Report on methods for the characterization of imaging luminance measurement devices.
- TC2-60 *Effect of instrumental bandpass function and measurement interval on spectral quantities* (chair: D. Gibbs, UK)
TR: To prepare a technical report that describes the effect of instrumental bandpass functions and measurement wavelength interval on spectrally resolved quantities and provide recommendations on suitable methods to minimise the error introduced by instrumental bandpass functions on spectrally integrated or weighted quantities.

The following Technical Committees were dissolved during the period 2003-2005:

- TC2-24 *Users guide for the selection of illuminance and luminance meters*
- TC2-55 *Round Robin Investigation of Implementation of CIE Photobiological Safety Standard*

There were changes in the chairpersons for the following Technical Committees:

- TC2-44 *Vocabulary matters* (from J R Moore, UK, to the new Editor, J. Gardner, Australia)
- TC2-16 *Characterisation of the performance of tristimulus colorimeters* (from M.L. Rastello, Italy to J. Schanda, Hungary)
- TC2-50 *Measurement of the optical properties of LED clusters and arrays* (from G. Sauter, Germany to J. Schuette, Germany)

New reporterships were established in the following areas:

- R2-32 *Visual appearance measurement* (M. Pointer, UK)
- R2-33 *Measurement of laser-based projection displays* (K. Niall, Canada)

- R2-34 *Methods for characterising and calibrating detectors in photon counting regime* (M. L. Rastello, Italy)
- R2-35 *Uncertainties in Distribution Temperature Determination* (A. Robertson, Canada)

The following reporterships were dissolved following completion of their work:

- R2-05 *Visual Gloss* (M. Pointer, UK) - Report produced; further work on this topic will be pursued in D1 via a new TC on Visual Appearance Measurement.
- R2-29 *Characterization of imaging luminance measurement devices* (P. Blattner, Switzerland) - TC established.
- R2-30 *Problems linked to correct measurement of TL5 fluorescent lamps with existing electronic ballasts* (G. Vandermeersch, Belgium) - work to continue in TC2-23.
- R2-31 *Problems with spectroradiometric measurement of light sources associated with bandpass and sampling intervals* (D Gibbs, UK) – TC established

3. Meetings

In order to maximise attendance at Division meetings, and encourage participation by new contributors, these have continued to be linked to symposia or conferences and to be held in conjunction with other Divisions. The following Division meetings were held:

- 2 July 2003, San Diego (USA), during the 25th Quadrennial Session.
- 11 June 2004, Tokyo (Japan), in conjunction with the *CIE Symposium on LEDs* and also linked with a meeting of Division 1. A joint D1/D2 workshop was also held (9 June 2004) at which the subjects debated were colour rendering of LEDs, safety aspects of LEDs, and mesopic photometry.

A number of Technical Committees met in conjunction with each of the Division meetings; details are given in the minutes for the Division meetings.

Future meetings are planned as follows:

- May 2005: Leon, Spain – linked with CIE Mid-term Meeting
- June 2006: Braunschweig, Germany – linked with CIE Symposium on *Uncertainty Evaluation*
- 2007: Beijing, China, in conjunction with the 26th Quadrennial Session

4. Symposia

Division 2 organised the following CIE Symposium, jointly with D1 and D6:

Third Expert Symposium on LED Measurements, June 2004, Tokyo, Japan. The symposium included sessions on visual aspects of LEDs (particularly colour rendering) and photobiological issues (particularly safety evaluation), as well as measurement (including presentations on LEDs as transfer standards, characterisation of photometers for use with LEDs and uncertainty evaluation). A total of 93 participants registered, demonstrating the continued high level of interest in the subject of LEDs.

The Division plans to organise a CIE Symposium on Uncertainty Evaluation in June 2006, in Braunschweig, Germany (the D2 meeting will be linked with this). It is hoped that the final draft of TC2-43 will be ready at that time, so it will also be an opportunity to publicise the new document. Further topics suggested, each as a follow-on to a previous, very successful, symposium, are LEDs and pulsed sources. Of these, LEDs is seen as the highest priority and it has been suggested that it should have a strong focus on LED clusters and arrays, and should also include discussion of temporal aspects (modulation).

5. Technical reports and publications

The transfer of responsibility to the new Editor resulted in a hiatus in the processing of drafts for editing. However a number of TCs are nearing the end of their work and expect to pass documents to the Editor shortly. The following CIE Technical Report was published:

CIE Publication 153: 2003 *Intercomparison of Measurements of the Luminous Flux of High-Pressure Sodium Lamps* (report from TC2-22)

6. Liaisons

Liaisons were maintained as follows:

Comité Consultatif de Photométrie et Radiométrie – CCPR, Y. Ohno, USA

Division 1, K. Sagawa, Japan

Division 4, N. Johnson, USA

Division 6, T. Goodman, UK

Division 8, Y. Ohno, USA and A. Kravetz, USA

International Association of Lighthouse Authorities – IALA, C. Andersen, USA and I. Tutt (UK)

International Dark Sky Association – IDA, J. Rennilson, USA

IEC TC34 Lamps and related equipment, G. Vandermeersch, BE

IEC TC100 Audio, video and multimedia systems, J. Schanda (HU)

ISO TC6/WG3 Paper, board & pulps – optical properties, J Zwinkels (CA)

ISO on reflectance and transmittance issues, D Rich (US)

OIML, G Sauter (DE)

7. Other achievements, issues, etc.

Website and communications

All current Division activity reports, meeting minutes, membership lists, contact details and circulars are available on the D2 website (<http://cie2.nist.gov>), and there is an excellent archive of past meeting reports, minutes and activity reports. Many of the draft TC documents are available to TC members from the website (these are password protected) and e-mail reflectors have been set up to encourage rapid exchange of ideas and to encourage debate; these have been very successful and are being increasingly widely used. Most communication with Division members is via e-mail and this has helped to ensure that information is distributed quickly and effectively.

Division officers

I shall come to the end of my second term as Director in 2007 and the Division will need a new Director

Forward look

I have instituted an annual 'forward look' at D2 meetings, where we consider what developments might drive the need for new or improved measurements. The idea is to try to anticipate requirements, rather than just react to issues once they arise. Issues raised so far include:

- Recommendations for measurements in the vacuum UV, for lamps which emit below 200 nm
- The need to establish source scales above 2500 nm for safety evaluations on lamps
- Recommendations for standards based on synchrotron radiators
- Measurement recommendations for OLEDs
- Characterisation of fibre optics when used as components in other systems e.g. spectroradiometers (i.e. not for communications purposes)
- Measurement standards for the mesopic range, if a new system for mesopic photometry is established in D1

I would like to ask other DDs to let me know if there are developments in their areas that might lead to the need for work in D2 – again this will allow us to respond in a more timely fashion.

Other issues

IALA has written requesting guidance on the correct method for determining effective intensity, particularly for LED beacons. TC2-49 is working on recommended measurement techniques, but cannot make recommendations on the effective intensity evaluation – this relates to visual perception and requires input from D1. We need to discuss how to take this forward.

Teresa Goodman (Division Director)
National Physical Laboratory, UK

April 2005

Division 5 — Mid-term report 2003-2005 (Nigel Pollard)

Meetings

Following the 25th Session in San Diego in 2003, the Division has held meetings in Bern, Switzerland in September 2004 and Leon, Spain in May 2005. Both have been held in liaison with Division 4 that has now been accepted as the most efficient and useful way of employing both Divisional members' time and money.

Towards the end of 2003, Publication 154:2003 *The Maintenance of Outdoor Lighting Systems* was published and the TC, in line with CIE Guidelines, has now been closed.

Symposia

A very successful Symposium was held in November 2004 on *Obtrusive Light and Sky Glow* in Barcelona.

The two and a half day symposium was held in the newly opened "Forum" centre in which 28 papers (+ 6 posters) were given. The vast majority of the 250+ delegates were from Catalunya / Spain, although papers were presented from Chile, France, Germany, Italy, Mexico, Japan and the UK. (plus The Canaries Islands)

Most papers were about improving public lighting with a move towards horizontal cut-off (HCO), which in Spain/Catalunya is being progressed within an energy saving programme moving from mercury lamps to high pressure sodium.

Of particular interest were the papers investigating the main source of sky glow, which seems to be from direct light emitted close to the horizontal rather than reflected light, although there are some conflicting claims.

Technical Reports & Publications

No new Reports have been published.

Liaisons

One semi-liaison meeting has been held during the year between Messrs. Seidl and Pollard in Wien in September 2004 to discuss the way forward on the draft standard on the lighting of outdoor work places.

Technical Committee Work

- TC 5.08 *Lighting of Off-shore Gas and Oil Structures* — Dissolved
- TC 5.11 *Practical Design Guidelines for Sports Lighting Installations for Television and Film* — Final Draft (7) in course of editing.
- TC 5.13 *CIE/ISO Standard for the lighting of Exterior Work Places* — This will now be produced as two separate standards. One in which the lighting levels required for health and safety will be left out, to suit those countries that have separate laws for this, and a second document that lists the H&S levels for those countries that require them. These final documents will now be sent out for voting.
- TC 5.16 *Exterior Security Lighting of Private Properties* — The committee meeting held in Bern reviewed Draft 3. Additional working members of the committee are needed to prepare material for this report.
- TC 5-19 *Emergency Lighting* — A Final Draft will be prepared and distributed for a final vote at Leon.
- TC 5-18 *Practical design guidelines for the lighting of exterior work areas* — New Chair to be sort for Leon meeting.
- TC 5.20 *Sports Lighting* — A new draft will be prepared for the 2005 meeting in Leon.

TC 5.21 *City Beautification* — The next draft will be prepared and distributed for review prior to the Leon meeting.

Reporterships

- R 5.05 *Semi-cylindrical illuminance* — Report to be presented at Leon meeting.
- R 5.12 *Lighting and ECO systems* — A final report will be presented in Leon.
- R 5.13 *Lighting controls & Visual Effects* — Report to be presented at 2005 Leon meeting.

Two new Reporterships:

- R 5-14 *Exterior luminaire beam patterns* — T. Lemons and S. Davis
- R 5-15 *Fundamental aspects of vision at night* — D Crawford

Future Programme

- 2005 September in Delphi, Greece, in conjunction with the Urban Nightscape 2006 conference being held on 21 to 24 September and sponsored by the Hellenic Illumination Committee.
- 2006 CIE 26th Session, 27 June to 4 July, 2007, Beijing, China.
- 2007 Proposed meeting in Budapest, Hungary.
- 2008 Proposed meeting in USA.

Division 6 — Mid-term report 2003-2005 (Anne Webb)

Achievements

The Division (24 attendees) met in Vienna in September, 2004, prior to the Light and Health Symposium (see below). Six TCs also met during the Division meetings in Vienna. Since the last Quadrennial, 4 TCs have published their reports and a further report is currently in Board Ballot. Several TC Chairs have changed and four new TCs have been proposed, in various stages of gaining approval within the Division. The Division will meet next in Aix les Bains, France in September, 2005 in conjunction with the European Society for Photobiology.

Publications

International standard global solar UV index CIE Standard, S013:2003
Ocular lighting effects on human physiology and behaviour CIE 158:2004 (TC 6-11)
Spectral weighting of ultraviolet radiation CIE 151:2003 (TC 6-25)
Ultraviolet air disinfection CIE 155:2003 (TC 6-35)
UV Protection and Clothing (TC 6-29) currently in Board Ballot.
The Proceedings of the Symposium on Light and Health has been published as CIE x027:2004.

Symposia

The Division organised the first CIE Expert Symposium on Light and Health in Vienna, 30th September – 2nd October, 2004, preceded by a one day Tutorial on Light Measurement for Photobiology. Both events were very successful with attendance of over 100 for the Symposium and 40 for the Tutorial. Symposium Proceedings will be available shortly.

Division reported in September 2004 the following:

TCs to terminate

6-11 completed.
6-35 completed

TCs requiring follow up to establish activity (or not):

A Computerized Approach to Reflection, Transmission, and Absorption Characteristics of the Human Eye
UV Protective Materials Used in Shading
Lighting Aspects for Plant Growth in Controlled Environments
Illuminators for Treatment of Infant Hyperbilirubinemia
Optical Radiation Hazard Measurements in the Work Space
Standard Action Spectrum for UV Disinfection
Infrared Cataract
Proper Measurement of Passive UV Air Disinfection Sources

It was reported that TC 6-28, Standardised method of UVA sunscreen testing, is unable to reach consensus at this time. The Division will keep the TC open pending future developments.

New TCs

TC 6-58 A recommendation on lower limits for UV exposure.

Proposed but only approved at Division level (to date):

Lighting and UV protection needs of xeroderma pigmentosum patients.

Proposed but need to provide additional information to Division before moving forward with approval process:

UVC photocarcinogenesis from germicidal lamps
Spectral weighting of simulated solar UV radiation

CIE publications that need updating

Division 6 participated with the rest of CIE in updating the International Lighting Vocabulary. Much discussion and worthwhile submissions were provided for the document, which is now under review by CIE.

Only Technical collections that should be replaced by the full TC reports (when available) eg 134-1999 and 138-2000. TCs already exist for these, and each Technical Collection covers the work of several TCs.

Proposed meetings for second half of Quadrennium

Aix-les-Bains, France, September, 2005.

Division 8 — Mid-term report 2003-2005 (Todd Newman)

Achievements

Here is the status for the TCs that were created in the first year of the division:

TC8-01, 03, 04 have published their first reports.

TC8-05's report is in final editing between the Central Bureau and the TCC.

TC8-02 a new chapter is being added to the report. A new version of the report should be ready for TC balloting by the end of February 2005.

TC8-06 has sent a draft vocabulary to the division for balloting.

Publications since last session

156:2004: Guidelines for the evaluation of gamut mapping algorithms (TC8-03)

159:2004: A colour appearance model for colour management systems: CIECAM02 (TC8-03)

162:2004: Chromatic adaptation under mixed illumination condition when comparing softcopy and hardcopy images (TC8-04)

163:2004: The effects of fluorescence in the characterization of imaging media (R8-04)

Issues that need attention

All three division officers (Director, Secretary, and Editor) have served for two terms. Replacements should be found for two of the three. At least one should remain to provide a degree of continuity. At the moment, we have not found any candidates for these positions.

After closing down TCs that have completed their work, there will only be three TCs remaining (8-03, 8-07, and 8-08). It is important that a next generation of TCs commence work, so that Division 8 remains a viable division. This was discussed by the Division in November 2004. Several ideas were proposed for potential new TCs. The division officers must make sure that some of these ideas bear fruit.