



International Commission on Illumination  
Commission Internationale de l'Eclairage  
Internationale Beleuchtungskommission

# **CIE Code of Procedure**

## THE INTERNATIONAL COMMISSION ON ILLUMINATION

The International Commission on Illumination (CIE) is an organization devoted to international co-operation and exchange of information among its member countries on all matters relating to the art and science of lighting. Its membership consists of the National Committees in about 40 countries.

The objectives of the CIE are:

1. To provide an international forum for the discussion of all matters relating to the science, technology and art in the fields of light and lighting and for the interchange of information in these fields between countries.
2. To develop basic standards and procedures of metrology in the fields of light and lighting.
3. To provide guidance in the application of principles and procedures in the development of international and national standards in the fields of light and lighting.
4. To prepare and publish standards, reports and other publications concerned with all matters relating to the science, technology and art in the fields of light and lighting.
5. To maintain liaison and technical interaction with other international organizations concerned with matters related to the science, technology, standardization and art in the fields of light and lighting.

The work of the CIE is carried out by Technical Committees, organized in six Divisions. This work covers subjects ranging from fundamental matters to all types of lighting applications. The standards and technical reports developed by these international Divisions of the CIE are accepted throughout the world.

A plenary session is held every four years at which the work of the Divisions and Technical Committees is reported and reviewed, and plans are made for the future. The CIE is recognized as the authority on all aspects of light and lighting. As such it occupies an important position among international organizations.

## LA COMMISSION INTERNATIONALE DE L'ECLAIRAGE

La Commission Internationale de l'Eclairage (CIE) est une organisation qui se donne pour but la coopération internationale et l'échange d'informations entre les Pays membres sur toutes les questions relatives à l'art et à la science de l'éclairage. Elle est composée de Comités Nationaux représentant environ 40 pays.

Les objectifs de la CIE sont :

1. De constituer un centre d'étude international pour toute matière relevant de la science, de la technologie et de l'art de la lumière et de l'éclairage et pour l'échange entre pays d'informations dans ces domaines.
2. D'élaborer des normes et des méthodes de base pour la métrologie dans les domaines de la lumière et de l'éclairage.
3. De donner des directives pour l'application des principes et des méthodes d'élaboration de normes internationales et nationales dans les domaines de la lumière et de l'éclairage.
4. De préparer et publier des normes, rapports et autres textes, concernant toutes matières relatives à la science, la technologie et l'art dans les domaines de la lumière et de l'éclairage.
5. De maintenir une liaison et une collaboration technique avec les autres organisations internationales concernées par des sujets relatifs à la science, la technologie, la normalisation et l'art dans les domaines de la lumière et de l'éclairage.

Les travaux de la CIE sont effectués par Comités Techniques, organisés en six Divisions. Les sujets d'études s'étendent des questions fondamentales, à tous les types d'applications de l'éclairage. Les normes et les rapports techniques élaborés par ces Divisions Internationales de la CIE sont reconnus dans le monde entier.

Tous les quatre ans, une Session plénière passe en revue le travail des Divisions et des Comités Techniques, en fait rapport et établit les projets de travaux pour l'avenir. La CIE est reconnue comme la plus haute autorité en ce qui concerne tous les aspects de la lumière et de l'éclairage. Elle occupe comme telle une position importante parmi les organisations internationales.

## DIE INTERNATIONALE BELEUCHTUNGSKOMMISSION

Die Internationale Beleuchtungskommission (CIE) ist eine Organisation, die sich der internationalen Zusammenarbeit und dem Austausch von Informationen zwischen ihren Mitgliedsländern bezüglich der Kunst und Wissenschaft der Lichttechnik widmet. Die Mitgliedschaft besteht aus den Nationalen Komitees in rund 40 Ländern.

Die Ziele der CIE sind:

1. Ein internationales Forum für Diskussionen aller Fragen auf dem Gebiet der Wissenschaft, Technik und Kunst der Lichttechnik und für den Informationsaustausch auf diesen Gebieten zwischen den einzelnen Ländern zu sein.
2. Grundnormen und Verfahren der Messtechnik auf dem Gebiet der Lichttechnik zu entwickeln.
3. Richtlinien für die Anwendung von Prinzipien und Vorgängen in der Entwicklung internationaler und nationaler Normen auf dem Gebiet der Lichttechnik zu erstellen.
4. Normen, Berichte und andere Publikationen zu erstellen und zu veröffentlichen, die alle Fragen auf dem Gebiet der Wissenschaft, Technik und Kunst der Lichttechnik betreffen.
5. Liaison und technische Zusammenarbeit mit anderen internationalen Organisationen zu unterhalten, die mit Fragen der Wissenschaft, Technik, Normung und Kunst auf dem Gebiet der Lichttechnik zu tun haben.

Die Arbeit der CIE wird durch Technische Komitees geleistet, die in sechs Divisionen organisiert sind. Diese Arbeit betrifft Gebiete mit grundlegendem Inhalt bis zu allen Arten der Lichtenwendung. Die Normen und Technischen Berichte, die von diesen international zusammengesetzten Divisionen ausgearbeitet werden, sind auf der ganzen Welt anerkannt.

Alle vier Jahre findet eine Session statt, in der die Arbeiten der Divisionen berichtet und überprüft werden, sowie neue Pläne für die Zukunft ausgearbeitet werden. Die CIE wird als höchste Autorität für alle Aspekte des Lichtes und der Beleuchtung angesehen. Auf diese Weise unterhält sie eine bedeutende Stellung unter den internationalen Organisationen.

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## CONTENTS

1	Preamble .....	1
2	Abbreviations .....	1
3	Organizational Structure .....	2
3.1	Board of Administration .....	2
3.2	Division Directors Committee .....	2
3.3	Divisions .....	2
3.3.1	Structure and Operation .....	2
3.3.2	Technical Committees .....	4
3.3.3	Division Reporterships .....	9
3.3.4	Research Fora .....	9
3.3.5	Modes of Collaboration .....	9
3.3.6	Meetings of Divisions .....	12
3.3.7	Meetings of TCs .....	13
4	Events .....	14
4.1	CIE Trainings – Division Level Symposia, Tutorials and Workshops .....	14
4.2	Proposals for Hosting of CIE Quadrennial Sessions and Midterm Meetings .....	15
5	Publications .....	17
5.1	Technical Publications .....	17
5.1.1	International Standards .....	17
5.1.2	Technical Reports .....	17
5.1.3	Technical Notes .....	18
5.1.4	Supplements .....	18
5.1.5	Series .....	19
5.1.6	Technical Amendments .....	19
5.1.7	Technical Corrigenda .....	19
5.1.8	Position Statements .....	20
5.2	Proceedings .....	20
6	Drafting and Approval of CIE Publications .....	21
6.1	General – Preparing Drafts .....	21
6.1.1	Acknowledgement of Authors and Advisors .....	21
6.1.2	TC Ballots on Technical Reports .....	21
6.1.3	TC Ballots on Standards .....	22
6.2	CIE Technical Reports .....	22
6.2.1	Working Draft (WD) .....	22
6.2.2	Committee Draft (CD) .....	23
6.2.3	Enquiry Draft (ED) .....	24
6.2.4	Approval Draft (AD) .....	24
6.3	CIE International Standards in Fast Track .....	24
6.3.1	Enquiry Draft International Standard (ED/IS) .....	24
6.3.2	Approval Draft International Standard (AD/IS) .....	24
6.3.3	Draft International Standard (DIS) .....	25
6.3.4	Final Draft International Standard (FDIS) .....	25
6.4	CIE International Standards .....	25
6.4.1	Working Draft International Standard (WD/IS) .....	25
6.4.2	Committee Draft International Standard (CD/IS) .....	26

6.4.3	Enquiry Draft International Standard (ED/IS)	27
6.4.4	Approval Draft International Standard (AD/IS)	27
6.4.5	Draft International Standard (DIS)	27
6.4.6	Final Draft International Standard (FDIS)	27
6.5	ISO/IEC/CIE Draft International Standard	28
6.6	CIE Technical Note	28
6.7	Numbering of CIE Publications	28
7	Reviewing of CIE Publications	29
7.1	General Guidelines	29
7.2	Categories for CIE Publications	29
7.3	CIE International Standards	29
7.4	CIE Technical Reports	30
8	Instructions for the Preparation of CIE Publications	31
8.1	Introduction	31
8.2	Language	31
8.3	Page Setup	31
8.4	Font	31
8.5	Clause	31
8.6	Subclause	31
8.7	Paragraphs	32
8.8	Notes and Examples	32
8.9	Footnotes to the Text	32
8.10	Lists	32
8.11	Definitions	33
8.12	Abbreviations	33
8.13	Presentation of Figures	33
8.13.1	Designation	33
8.13.2	Layout of Figure Designation and Title	34
8.13.3	Layout of Figure	34
8.13.4	Notes to Figures	34
8.13.5	Footnotes to Figures	34
8.14	Presentation of Tables	34
8.14.1	Designation	34
8.14.2	Layout of Table Designation and Title	34
8.14.3	Layout of Table	34
8.14.4	Continuation of Tables	35
8.14.5	Notes to Tables	35
8.14.6	Footnotes to Tables	36
8.15	Equations	36
8.16	References	37
8.16.1	References to Elements of Text	37
8.16.2	References to Figures and Tables	37
8.16.3	Bibliographic References	37
8.17	Bibliography	38
8.18	Trade and Proprietary Names	38
8.19	Annexes	38
8.20	Table of Contents	38

8.21 Representation of Numbers and Numerical Values, Quantities, Units, Symbols and Signs.....	38
8.22 Basic Requirements .....	38
Annex A Guidelines for Notation to be used in CIE Publications .....	40
A.1 General .....	40
A.2 Symbols for Quantities and Functions .....	41
A.3 Units .....	42
A.4 Checklist .....	44
A.5 Recommended MathType Equation Editor Settings .....	45
Annex B Flow Diagrams for the Drafting and Approval Procedures of Technical Reports, International Standards in Fast Track, International Standards and Technical Notes.....	47
References .....	51



## 1 Preamble

This document gives the procedures to be used in the conduct of the affairs of the Divisions of the Commission Internationale de l'Eclairage (CIE). The purpose of this document is to provide a legal, administrative or working framework for the activities of the CIE.

## 2 Abbreviations

The following abbreviations are used throughout this document and in any other CIE communications:

AD*	Approval Draft	IS	International Standard
ADD	Associate Division Director	ISC	International Scientific Committee
ADM	Alternate Division Member	JTC	Joint Technical Committee
AM	Associate Member	JTCC	Joint Technical Committee Chair
ANC	Associate National Committee	JTCCoC	Joint Technical Committee Co-Chair
AR	Activity Report	LO	Liaison Officer
BA	Board of Administration	NC	National Committee
CB	Central Bureau	PS	Position Statement
CD*	Committee Draft	RF	Research Forum
CP, CoP	Code of Procedure	SM	Supportive Member
CTS	Collaboration Tool Suite	TA	Technical Amendment
D, DIV	Division	TC	Technical Committee
DA	Division Associate	TCC	TC Chair
DD	Division Director	TCM	TC Member
DDC	Division Directors Committee	TN	Technical Note
DE	Division Editor	ToR	Terms of Reference
DIS	Draft International Standard	TP	Tutorial Panel
DM	Division Member	TR	Technical Report
DMT	Division Management Team	VP	Vice-President
DO	Division Officer	VPP	Vice-President Publications
DR	Division Reportership	VPS	Vice-President Standards
DRR	Division Reportership Report	VPT	Vice-President Technical
DS	Division Secretary	WP	Work Programme
ED*	Enquiry Draft	WD*	Working Draft
FDIS	Final Draft International Standard	WP	Workshop Panel

\* To distinguish between drafts of the different publication types (TR, IS, TN, TA) the respective draft designation (WD, CD, ED, AD) shall be followed by a "/" and the abbreviation of the publication type, e.g. 'ED/IS'.

### **3 Organizational Structure**

#### **3.1 Board of Administration**

The Board of Administration is responsible for the overall management of the technical work and is responsible for

- a) approval and re-approval of Division Officers on a two-years basis,
- b) establishment of Technical Committees,
- c) appointment of Technical Committee Chair,
- d) re-approval of Technical Committee Chair as laid out in 3.3.2.2,
- e) Terms of Reference and Work Programmes of the Divisions,
- f) Terms of Reference and Work Programmes of the Technical Committees,
- g) disbanding of Technical Committees,
- h) monitoring the progress of the technical work within the Divisions with the assistance of the Central Bureau and taking appropriate action,
- i) approval of publications,
- j) approval of Division Symposia, Tutorials and Workshops,
- k) making recommendations to the hosting of Quadrennial Sessions and Midterm Meetings to the General Assembly.

#### **3.2 Division Directors Committee**

The Division Directors Committee is coordinating and adjusting the respective Division Strategies and Work Programmes for approval by the BA. It is chaired by the Vice-President Technical. Vice-President Publications, Vice-President Standards and all Division Directors are members. It shall meet semi-annually to develop, monitor and review the Technical Strategy of Divisions and of the Commission as such.

#### **3.3 Divisions**

The Division is responsible for the conduct of the approved WP within the procedures given in this document. Each Division should advise the BA through its DD on policy and on the operational aspects of the technical activity of the Commission as well as on the scope of technical activities as stated in its WP.

##### **3.3.1 Structure and Operation**

###### **3.3.1.1 Division Officers**

The DD, in consultation with the DMs, shall nominate a DS and a DE. These nominations must be approved by the BA. The function of the DS and the DE is to support the DD in the "day to day" running of the Division. The Division Director, Associate Division Director(s), Division Secretary and Division Editor are referred to as Division Officers and form the so-called Division Management Team. They do not need to be DMs, but upon appointment shall become ex-officio DMs without voting rights.

###### **3.3.1.2 Division Director**

The functions of a DD include

- a) promoting the objectives of the CIE within the Division,
- b) coordinating the WP of the Division, especially between Division meetings,
- c) calling and chairing meetings of the Division,
- d) representing the Division on the BA,
- e) implementing policies and directives of the BA,
- f) keeping the VPT and CB informed on major developments of work and of changes in the organization of the Division.

Each DD shall, with the approval of the Division, appoint Liaison Officers whose function is to provide liaison and maintain technical interaction with other CIE Divisions and other international organizations (see 3.3.5.1).

### **3.3.1.3 Associate Division Director**

The DD, in consultation with the DMs, may nominate a number of ADDs. These nominations must be approved by the BA. The duties and tasks of the ADD should be drawn up by the DD together with the ADD, to suit the requirements of the Division. Tasks and appointment of each ADD should be reviewed every two years.

### **3.3.1.4 Division Secretary**

A DD shall, with the approval of the Division and the BA, appoint a DS to administer the Division. The duties and authority of the DS should be drawn up by the DD together with the DS, to suit the requirements of the Division. Duties of the DS comprise

- a) to maintain an up-to-date list of DMs and their contact data;
- b) to circulate material to DMs, President, VPT and CB;
- c) to prepare a calling notice for Division meetings at least three months prior to the date of the meeting. This notice should include a call for agenda items;
- d) to circulate an agenda at least four weeks prior to the meeting;
- e) to circulate a call for nominations for DD ten months prior to the quadrennial Session;
- f) to prepare and distribute minutes of Division meetings (see 3.3.6.5) to which is attached the current list of DMs, TCMs, DRs and LOs eight weeks after the meeting at the latest;
- g) to collate comments to the minutes;
- h) to organize ballots on Division documents and to send the results together with any comments to the CB and DD, TCC and DE;
- i) to conduct ballots at Division meetings, the results to be included in the minutes.

### **3.3.1.5 Division Editor**

A DD shall, with the approval of the Division and the BA, appoint a DE whose function is to ensure that the publications of the Division are technically consistent and prepared in accordance with instructions of the VPP as well as the CB and the guidance given in the respective clauses of this CP.

Items which the DE must ensure are attended to in the final WD version, prior to submission to CB for preparation of a CD, include:

- Accuracy and consistency of the technical content.
- The WD is consistent with the topic given by the ToR.
- Attention is given to the use of proper English throughout the text.
- Figures and diagrams are of publishable quality.
- The WD is prepared based on the CIE template file (see 6.2.1, 6.4.1, 6.6), and in accordance with the "Instructions for the Preparation of CIE Publications" (see Clause 8) and the "Guidelines for Notation to be used in CIE Publications" (see Annex A).

The DE is responsible for the adherence to these items. He/she may reject a WD and return it to the responsibility of the TCC if one or more of these items are not fulfilled.

### **3.3.1.6 Division Members**

Each National Committee shall be entitled to appoint one voting DM and one non-voting Alternate DM (ADM) to each Division. Each ANC, AM and SM shall be entitled to appoint one non-voting member to each Division. TCCs and the Division Officers shall be ex-officio DMs without voting rights.

All members shall

- a) participate in the work of the Division,
- b) represent the interests of their NC in the technical field of the Division where applicable,
- c) advise their NC on Division activity where applicable,
- d) recommend items for the WP of the Division,
- e) recommend TC Chairs,
- f) monitor technical activity within the Division.

The ADM can attend Division Meetings without voting rights. If the voting DM is unable to attend a Division Meeting, the ADM may attend in his or her place with voting rights. If neither the voting DM nor the ADM is available for the meeting, the National Committee may appoint a member from their own NC or the DM from another country as its proxy for that meeting. In such a case, the Division shall be notified of the proxy not less than seven days prior to the meeting (except in exceptional circumstances). In either case, the Division will notify the Central Bureau of the substitution.

### **3.3.1.7 Division Associate**

Each Division may accept individual experts who need formal approval by the Division Officers. The outcome of the official decision has to be sent to the Central Bureau for registering them in the official databases of the Commission.

## **3.3.2 Technical Committees**

Each Division shall make proposals for WPs, to be submitted to the Board of Administration for approval, to be carried out by Technical Committees. A TC shall thus be responsible for one item of the WP of the Division, restricting their scope of activity to the ToR adopted by the Division and approved by the BA.

The Division shall nominate a TC Chair for any Technical Committee it wishes to establish, the nomination to be submitted to the Board of Administration for approval. The nominee has to be endorsed by or belong to the statutory members of the Commission (see CIE Statutes, Clause 4.1). A candidate does not need to be a DM, but upon appointment shall become an ex-officio DM without voting rights.

A Technical Committee shall be dissolved when its specific task is completed, usually signalled by the publication of a document. At the stage of dissolution the TC Chair shall send all relevant background material to the Central Bureau for archiving.

### **3.3.2.1 Establishment and Operation**

If the CIE is to respond to the need for Technical Reports and is to be both up-to-date and relevant, it is important that TCs complete their work in a timely fashion. As TRs and ISs have to meet different requirements, though, procedures for establishment and operation vary depending on the type of publication.

### 3.3.2.1.1 Establishment of a TC Aiming to Publish a Technical Report

The procedure for establishment of a TC, aiming to publish a TR, is as follows:

- a) Each officially registered DM or DA (see 3.3.1.6 and 3.3.1.7) may prepare a TC proposal by using the [TC Proposal Form](#) for consideration by the Division. It shall be submitted for review to the DMT prior to consideration by the Division.
- b) The Division shall decide whether to recommend the establishment of the proposed TC and shall agree the ToR, the Scope and the TCC. The time span between the circulation of the recommendation of the DMT and the actual ballot shall be at least four weeks.
- c) Any proposal for a new TC will be circulated by CB to Division Directors who shall review the proposal to check if there might be an interest or even requirement to set up a JTC. In case there is an interest to form a JTC the DDs shall coordinate and jointly develop the JTC proposal.
- d) If it is decided that the TC is just assigned to one Division, the relevant DD shall make a formal recommendation to the BA in writing for the establishment of the TC. If a JTC is decided, the procedure in 3.3.5.2 shall be followed.
- e) The BA shall decide on whether or not to approve establishment of the TC. This may be subject to specified conditions, such as a modification to the proposed ToR, a change to the suggested TCC, a requirement to liaise with another Division or other Divisions, or a requirement for a detailed membership list to be submitted (and agreed) prior to approval.
- f) The TC will get a number assigned by the CB after BA-approval.
- g) The acting TCC sends the contact details of the TCMs to the CB which processes the data into the CIE Collaboration Tool Suite and the TC database. Only after the data of TCMs have been submitted the TC will be included in the list of active TCs both in the TC-database and the website. A TC shall comprise at least five members from five different countries having expressed their intention to participate actively in the work of the TC. If these requirements are not met within six months the Division as well as the BA approval of the TC is considered null and void.
- h) The TCC has to attend at least one training session on the use of the Collaboration Tool Suite and of the CP. If after six months this requirement is not met the Division as well as BA approval is considered null and void. CB will inform the BA and the acting TCC that the TC has not met the requirements and is therefore not established.
- i) The TC shall be established for a four-year term initially, with the TCC also appointed for a four-year term.
- j) The TCC shall appoint members to the TC following the guidelines given in 3.3.2.3.
- k) The TCC, in conjunction with the TCMs, shall prepare a detailed work plan for the TC, which shall be made available to all DMs and the BA, and uploaded to the Collaboration Tool Suite.
- l) The TCC, ToR and detailed work plan for each TC as well as its progress in a timely manner shall be reviewed by the relevant Division each year. Any proposed changes to TCC or ToR shall be submitted by the DD to the BA for approval.
- m) At the end of each four-year term, the requirement for continuation of the work of the TC and the appointment of the TCC shall be the subject of a formal vote within the relevant Division. Based on this vote, the DD shall make a formal recommendation to the BA. The BA shall decide whether the work shall continue.
- n) If continuation is agreed, this shall be for a further four-year term (or shorter period if the BA so decides), at the end of which step l) shall be repeated.

### **3.3.2.1.2 Establishment of a TC Aiming to Publish an International Standard**

The procedure for establishment of a TC, aiming to publish an IS, is as follows:

- a) Each officially registered DM or DA (see 3.3.1.6 and 3.3.1.7) may prepare a TC proposal by using the [TC Proposal Form](#) for consideration by the Division. It shall be submitted for review to the DMT prior to consideration by the Division.
- b) The Division shall decide whether to recommend the establishment of the proposed TC and shall agree the ToR, the Scope and the TCC. The time span between the circulation of the recommendation of the DMT and the actual ballot shall be at least four weeks.
- c) Any proposal for a new TC will be circulated by CB to Division Directors who shall review the proposal to check if there might be an interest or even requirement to set up a JTC. In case there is an interest to form a JTC the DDs shall coordinate and jointly develop the JTC proposal.
- d) If it is decided that the TC is just assigned to one Division, the relevant DD shall make a formal recommendation to the BA in writing for the establishment of the TC. If a JTC is decided, the procedure in 3.3.5.2 shall be followed.
- e) The BA shall decide on whether or not to approve establishment of the TC. This may be subject to specified conditions, such as a modification to the proposed ToR, a change to the suggested TCC, a requirement to liaise with another Division or Divisions, or a requirement for a detailed membership list to be submitted (and agreed) prior to approval.
- f) The TC will get a number assigned by the CB after BA-approval.
- g) The acting TCC sends the contact details of the TCMs to the CB which processes the data into the CIE Collaboration Tool Suite and the TC database. Only after the data of TCMs have been submitted the TC will be included in the list of active TCs both in the TC-database and the website. A TC shall comprise at least five members from five different countries having expressed their intention to participate actively in the work of the TC. If these requirements are not met within six months the Division as well as the BA approval of the TC is considered null and void.
- h) Those NCs in whose territory participating experts are residents or companies have their headquarters will be informed by the Central Bureau on their participation.
- i) The TCC has to attend at least one training session on the use of the Collaboration Tool Suite and of the CP. If after six months this requirement is not met the Division as well as BA approval is considered null and void. CB will inform the BA and the acting TCC that the TC has not met the requirements and is therefore not established.
- j) The TC shall be established for a four-year term initially, with the TCC also appointed for a four-year term.
- k) The TCC shall appoint members to the TC following the guidelines given in 3.3.2.3.
- l) The TCC, in conjunction with the TCMs, shall prepare a detailed work plan for the TC, which shall be made available to all DMs and the BA and uploaded to the Collaboration Tool Suite.
- m) The TCC, ToR and detailed work plan for each TC as well as its progress in a timely manner shall be reviewed by the relevant Division each year. Any proposed changes to TCC or ToR shall be submitted by the DD to the BA for approval.
- n) At the end of each four-year term, the requirement for continuation of the work of the TC and the appointment of the TCC shall be the subject of a formal vote within the relevant Division. Based on this vote, the DD shall make a formal recommendation to the BA. The BA shall decide whether the work shall continue.
- o) If continuation is agreed, this shall be for a further four-year term (or shorter period if the BA so decides), at the end of which step m) shall be repeated.

### 3.3.2.2 TC Chairs

The TCC is responsible for calling meetings, preparing the agenda and circulating the draft publication. The TCC is responsible for keeping a record of the meetings and preparing the minutes. This documentation shall be circulated within the Division as agreed with the DD and copies of minutes sent to the CB.

The TCC shall normally serve for only one four-year term, although this may be extended to two terms with the formal agreement of the Division and the BA. The TCC shall not serve for more than two four-year terms.

The functions of a TCC include:

- a) Nominating TCMs.
- b) Ensuring that TCMs provided signed [CIE Copyright Agreement Forms](#) and transmitting them to CB.

NOTE If the Copyright Agreement Forms of the TCMs are not filed with CB the TC will not be considered as active and therefore neither included in the TC database nor in the website.

- c) Coordinating the work of the TC, specifically ensuring that all knowledge and viewpoints are considered, that the TC keeps to its terms of reference and to its time schedule.
- d) Taking care that all relevant information, such as work plan, target dates, drafts and related email exchanges, is stored in the CIE Collaboration Tool Suite.
- e) Conducting TC meetings and keeping of records and minutes.
- f) Responsibility for preparing drafts of publications and to ensure that TCMs are properly involved in any stage of the publishing procedure.
- g) Annual reporting to the Division to be submitted four weeks prior the Division Meeting at the latest.
- h) In addition to the annual reporting to the Division the TCC shall report the status of the TC to the Division Director twice a year, once at the Division Meeting and a second report six months later. The format of the report will be determined by the specific Division but at the very least shall specify if the TC is "Active" or "Inactive".
- i) TCC should, from time to time, examine personal and/or working commitments to see whether these still permit effective leadership of the TC. If in doubt, this should be discussed with the DD. Possible solutions include the change of TCC.
- j) If the TCC does not provide a report, then regardless of the length of time for which the TC has been running (i.e. even for TCs less than four years old) there must be a formal vote at the Division meeting to decide whether the TC should continue and, if it is to continue, to identify a possible new TCC.
- k) After the Division meeting, the DD shall write to all TCCs who did not provide a report to request that a progress report and a detailed work plan (with dates) be submitted within four weeks. If those requirements are not met, the TC will be closed or a new TCC will be appointed, depending on the respective voting result.

### 3.3.2.3 TC Members

A TCC appoints TCMs. A "Call for Experts" will be circulated by the CB to all statutory members and liaison organizations in question after the approval of the TC by the BA.

Alternatively, all mentioned parties can request to be kept posted with all TC documents electronically.

- a) The TCMs must be experts within the item referred to in the WP of the particular TC. They need not be DMs.
- b) The membership of a TC must represent the range of knowledge and viewpoints which exist. It is not necessary to have a TCM from each NC. Normally the size of the committee will be determined by the range of experts available and by considerations of efficient functioning.
- c) Anyone wishing to join a TC shall write to the TCC, copied to DD and DS, giving a clear commitment to actively participate in the work of the TC (if accepted as a TCM) by using the "[CIE Technical Committee and Research Forum Membership Application Form](#)". In case of a TC working on an IS 3.3.2.1.2, list item g) shall additionally apply.
- d) An NC may, if it so wishes, make it a requirement that anyone within their country who participates in a TC must be a member of the NC. Any such requirement must be notified to CB. A list of NCs with this requirement will be maintained by CB and made available on the CIE website.

NOTE 1 This requirement cannot be applied should an NC not have the possibility of individual membership.

NOTE 2 This requirement does not apply to TC Chairs as they are approved by the BA.

- e) NCs that apply the requirement in d) should monitor membership of TCs periodically and inform CB of any non-compliant TCMs. In this case, CB will notify each relevant TCC. Generally the TCC should then inform the TCM that he/she must join his/her NC in order to remain as a TCM and suspend the TCM from further involvement in the work of the TC until NC membership is confirmed. However a TCC is authorized to invite any needed experts as TCMs for appropriate reasons, thereby overruling the NC membership requirement (e.g. if the TCM has expertise that is essential to the work of the TC which is not available from other TCMs, or if the TCM is from an organization or retired and has no support for CIE work). In this case the TCC must inform CB of this decision and the reason for it; CB will forward this information to the relevant NC.
- f) On receipt of an application to join the TC, the TCC shall review the existing TC membership, and the activity of each TCM, to assess whether the new applicant will bring relevant expertise to the TC that is currently lacking, or additional expertise in an area where the existing TCMs are not particularly active, or make a valuable contribution to the work of the TC in some other way.
- g) If the TCC feels that the new applicant will be a valuable addition to the TC membership, they should write a formal letter of appointment, copied to the DD and DS, including information on how the new TCM is expected to contribute.
- h) If the TCC feels that the current membership adequately fulfils the need for a range of knowledge and viewpoints in the work of the TC and that the new applicant will not assist in the more rapid completion of the work, they should first discuss this with DD and then write to the new applicant, copied to DD and DS, explaining the decision. In making this decision, although the technical expertise required within the TC should be the first priority, consideration should also be given to the following points:
  - the international nature of the CIE and the desirability of having inputs from a number of different countries (but not necessarily all countries),
  - the desirability of involving TCMs at early or developmental stages in their careers.
- i) TCMs are not DMs, unless already so by virtue of another position.
- j) The TCC shall review the TCM list annually. If, during this review, the TCC identifies a TCM who has been inactive for some time, this TCM shall be contacted in writing by TCC (copied to DD, DS and the DM as well as the NC of the country from which the TCM comes) to determine whether the TCM is still interested in the work of the TC and asking for a commitment to contribute to a specific area of the TC's work (as in point c) above for potential new TCMs). Unless a sufficiently positive response is returned, the TCM should be removed from the membership list.
- k) Those TCMs who have made a significant contribution to the work of the TC and to the preparation of a Technical Report shall be acknowledged as Authors of the Technical Report. Authors need not be TCMs at the time of completion of the TC's work, but they must have made a significant contribution during the period in which they were a member. Where a

TCM has taken a less active role, acting as an advisor rather than a contributor to the work, this may be acknowledged in the final report by inclusion in a list of Advisors. (See also 6.1.1.)

### **3.3.3 Division Reporterships**

Each DD may, with the approval of the Division, establish a Division Reportership (DR), often abbreviated to simply "Reportership", by appointing a Reporter whose function is to inform the Division on relevant technical subjects, by provision of a Division Reportership Report (DRR). The tasks and objectives of the Division Reportership shall be defined through terms of reference.

If at the establishment of a DR it is the intention of the DR to produce a TN, which shall be on a topic not already covered by a TC, then this shall be explicitly expressed in the terms of references.

The Division may decide upon completion of a DR that the DRR, independent of the approved terms of reference of the DR, is made publicly available as a TN.

For the criteria of and procedure for the publication of a TN, see 5.1.3.

The Reporter of a DR, if not already a member of the Division, shall become an ex-officio Division Member (DM) without voting rights. A Reporter may be assisted by experts in the area of expertise of the DR. These experts are not members of the DR, but can be acknowledged in the final publication with the following statement: "The support of <Name (Country)> during the preparation of this Technical Note is appreciated."

### **3.3.4 Research Fora**

A Research Forum's (RF's) function is to provide the opportunity for researchers to discuss ideas and exchange data on a given scientific or technical topic and where there is insufficient scientific knowledge to start a new Technical Committee. Members of an RF can be any individual who expresses an interest in the given topic, subject to their agreement to adhere to the CIE Code of Ethics as it applies to their participation.

An RF may be proposed to the Division Directors Committee (DDC), by recommendation from a Division or from the VPT, with the name of the proposed convener, by submission of the completed RF proposal form. The RF will be established by approval of the DDC.

An RF shall have shared space within the Collaboration Tool Suite which is accessible to the RF members. There shall be no requirement for an RF to produce a deliverable, but it may formulate proposals for TCs, DRs, expert symposia, training and other outreach activities for presentation to the relevant Division(s).

The DDC shall review the list of RFs annually to determine whether the topics remain relevant. RFs thus determined to have outlived their usefulness will be dissolved and their Collaboration Tool Suite spaces shall be archived.

An RF shall be led by its convener, who normally serves for one four-year term, which may be extended by another four-year term with approval of the DDC. The RF convener shall provide an annual report (activity summary) on the discussions taking place over the previous year. CB will advise the convener eight weeks prior to the DDC meeting during which the annual reports of RFs will be reviewed. The annual report shall be submitted to CB four weeks prior to the DDC meeting for circulation to the DDC.

### **3.3.5 Modes of Collaboration**

#### **3.3.5.1 Liaisons**

CIE work is sometimes closely related to the work of other international or regional organizations like ISO, IEC, CEN, etc. To avoid duplication of work and to secure a good cooperation liaisons with such organizations are established and Liaison Officers named.

However, an effective liaison with such other organizations with liaison status requires that Liaison Officers have clearly defined responsibilities.

Each DD shall, with the approval of the Division, appoint Liaison Officers whose function is to provide liaison and maintain technical interaction with other CIE Divisions and other international organizations. Wherever possible a bi-directional liaison has to be avoided. It should be clear in which direction (from CIE or to CIE) the liaison shall work (see list item f) below)

New liaisons from CIE Divisions with other organizations must, after approval of the respective Division, be communicated to the CB (the implementer of all these agreements and the archive of the CIE) which will register and formally start the liaison process.

The responsibilities of Liaison Officers are:

- a) Review all documents in general circulation within that organization for applicability to the work of the CIE and forward appropriate documents, together with a cover letter explaining their importance in relationship to CIE work, to the CIE Central Bureau and to the relevant CIE Division for entry into the document register and for distribution to its members. To make this possible the CIE Central Bureau has to ensure that their name is on the mailing list of the organization to which they are a liaison.
- b) Send copies of applicable CIE documents explaining the importance of the document to the work of the organization in liaison to the CIE Central Bureau which will forward it to that organization.
- c) Actively work to resolve conflicts between CIE and the organization to which they are a liaison. This should involve not merely understanding the positions of both CIE and the other organization but consistently working to resolve any differences. The Liaison Officer has the responsibility of preparing input documents to CIE as expert contributions suggesting appropriate resolutions where there are conflicts.
- d) As necessary, attend meetings of the organization to which they are in liaison. Although Liaison Officers are not expected to attend all meetings of the organization, they are expected to have adequate financial funds so that they are able to attend meetings when it is necessary.
- e) Prepare written reports for the relevant CIE Division when necessary to explain the progress of work in the organization to which they are in liaison. Prepare a written liaison report and report orally on the status of their liaison work at plenary meetings of the relevant CIE Division. Send copies of all reports to the CIE Central Bureau.
- f) Due to the extreme demands placed upon a person to participate fully in the activities of an organization such as CIE, it is not feasible for a person to fully participate in the activities of another organization as well, and this is not expected from CIE Liaison Officers. Indeed, it is an obvious conflict of interest if a person participates as a primary member of two organizations which work in areas where there may be different interests and an overlap of responsibilities. Therefore, CIE expects its Liaison Officers to have liaison status only within that organization and not be active members or participants, and may view such participation as a clear conflict of interest and reason for removal as the CIE liaison to that organization.

### **3.3.5.2 Procedures for Managing Joint TCs within CIE**

#### **3.3.5.2.1 Establishment**

- 1) Joint TCs within CIE (abbreviated as JTC) may be created to develop Technical Reports or International Standards on subjects that require substantial contributions from two or more Divisions of CIE.
- 2) Any proposal for a new TC will be circulated by CB to Division Directors who shall review the proposal to check if there might be an interest or even requirement to set up a JTC. In

case there is an interest to form a JTC the DDs shall coordinate and jointly develop the JTC proposal.

- The proposal shall be discussed and approved in each participating Division prior to the submission to BA. Proper coordination remains with the Division Directors (or Division Management Teams).
  - Each participating Division shall appoint one co-chair.
  - The Division to which the chair belongs will be the Lead Division.
- 3) The JTC proposal shall be submitted then to CIE BA by using the [TC Proposal Form](#).
  - 4) The name and numbering of the JTC shall be JTC x (Dy/Dz/D...), with "x" being a sequential number starting 1 and "y", "z", ... being the numbers of the Divisions involved.
  - 5) The registration procedure of the JTC shall follow the requirements of the CP (such as work plan, membership form, copyright form, chairperson's training).

### **3.3.5.2.2 Maintenance**

- 1) The JTC Chair, together with the JTC Co-Chair(s), is responsible for managing the JTC. This includes the joint organization of meetings, taking into account a balance between all Divisions concerned. The progress of the JTC shall be reported to all participating Divisions.
- 2) Approval of drafts follows the usual CIE procedures and naturally includes all participating Divisions as well as their DDs where necessary.

### **3.3.5.3 Procedures for Managing Joint TCs of CIE and other Organizations**

There are different types of collaboration between CIE and other organizations some of which are handled through formal agreements such as the Vienna Agreement and others which are more ad-hoc. In the absence of separate agreements defining the formal collaboration the procedures given below shall be followed.

#### **3.3.5.3.1 Collaborative Relation**

One organization takes the lead in the activities, but the work sessions and meetings receive delegates from the other who have observer status and who assure the technical liaison with the other organization. Such observers have the right to intervene in the debate, but have no right to vote. This liaison affects the exchange of information.

#### **3.3.5.3.2 Co-operation using the Vienna Agreement**

ISO, IEC, CEN and CIE can agree at an early stage in the development of an International Standard to make use of the Vienna Agreement. This means that the draft publication is developed by an ISO, IEC, CEN or CIE technical body (called ISO lead, IEC lead, CEN lead or CIE lead) and in the final stage notified for the simultaneous approval by the other. The approval process and publication will be performed by each involved organization, as far as possible in a parallel and synchronized way (as it is stipulated in the Vienna Agreement), each according to its own rules of procedure.

### **3.3.5.4 Joint Development of a Publication (Interorganizational JTC)**

#### **3.3.5.4.1 Establishment**

- 1) Joint TCs with other organizations (Interorganizational JTC) may be created to develop a joint publication or a joint standard by both organizations or other specific work to be done jointly, normally based on a cooperation agreement between the CIE and the other organization.
- 2) An Interorganizational JTC can be proposed by either organization and has to be submitted to CB. CB will then circulate the proposal to the DDs for decision on which Divisions shall be involved. The final proposal shall then be submitted for BA consideration using the [TC Proposal Form](#).
  - The members can overlap for both organizations if individuals are active in both organizations.

- The chair can be from either organization, and the co-chair is selected from the other.
  - In the case where several Divisions are involved the procedures given in 3.3.4.2 shall be followed.
- 3) The CIE Division to which the chair or co-chair from CIE belongs to will be the Lead Division. If necessary, relevant Division(s) may also be identified for maintenance purposes.
  - 4) The proposal shall be approved by Division vote in the Lead Division and CIE BA.
  - 5) If a proposal is prepared by CIE, the voting will be on the decision to propose this Interorganizational JTC to the other organization and to establish it by approval of both organizations.  
  
If a proposal has been prepared and already approved by the other organization, the voting in CIE will be for a decision to establish the Interorganizational JTC.
  - 6) Name and numbering of the Interorganizational JTC shall be CIE JTC x (CIE-yyy) where “yyy” is the abbreviation of the other organization and “x” is a serial number starting from 1, and incremented for all JTCs (including those between Divisions)

The registration of the Interorganizational JTC in CIE shall follow the requirements of the CP when it comes to CIE participants (membership form, copyright form, (co-)chair’s training, etc). Participants of the other organization shall provide the copyright form only.

#### **3.3.5.4.2 Maintenance**

- 1) Progress of the Interorganizational JTC shall be reported by the JTCC or JTCCoC to the DD of the Lead Division copied to VPT and DDs of relevant divisions, if any.
- 2) The approval process and publication will be performed by each organization according to its own rules of procedure, as far as possible in a parallel and synchronized way. If necessary, an editorial panel consisting of a CIE delegation (the Interorganizational JTC chair or co-chair from CIE, DD of Lead Division, VPP, VPT, and CB) and a corresponding delegation of the other organization to prepare a revised draft shall be set up.
- 3) Meetings of the Interorganizational JTC are organized by the chair and co-chair(s) of the JTC, consulting the TCMs. Physical meetings can be held in conjunction with other meetings of either organization or independently and should be approved by both organizations.

### **3.3.6 Meetings of Divisions**

#### **3.3.6.1 Scheduling of Meetings**

It is recommended that each Division draw up a programme of meetings for at least two years ahead. In doing so, account should be taken of the international nature of the CIE activity. The CB shall be consulted and informed of this programme. Meetings of Divisions shall be held at least twice each term.

#### **3.3.6.2 Constituents of the Meeting**

The constituents of a meeting are the DD, ADD(s), DS, DE, DMs, TCCs, DRs, LOs. If any DMs are unable to attend a meeting of the Division, they may delegate their votes to alternative representatives from their country or to another constituent of the meeting. In either case the DD must be informed in writing.

Observers may attend, but without voting rights.

There is no limiting quorum for a Division meeting that has been correctly announced.

#### **3.3.6.3 Chair of the Meeting**

The chair of a Division meeting shall be the DD. If unable to attend, the DD may appoint one of the DOs to chair the meeting.

#### **3.3.6.4 Meeting Procedure**

The business shall be conducted according to an agenda, circulated to reach the constituents at least four weeks before the meeting. It is recommended that reports, drafts, information and discussion papers be circulated beforehand so that constituents can come to meetings fully briefed and so that meeting time is used efficiently.

The business should be conducted according to normally accepted procedures, i.e., formal items should be dealt with by motion, with each speaker limited to one contribution. Written contributions should also be considered within any debate. Minority viewpoints should not be inhibited and time should be given, if required, for general debate on policy.

#### **3.3.6.5 Minutes of Division Meetings**

The DS shall be responsible for keeping a record of the meeting, circulating an attendance list and preparing minutes.

The minutes shall record the essentials of the meeting, including decisions, minority viewpoints, actions required and persons responsible to carry out these actions.

The attendance list and minutes of each Division meeting shall be sent to the constituents, VPT and CB and at the same time shall be uploaded to the relating folder of the Collaboration Tool Suite.

#### **3.3.7 Meetings of TCs**

It is advisable to also hold TC meetings, whenever possible, electronically or in connection with Division meetings or other CIE events. The meeting agenda shall be circulated four weeks in advance of the meeting. Details of the meeting calendar should be sent to the responsible Division Management Team.

TC meetings shall be open to all interested parties. However, the TCC should make it clear that non-members are welcomed in an observer capacity; the work of the TC should not be impeded by their presence.

Printed copies of the current TC Draft may be made available to observers attending TC meetings at the discretion of the TCC; they should be clearly marked as 'Confidential draft, not for distribution'.

An attendance list shall be circulated at each TC meeting. It shall be, together with the meeting minutes, available in the respective file in the Collaboration Tool Suite.

## **4 Events**

CIE holds several types of events as detailed below.

CIE Quadrennial Sessions and CIE Midterm Meetings are official meetings of the CIE. These events incorporate administrative meetings, technical meetings and a conference. The procedure for bidding for a CIE Quadrennial Session or a CIE Midterm Meeting is given in 4.2.

Beside conferences within CIE Quadrennial Sessions and CIE Midterm Meetings, CIE also holds other conferences (e.g. CIE Topical Conferences) based on respective decisions of the BA.

All CIE Conferences cover a wide range of topics of relevance to the work of the CIE. CIE Conferences require the formation of an International Scientific Committee (ISC), comprised of VPT, chairing the ISC, VPP, delegates from the relevant Divisions and representation from the local host. The function of the ISC is to plan and organize the scientific content of the conference. CIE Conferences will include presentations from invited speakers, oral presentations and poster presentations selected from the abstract submission process. Papers resulting from presentations to a CIE Conference are published as a set of CIE Proceedings.

CIE Symposia are similar to CIE Conferences except that the topic is highly focussed on one aspect of the work of the CIE, usually limited to the scope of a Division. CIE Symposia require the formation of an International Scientific Committee (ISC) comprised of members from within the relevant Division(s) and representation from the host of the symposium. The function of the ISC is to plan and organize the scientific content of the symposium. CIE Symposia can include presentations from invited speakers, oral presentations and poster presentations selected from the abstract submission process. Papers resulting from presentations to a CIE Symposium are published as a set of CIE Proceedings.

CIE Tutorials are intended to give training on a specific topic, work or publication of the CIE. CIE Tutorials can include practical aspects. CIE Tutorials require the formation of a Tutorial Panel (TP), the TP is comprised of members from the relevant Division(s), presenters at the Tutorial and representation from the host of the tutorial. The function of the TP is to develop the tutorial presentations for the tutorial.

CIE Workshops are intended to present material and promote discussion on a specific topic of interest to the CIE. CIE Workshops require the formation of a Workshop Panel (WP), the WP is comprised of members from the relevant Division(s), presenters at the Workshop and representation from the local host. The function of the WP is to develop the content and structure of the workshop. If a Workshop allows for the presentation of poster papers that will complement the outcome of the Workshop, a CIE abstract submission process will be available and it is the function of the WP to review these submissions.

### **4.1 Approval of CIE Symposia, Tutorials and Workshops**

Each training or similar activity which is given on behalf of CIE has to be approved by the BA before publicizing it or agreeing on it with a contracting partner.

The following procedure will apply:

- 1) The Division(s) develops the proposal for the event. The proposal shall include the following information:
  - a) Type of training: symposium, tutorial or workshop (or combination). Note that for symposia an invitation for the submission of papers from participants will be available as will symposium proceedings.
  - b) Title and scope of the training.
  - c) Division(s) involved and initial members of the ISC, TP or WP.
  - d) Name of hosting institute or organization, host point of contact, confirmation that the host is able to undertake this role.
  - e) Date of proposed training, taking into account other CIE Events.
  - f) Likely number of attendees.
- 2) The proposal shall be approved by the Division(s).
- 3) The proposal shall be reviewed at a Division Directors Meeting.
- 4) The approved and reviewed proposal shall be sent to CB for circulation to the BA for further approval.
- 5) If approved CIE Scientific Services GmbH shall establish a contract with the host for the purpose of hosting a CIE Event.
- 6) The host shall form their own local organizing committee (LOC) and, depending upon the size of the event, might need to contract the services of a professional conference organizer (PCO).
- 7) The ISC, TP or WP along with the LOC shall develop materials to publicize the event (these will be included on the webpage for the event), including:
  - a) Outline/purpose of the event.
  - b) Topics of the event – to be used for abstract submission for papers in the case of a symposium or conference.
  - c) General information about the location of the event as provided by the proposed host.
  - d) The ISC, TP or WP determines matters such as invited speakers/tutors/presenters. The fee waiving, if any, of such individuals is up to the discretion of CIE Scientific Services GmbH and the host.

PowerPoint presentations shall be on a CIE Template, as provided by CIE CB on an as-needs basis, and carry only its logo and not the one of the institution that a trainer/speaker might be affiliated to. However, this can be used on the first slide of the presentation.

To ensure compliance with CIE Policies the contents of each training or similar activity has to be reviewed by a CIE Training Review Panel to ensure compliance with CIE Policies.

Each training has to be evaluated by a CIE Standard Evaluation Form, as provided by CIE CB on an as-needs basis, which will be circulated to participants as an online questionnaire after the training was completed.

## **4.2 Proposals for Hosting of CIE Quadrennial Sessions and Midterm Meetings**

- a) A call for proposals is sent out to NCs. The timelines for sending proposals are:
  - Quadrennial Session - six years before expected time of Session (around the time of the preceding Midterm Meeting)
  - Midterm Meeting - four years before expected time of the Midterm Meeting (around the time of preceding Midterm Meeting)

- b) If the CIE has already received any proposals at the time of sending the call for proposals, the call for proposals should mention the proposal(s) already received.
- c) Submitted proposals should include a venue (city), approximate time of year (month), and hosting organization (usually an NC and any other supporting organizations).
- d) Proposals shall refer to the requirements outlined in the CIE Scientific Services GmbH Standard Contract.
- e) The call for proposals states deadline date as below for each type of meeting:
  - Quadrennial Session - three months before the preceding Quadrennial Session.
  - Midterm Meeting - three years before the expected time of Midterm Meeting.
- f) Bids received will be circulated to the BA when they are received and to the GA at the deadline, the GA (NCs) will have six weeks to send comments to the BA on the bids. The BA will consider the bids and all comments for final selection by a letter ballot. The final approval by the GA depends upon the type of meeting:
  - Quadrennial Session - The proposal of the BA will then be tabled to the GA meeting at the preceding Quadrennial Session, where the final selection will be approved.
  - Midterm Meeting - The proposal of the BA will then be circulated to the GA for final approval by letter ballot.

NOTE There will be no bidding for CIE Symposia, CIE Workshops, CIE Tutorials, and CIE Topical Conferences. These meetings are proposed on an as-needs basis, proposals are reviewed by the Division Directors Committee and approved by the BA.

## 5 Publications

### 5.1 Technical Publications

#### 5.1.1 International Standards

CIE International Standards will usually be a concise documentation of data and procedures defining aspects of light and lighting, colour and vision, photobiology and image technology for which international harmony requires such unique definition. On the basis of agreements between CIE, ISO and IEC it is to be expected that CIE International Standards will be taken, essentially unaltered, into universal standard systems.

CIE International Standards shall reflect majority opinion, however all efforts should be taken to reach consensus (see ISO/IEC Guide 2:2004 (ISO/IEC, 2004) and ISO/IEC Directives, Part 1, Consolidated ISO Supplement, 2016 (ISO/IEC, 2016a), Clause 2.5.6).

CIE International Standards shall refer to CIE Technical Reports as "Normative References".

Publication numbers for CIE International Standards shall take the form 'CIE S nnn/L:yyyy Title' where "nnn" is the next number in the series of CIE International Standards, "L" is the language in which the standard is written (CIE International Standards are published in the three official languages of the CIE represented by "E" for English, "F" for French and "D" for German) and "yyyy" is the year of issue. The CIE number shall be preceded by the ISO or IEC number if appropriate. In this case the ISO or IEC number and the CIE number shall be separated by a slash (/).

Examples:

'CIE S 004:2001 Colours of Light Signals'

'ISO 23539:2005(E)/CIE S 010/E:2004 Joint ISO/CIE Standard: Photometry - The CIE System of Physical Photometry'

Publication numbers for CIE Draft International Standards (see 6.3.3 and 6.4.5) shall take the form 'CIE DS nnn/L:yyyy Title' where "nnn" is the next number in the series of CIE International Standards, "L" is the language in which the standard is written and "yyyy" is the year of issue.

Drafts for the different balloting stages shall be numbered the following way: Working Draft International Standard WD/IS nnn, Committee Draft International Standard CD/IS nnn, Enquiry Draft International Standard ED/IS nnn:yyyy, Approval Draft International Standard AD/IS nnn:yyyy, Final Draft International Standard FDIS nnn:yyyy.

#### 5.1.2 Technical Reports

CIE Technical Reports will normally be two kinds, a "survey" or a "guide". They will contain documentation of knowledge and experience within specific fields of light and lighting with recommendations as to how this documentation should be used by interested parties at large. A TR would usually be a necessary preliminary to a CIE or joint CIE/ISO/IEC International Standard.

Since a TR of the survey type will often represent the state of the art, it is to be expected that it will contain a range of knowledge and viewpoints. Some TRs may use the word 'Guide' in the title to reflect documentation of desirable practice within specific fields of light and lighting. CIE Guides may be used as a basis for international or national standards.

Publication numbers for TRs shall take the form 'CIE nnn:yyyy Title' where "nnn" is the next number in the series of CIE Technical Reports and "yyyy" is the year of issue.

Example:

'CIE 183:2008 Definition of the Cut-off of Vehicle Headlights'

### 5.1.3 Technical Notes

A CIE Technical Note (TN) is a concise informative technical paper, which may be made freely publicly available on the CIE website.

A TN may be prepared by a TC, in which case it will usually form only a part of the outputs from that TC, or through the auspices of a Division Reportership (see also 3.3.3).

In the case of a TN produced as part of the work of a TC, it is the responsibility of the TCC, in discussion with the TCMs, to identify that a TN is the most appropriate form of publication.

The following criteria apply to a TN:

- It demonstrates CIE's leadership in the fields covering the scope of the CIE.
- It is concise and shall be contained within a 10-page limit (excluding the title page, foreword, contents list, references list). In rare circumstances there can be exceptions to this criterion, which need approval of the VPT, VPP, GS and relevant Division Director(s); approval is to be sought prior to the drafting of the TN.
- It is limited to one specific technical issue.
- More than three stakeholders have been identified as benefitting from the TN.

TNs shall be numbered analogous to CIE Technical Reports (xxx:yyyy) (see 5.1.2), but the number preceded by the acronym 'TN'.

Example:

'CIE TN 001:2013 Title'

### 5.1.4 Supplements

A new document that cannot be treated as a stand-alone publication, but must be read in conjunction with another (main) CIE publication, shall be issued as a Supplement to the main publication. Procedures shall follow the general rules for approval of publications.

A Supplement shall be numbered as 'CIE nnn-SPx:yyyy Title' where "nnn" is the number of the main publication, "x" is the supplement number (starting from 1 for the first supplement) and "yyyy" is the year of issue. The main document number remains unchanged.

Example:

'CIE 121-SP1:2008 The Photometry and Goniophotometry of Luminaires – Supplement 1: Luminaires for Emergency Lighting'.

Where a supplement is published in one or more parts, these shall be numbered as 'CIE nnn-SPx.z:yyyy Title' where "nnn" is the number of the main publication, "x" is the supplement number (starting from 1 for the first part), "z" is the part number (starting from 1 for the first part to each supplement) and "yyyy" is the year of issue.

Examples:

'CIE 198-SP1.1:2011 Determination of Measurement Uncertainties in Photometry - Supplement 1: Modules and Examples for the Determination of Measurement Uncertainties – Part 1: Modules for the Construction of Measurement Equations'

'CIE 198-SP1.2:2011 Determination of Measurement Uncertainties in Photometry - Supplement 1: Modules and Examples for the Determination of Measurement Uncertainties – Part 2: Examples for Models with Individual Inputs'

Where supplement(s) are published to one or more parts of a series (see 5.1.6), these shall be numbered as 'CIE nnn-x-SPz:yyyy Title' where "nnn" is the number of the series of linked publications, "x" is the part number (starting from 1 for the first part), "z" is the supplement number (starting from 1 for the first supplement to each part) and "yyyy" is the year of issue.

Examples:

'CIE 999-1-SP1:2009 Calculation of Uncertainties in Optical Radiation Measurements – Part 1: Photometric Uncertainties, Supplement 1: Worked Examples'

'CIE 999-2-SP1:2010 Calculation of Uncertainties in Optical Radiation Measurements – Part 2: Spectroradiometric Uncertainties, Supplement 1: Worked Examples'

### 5.1.5 Series

Where several documents are closely linked, but each can be read as a stand-alone document, these shall be issued as separate parts of a publication series. They shall be numbered as 'CIE (S) nnn-x(/L):yyyy Title' where "nnn" is the number of the series of linked publications, "x" is the part number (starting from 1 for the first part) and "yyyy" is the year of issue.

Examples:

'ISO 11664-1:2007(E)/CIE S 014-1/E:2007 Joint ISO/CIE Standard: Colorimetry – Part 1: CIE Standard Colorimetric Observers'

'ISO 11664-4:2008(E)/CIE S 014-4/E:2007 Colorimetry - Part 4: CIE 1976 L\*a\*b\* Colour Spaces'

**NOTE** Occasionally it may be decided after a CIE publication has been published that it should preferably form the first of a series of linked publications. In this case, the publication shall be reissued with the designation -1 added as above, but with the original date. A note shall be added in brackets after the title stating that the document is identical to the original publication number.

### 5.1.6 Technical Amendments

A CIE Technical Amendment is a technical paper that alters and/or adds provision to a previously agreed existing CIE publication, and which shall be incorporated into the respective publication during the next regular review. It shall be withdrawn as soon as its content has been incorporated into the publication which it is related to.

As amendments change the contents of a publication they should undergo the same drafting and approval procedure as the publication itself.

Technical Amendments are self-contained documents and shall be denoted by '-amX' following the publication number, where "X" is the sequential number of the amendment.

Example:

'CIE 154:2003-am1'

### 5.1.7 Technical Corrigenda

A Technical Corrigendum is issued to correct either

- a technical error or ambiguity in a CIE publication inadvertently introduced either in drafting or in printing and which could lead to incorrect application of the publication, or
- information that has become outdated since publication, provided that the modification has no effect on the technical elements of the publication in question.

**NOTE** Technical corrigenda are not issued to correct errors that can be assumed to have no consequences in the application of the publication, for example minor printing errors.

Suspected technical errors or outdated information shall be brought to the attention of the TCC or DD concerned. After consultation with the Division Management Team DS shall submit to CB a proposal for correction, with an explanation of the need to do so.

VPT, VPP and CB shall decide, in consultation with the Division concerned whether to publish a technical corrigendum or a corrected or updated reprint of the existing edition of the publication.

The corrigendum shall form part of the publication and will be identified in brackets after the title of the publication, together with the year of issue of the corrigendum. The number of the publication will be unchanged.

Example:

'CIE 158:2004 Ocular lighting effects on human physiology and behaviour (including Corrigendum 1:2008)'

**NOTE** No more than two separate documents in the form of technical corrigenda or amendments shall be published modifying a current TR or IS. The development of a third such document shall result in publication of a new edition of the related publication.

### **5.1.8 Position Statements**

CIE Position Statements (PSs) are developed in response to significant questions and comments from external parties on matters of strong interest to the CIE. A PS shall reflect the Commission's stance on the specific topic and outline the current and future work of the CIE in this area. As a PS should be a response to a very current matter it is expected that PSs shall be developed in a period no longer than four weeks from notification of the matter.

The procedure to develop a PS is:

- A proposal to develop a PS is submitted to GS for BA notification from one of BA members.
- The proposal should include a brief description of the issue and propose members of Task Group for drafting it. It is coordinated by the GS and normally includes relevant Division Directors, relevant TCCs, and some TC members, but not limited to these.
- The Task Group develops a draft. It is normally completed within two weeks.
- The draft is submitted by GS to the BA for approval by simple majority. The balloting period is one week.
- The PS will be posted on the CIE website.

### **5.2 Proceedings**

CIE Conference and Symposium Proceedings as well as CIE Session Proceedings shall include

- full papers of keynotes,
- full papers of oral presentations,
- full papers of poster presentations,
- workshop reports.

## 6 Drafting and Approval of CIE Publications

### 6.1 General – Preparing Drafts

In the following the drafting and approval procedures for CIE Technical Reports, CIE International Standards in Fast Track, CIE International Standards, and CIE Technical Notes are described. Additionally, these procedures are summarized in the flow diagrams in Annex B.

NOTE 1 A draft should never be called a "Final Draft". In the past, confusion has arisen from several "Final Drafts", from different authors, all being circulated at one time!

NOTE 2 No matter how minor the change, a new draft number and date must be added to the front page. It is also useful to indicate where changes have been introduced since the previous draft. This should be done by using the "Track Changes" option of the word processing program.

#### 6.1.1 Acknowledgement of Authors and Advisors

Those formally recognized TCMs who have made a significant contribution to the work of the TC and to the preparation of a Technical Report shall be acknowledged as "Authors". Authors need not be TCMs at the time of completion of the TC's work, but they must have made a significant contribution during the period in which they were a TCM.

Where a member has taken a less active role, acting as an advisor rather than a contributor to the work, this may be acknowledged in the final report by inclusion in a list of "Advisors".

CIE Technical Reports and Technical Notes shall only include names of authors and advisors. TCMs who have not contributed to the work of the TC shall not be acknowledged, regardless of the length of time for which they have been a formal member.

The TCC shall maintain a list of all current members and ex-members, including notes on the contributions each one has made to the work of the TC, to aid in the preparation of the lists of Authors and Advisors in the final report and to ensure that these lists are accurate. In the case where more than one TCC has been involved during the lifetime of a TC, each TCC shall keep records of the contributions made by TCMs by using the Collaboration Tool Suite.

Before publication, the TCC shall notify all current and (where possible) ex-members of the TC of whether or not they will be listed as Authors or Advisors in the Final Report, with a deadline for response (typically one month). In case of disagreement, the TCM should appeal first to the TCC, with evidence of the contribution made. If necessary, the TCM may invoke independent arbitration from a Review Panel consisting of DD, VPP, VPT and CB; in this case the Review Panel shall have the final decision on who should be listed.

Where a Technical Report includes a separate Minority Opinion Report, the Authors of each part of the report shall be clearly identified, both in the main part of the Technical Report and at the start of the Minority Opinion Report. If appropriate, Authors of the Minority Opinion Report may also be listed as Authors or Advisors for the main part of the Report, if their contribution to the main part of the Report warrants this acknowledgement.

#### 6.1.2 TC Ballots on Technical Reports

Only those TCMs involved in the preparation of the Technical Report (and listed in the Report as Authors or Advisors) shall be eligible to vote during the WD ballot. TCMs not listed as Authors or Advisors cannot vote during the WD ballot.

Occasionally a TCC may co-opt one or more external advisors onto the TC, to provide specific advice. It is at the discretion of the TCC whether the contribution of such external advisor(s) is of sufficient merit and significance for them to be listed under 'Advisors'. If it is decided to include their name, they should also be sent the WD at the WD ballot stage, but in this case it is for comment only. However if such an external advisor has been appointed as a full TCM prior to WD ballot, he/she shall be eligible to vote.

All those listed as Authors or Advisors (including any co-opted experts designated as Advisors in the report), shall be eligible to vote during the CD ballot; TCMs not listed as Authors or Advisors cannot vote during the CD ballot.

In the case of a ballot on a Minority Opinion Report, voting during the WD and CD stages shall be restricted to the Authors of the Minority Opinion Report; others involved in the WD and CD ballots may submit comments on the Minority Opinion Report but cannot vote on it.

Any Author of a Minority Opinion Report who is also listed in the main Report as an Author or Advisor, according to the guidelines above, will also be eligible to vote in the WD and CD ballots for the main Technical Report. In this latter case, their votes must take account of the inclusion of the Minority Opinion Report; i.e. a negative vote is not permitted if this relates to the point of dispute covered by the Minority Opinion Report.

### **6.1.3 TC Ballots on Standards**

Voting during WD and CD stage is limited to the officially nominated heads of national delegations only (see also 3.3.2.1.2, list item g)). It is the task of the head of delegation to properly organize procedures on national level and to take into account the opinions of TCMs which are resident in the respective country.

Occasionally a TCC may co-opt one or more external advisor(s) onto the TC, to provide specific advice. It is at the discretion of the TCC whether the contribution of such external advisor(s) is of sufficient merit and significance for them to be listed under 'Advisors'. If it is decided to include their names, they should also be sent the WD at the WD ballot stage, but in this case for comment only. However if such external advisors have been appointed as full TCMs prior to WD ballot, they shall be eligible to vote.

## **6.2 CIE Technical Reports**

### **6.2.1 Working Draft (WD)**

After having performed all TC approval steps the TC, under the direction of the TCC, works out a Working Draft (WD) according to the work plan and timetable, which will usually take several iteration steps. Each WD version should be numbered sequentially. For the preparation of the WD the CIE template file for Technical Reports shall be used (see separate document [CIE Technical Report Sample.doc](#)).

After finalization of the WD DE<sup>1</sup> shall additionally review the document in order to ensure that the publication is technically consistent and prepared in accordance with the guidance given in the respective clauses of this CP (see also 3.3.1.5). Any deficiencies in the document shall be resolved in cooperation between the DE and the TC. Only after approval by the DE a TC Ballot (yes/no/abstention, comments), conducted by the TCC, shall take place (duration: one month). Comments shall be submitted on the Commenting Form on WD (see separate document [FormComments.docx](#)). TCC completes the Ballot Result Form on WD (see separate document [Ballot Result Form WD.docx](#)), collects the comments and addresses them within the TC. The actions taken have to be recorded in the column "Remarks" in the Commenting Form(s). In case of any dispute within the TC or need for clarification TCC shall consult VPT, VPP, DD, DE and CB. In case of negative votes the TC, if necessary with the assistance of VPT, VPP, DD, DE and CB, has to consider the reason for the negative vote(s) and prepare a new WD, which again has to be balloted. This has to be repeated until there is unanimity within the TC (see also following NOTE on Requirement for Unanimity within TCs).

If there is unanimity within the TC and all comments have been addressed, TCC sends the WD together with all documents used for the preparation of the WD, the Ballot Result Form and the Commenting Forms to CB.

CB performs a final editing and brings the WD into CIE Technical Report format.

### **NOTE on Requirement for Unanimity within TCs in WD Stage**

CIE Technical Reports are recognized around the world as encapsulating the state-of-the-art of knowledge and experience in their given topic areas. This is achieved through the free exchange of information and expertise between TCMs and the testing and refinement of that

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<sup>1</sup> In the case of a JTC the DEs of all Divisions involved shall participate in this process.

knowledge via scientific and technical debate. TCs are therefore encouraged to explore issues that may be contentious or open to different interpretations, but are required to reach a unanimous decision view prior to publication as a CIE Technical Report.

CIE Technical Reports involve a number of ballots before publication. The majority of these require approval by at least two thirds of the votes cast, and not more than one quarter of the total number of votes cast shall be negative, before work can progress to the next stage. However, in the case of the TC ballot on a Working Draft (WD) – stage 5 in the Procedure – approval is required from all those who vote. In extreme cases this could result in a TC being unable to conclude its work due to negative vote(s) by as few as one TCM. The following guidelines shall be followed to avoid this:

- 1) Wherever possible TCs shall strive to reach a unanimous decision on the content of the Technical Report before the formal voting stage. If necessary, the TC may conduct one or more informal ballots on specific work items before proceeding to the WD ballot, in order to highlight areas of potential dispute and address these accordingly.
- 2) All TCMs shall be encouraged to put forward their views, even if these are not in accord with the rest of the TC. Minority opinions shall be discussed constructively and not dismissed out of hand. Equally, those raising contentious issues have a responsibility to act in a reasonable manner; no TCM shall impede the progress of a TC without sound, relevant and justifiable scientific or technical reasons.
- 3) TCCs must act impartially (see also [CIE Code of Ethics](#)), both when putting forward their own opinions and when considering the views of TCMs; the opinions of all TCMs (including the TCC) must be treated equitably.
- 4) If it proves impossible to reach a unanimous decision within the TC, the TCC or any TCM may invoke independent arbitration from a Review Panel consisting of DD, VPP, VPT and CB. This panel will consider the points of dispute and decide from the following options within a deadline of one month:
  - e) Over-rule the minority view. This option will usually only be taken if the point of dispute falls outside the terms of reference of the TC; in this case some other action will be put in place to address the point of dispute e.g. a new Reportership.
  - f) Technical Report to include a separate Minority Opinion Report. This option will be chosen if the point of dispute is important from a scientific or technical perspective and is felt to be of significance to the potential readership of the Technical Report despite the fact that it deviates from the majority view.
  - g) Expulsion of a TCM or suspension of a TCC. This option will only be taken in cases where the objecting TCM or TCC is felt to be behaving unreasonably (i.e. is failing to act in an appropriately impartial manner, has no scientific or technical grounds for the point of dispute, is seeking to introduce commercial bias to a report, etc.).
  - h) Refer back to the TC for further debate. This option will be taken if the Review Panel feels that the point(s) of dispute have not been adequately discussed within the TC. In this case a time period of no more than six months will be allowed for the TCMs to hold further discussions before referring again to the Review Panel.
- 5) The TCC or TCM may involve the Review Panel at any stage in the TC's work. If a WD ballot has already been held, the results of the ballot shall be considered by the panel members as part of their deliberations. In this case, a new WD ballot shall be conducted as soon as the recommendations from the panel have been implemented.

### 6.2.2 Committee Draft (CD)

In case the changes that have been implemented in the latest WD due to incoming comments during the final TC ballot on WD are not of technical significance, TCC, VPT, VPP, DD, DE and CB may decide to skip the CD stage and directly proceed with the ED stage (see 6.2.3).

In case the changes are evaluated as being of technical significance, CB prepares a CIE formatted CD and conducts another TC ballot (yes/no/abstention, comments) (duration: one month). CB collects the comments and forwards them to the TCC asking him/her to address them within the TC. The actions taken have to be recorded by the TCC in the column "Remarks"

in the standard Comment Form(s). In case of any dispute within the TC or need for clarification TCC shall consult VPT, VPP, DD, DE and CB. If more than one third of the returned votes were negative, the TC, if necessary with the assistance of VPT, VPP, DD, DE and CB, has to consider the reason for the negative vote(s) and return to the WD stage (see 6.2.1).

### **6.2.3 Enquiry Draft (ED)**

In this stage all comments raised during the CD stage shall be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD). The ED shall be prepared by CB. The duration of the whole ED preparation stage shall not exceed one month.

After finalization of the ED a BA and Division Enquiry shall take place (duration: two months) using the Commenting Form on ED. CB collects the comments and forwards them to VPT, VPP, DD and TCC. In the case of substantial comments these shall again be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD), and another ED shall be prepared, which has to go through the BA/DIV commenting again. Any other comments shall be addressed in the next drafting stage, the Approval Drafting (AD) stage.

### **6.2.4 Approval Draft (AD)**

In this stage all comments raised during the ED stage shall be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD). The AD shall be prepared by CB. The duration of the whole AD preparation stage shall not exceed three months.

After finalization of the AD a final BA and Division Ballot with only “yes/no/abstention” voting shall take place (duration: one month) using the Balloting Form on AD. If more than one third of the returned votes were negative, CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD) shall prepare a new AD, taking into consideration the reasons for the negative votes, which again has to be balloted by BA and Division. In case a two-thirds majority of the votes cast are in favour, and not more than one quarter of the total number of votes cast are negative CB prepares the final publication within one month, will arrange for distribution of the document and issues a press release which is circulated to the CIE members (NCs, ANCs, SMs, AMs), the BA and suitable journals. An announcement of publication will be included in the CIE Newsletter.

## **6.3 CIE International Standards in Fast Track**

CIE International Standards can be prepared in a so-called fast-track procedure. In this case a Technical Report that has already passed the CD stage is prepared by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD) for an ED/IS.

### **6.3.1 Enquiry Draft International Standard (ED/IS)**

The ED/IS shall be prepared by CB. The duration of the whole ED/IS preparation stage shall not exceed one month.

After finalization of the ED/IS a BA and Division Enquiry shall take place (duration: two months) using the Commenting Form on ED. CB collects the comments and forwards them to VPT, VPP, DD and TCC. In the case of substantial comments these shall again be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD), and another ED/IS shall be prepared, which has to go through the BA/DIV commenting again. Any other comments shall be addressed in the next drafting stage, the Approval Drafting (AD/IS) stage.

### **6.3.2 Approval Draft International Standard (AD/IS)**

In this stage all comments raised during the ED/IS stage shall be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD). The AD/IS shall be prepared by CB. The duration of the whole AD/IS preparation stage shall not exceed three months.

After finalization of the AD/IS a BA and Division Ballot with only “yes/no/abstention” voting shall take place (duration: one month) using the Balloting Form on AD. If more than one third of the returned votes were negative, CB in cooperation with TCC, VPT, VPP and, if necessary, other

stakeholders (DE, DD) shall prepare a new AD/IS, taking into consideration the reasons for the negative votes, which again has to be balloted by BA and Division.

### **6.3.3 Draft International Standard (DIS)**

In case a two-thirds majority of the votes cast are in favour, and not more than one quarter of the total number of votes cast are negative the AD/IS CB turns the AD/IS into a DIS and forwards the DIS to the NCs for the NC commenting stage (duration: five months) using the Commenting Form on DIS.

The DIS shall be published as an official CIE publication, which will be withdrawn after publication of the International Standard (see 6.3.4). CB will arrange for distribution of the document and prepare a press release which is sent to the NCs, the BA and suitable journals. An announcement of publication will be included in the CIE Newsletter.

### **6.3.4 Final Draft International Standard (FDIS)**

In this stage all comments raised during the NC commenting stage on the DIS shall be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD). The FDIS shall be prepared by CB. The duration of the whole FDIS preparation stage shall not exceed three months.

After finalization of the FDIS a final NC Ballot with only “yes/no/abstention” voting shall take place (duration: two months) using the Balloting Form on FDIS. If more than one third of the returned votes were negative, another FDIS has to be prepared by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD), taking into consideration the reasons for the negative votes, and another NC Ballot shall take place. In case a two-thirds majority of the votes cast are in favour, and not more than one quarter of the total number of votes cast are negative CB prepares the final publication as International Standard (IS) within one month, will arrange for distribution of the document and prepare a press release which is sent to the NCs, the BA and suitable journals. An announcement of publication will be included in the CIE Newsletter.

## **6.4 CIE International Standards**

### **6.4.1 Working Draft International Standard (WD/IS)**

After having performed all TC approval steps the TC, under the direction of the TCC, works out a Working Draft International Standard (WD/IS) according to the work plan and timetable, which will usually take several iteration steps. Each WD/IS version should be numbered sequentially. For the preparation of the WD/IS the CIE template file for International Standards shall be used (see separate document [CIE Standard Sample.doc](#)).

After finalization of the WD/IS a TC Ballot (yes/no/abstention, comments), conducted by the TCC, shall take place (duration: one month). NCs have to nominate a head of the national delegation who will cast the national vote four weeks prior to the start of the respective voting. Comments shall be submitted on the Commenting Form on WD (see separate document [FormComments.docx](#)). TCC completes the Ballot Result Form on WD (see separate document [Ballot Result Form WD.docx](#)), collects the comments and addresses them within the TC. The actions taken have to be recorded in the column “Remarks” in the Commenting Form(s). In case of any dispute within the TC or need for clarification TCC shall consult VPT, VPP, DD, DE and CB. In case of negative votes the TC, if necessary with the assistance of VPT, VPP, DD, DE and CB, has to consider the reason for the negative vote(s) and prepare a new WD/IS, which again has to be balloted. This has to be repeated until there is consensus within the TC (see also following NOTE on Requirement for Consensus within TCs).

If there is consensus within the TC and all comments have been addressed, DE shall additionally review the document in order to ensure that the publication is technically consistent and prepared in accordance with the guidance given in the respective clauses of this CP (see also 3.3.1.5). After completion of this task TCC sends the WD/IS together with all documents used for the preparation of the WD/IS, the Ballot Result Form and the Commenting Forms to CB.

CB performs a final editing and brings the WD/IS into CIE IS format.

### **NOTE on Requirement for Consensus<sup>1</sup> within TCs in WD/IS Stage**

CIE International Standards are recognized around the world as encapsulating the state-of-the-art of knowledge and experience in their given topic areas. This is achieved through the free exchange of information and expertise between TCMs and the testing and refinement of that knowledge via scientific and technical debate. TCs are therefore encouraged to explore issues that may be contentious or open to different interpretations, but are required to reach a consensus view prior to publication as a CIE International Standard.

CIE International Standards involve a number of ballots before publication. They require approval by at least two thirds of the votes cast, and not more than one quarter of the total number of votes cast shall be negative, before work can progress to the next stage. The following guidelines shall be followed:

- 1) Wherever possible TCs shall strive to reach a unanimous decision on the content of the International Standard before the formal voting stage. If necessary, the TC may conduct one or more informal ballots on specific work items before proceeding to the WD ballot, in order to highlight areas of potential dispute and address these accordingly.
- 2) All TCMs shall be encouraged to put forward their views, even if these are not in accord with the rest of the TC. Minority opinions shall be discussed constructively and not dismissed out of hand. Equally, those raising contentious issues have a responsibility to act in a reasonable manner; no TCM shall impede the progress of a TC without sound, relevant and justifiable scientific or technical reasons.
- 3) TCCs must act impartially (see also [CIE Code of Ethics](#)), both when putting forward their own opinions and when considering the views of TCMs; the opinions of all TCMs (including the TCC) must be treated equitably.
- 4) If it proves impossible to reach consensus within the TC, the TCC or any TCM may invoke independent arbitration from a Review Panel consisting of DD, VPP, VPT and CB. This panel will consider the points of dispute and decide from the following options within a deadline of one month:
  - i) Over-rule the minority view. This option will usually only be taken if the point of dispute falls outside the terms of reference of the TC; in this case some other action will be put in place to address the point of dispute e.g. a new Reportership.
  - j) Refer back to the TC for further debate. This option will be taken if the Review Panel feels that the point(s) of dispute have not been adequately discussed within the TC. In this case a time period of no more than six months will be allowed for the TCMs to hold further discussions before referring again to the Review Panel.
- 5) The TCC or TCM may involve the Review Panel at any stage in the TC's work. If a WD ballot has already been held, the results of the ballot shall be considered by the panel members as part of their deliberations. In this case, a new WD ballot shall be conducted as soon as the recommendations from the panel have been implemented.

### **6.4.2 Committee Draft International Standard (CD/IS)**

In case the changes that have been implemented in the latest WD/IS due to incoming comments during the final TC ballot on WD/IS are not of technical significance, TCC, VPT, VPP, DD, DE and CB may decide to skip the CD/IS stage and directly proceed with the ED/IS stage (see 6.4.3).

In case the changes are evaluated as being of technical significance, CB prepares a CIE formatted CD/IS and conducts another TC ballot (yes/no/abstention, comments) (duration: one month). NCs have to nominate a head of the national delegation who will cast the national vote four weeks prior to the start of the respective voting. CB collects the comments and forwards

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<sup>1</sup> For the definition of consensus see ISO/IEC Directives Part 1, Consolidated ISO Supplement, 2016, 2.5.6.

them to the TCC asking him/her to address them within the TC. The actions taken have to be recorded by the TCC in the column “Remarks” in the standard Comment Form(s). In case of any dispute within the TC or need for clarification TCC shall consult VPT, VPP, DD, DE and CB. If more than one third of the returned votes were negative, the TC, if necessary with the assistance of VPT, VPP, DD, DE and CB, has to consider the reason for the negative vote(s) and return to the WD/IS stage (see 6.4.1).

### **6.4.3 Enquiry Draft International Standard (ED/IS)**

In this stage all comments raised during the CD/IS stage shall be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD). The ED/IS shall be prepared by CB. The duration of the whole ED/IS preparation stage shall not exceed one month.

After finalization of the ED/IS a BA and Division Enquiry shall take place (duration: two months) using the Commenting Form on ED. CB collects the comments and forwards them to VPT, VPP, DD and TCC. In the case of substantial comments these shall again be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD), and another ED/IS shall be prepared, which has to go through the BA/DIV commenting again. Any other comments shall be addressed in the next drafting stage, the Approval Drafting (AD/IS) stage.

### **6.4.4 Approval Draft International Standard (AD/IS)**

In this stage all comments raised during the ED/IS stage shall be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD). The AD/IS shall be prepared by CB. The duration of the whole AD/IS preparation stage shall not exceed three months.

After finalization of the AD/IS a final BA and Division Ballot with only “yes/no/abstention” voting shall take place (duration: one month) using the Balloting Form on AD/IS. If more than one third of the returned votes were negative, CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD) shall prepare a new AD/IS, taking into consideration the reasons for the negative votes, which again has to be balloted by BA and Division.

### **6.4.5 Draft International Standard (DIS)**

In case a two-thirds majority of the votes cast are in favour, and not more than one quarter of the total number of votes cast are negative CB turns the AD/IS into a DIS and forwards the DIS to the NCs for the NC commenting stage (duration: five months) using the Commenting Form on DIS.

The DIS shall be published as an official CIE publication, which will be withdrawn after publication of the International Standard (see 6.4.6). CB will arrange for distribution of the document and prepare a press release which is sent to the NCs, the BA and suitable journals. An announcement of publication will be included in the CIE Newsletter.

### **6.4.6 Final Draft International Standard (FDIS)**

In this stage all comments raised during the NC commenting stage on the DIS shall be addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD). The FDIS shall be prepared by CB. The duration of the whole FDIS preparation stage shall not exceed three months.

After finalization of the FDIS a final NC Ballot with only “yes/no/abstention” voting shall take place (duration: two months) using the Balloting Form on FDIS. If more than one third of the returned votes were negative, another FDIS has to be prepared by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD), taking into consideration the reasons for the negative votes, and another NC Ballot shall take place. In case a two-thirds majority of the votes cast are in favour, and not more than one quarter of the total number of votes cast are negative CB prepares the final publication as International Standard (IS) within one month, will arrange for distribution of the document and prepare a press release which is sent to the NCs, the BA and suitable journals. An announcement of publication will be included in the CIE Newsletter.

## 6.5 ISO/IEC/CIE Draft International Standard

ISO and/or IEC forward the CIE International Standard to their member bodies as a joint ISO/CIE, IEC/CIE or ISO/IEC/CIE Draft International Standard for acceptance as an International Standard. If the draft receives the required majority, it will be published as a joint ISO/CIE, IEC/CIE or ISO/IEC/CIE International Standard.

If it does not receive the required majority, the ISO or IEC member body objections shall be communicated to CB who consults VPT, VPP, DD and TCC on possible harmonization.

After harmonization CB restarts the NC commenting and voting stages (see 6.4.5, 6.4.6) and, in case a two-thirds majority of the votes cast are in favour, and not more than one quarter of the total number of votes cast are negative, sends the amended and balloted text back to ISO and/or IEC.

## 6.6 CIE Technical Note

Whether a TN is produced as part of the work of a TC or by a Reportership the same commenting and balloting procedure shall be followed:

- 1) TC or DR works out a Working Draft Technical Note (WD/TN), which will usually take several iteration steps. Each WD/TN version should be numbered sequentially. For the preparation of the WD/TN the CIE template file for Technical Notes shall be used (see separate document [CIE Technical Note Sample.doc](#)).
- 2) In the case of a TN prepared by a TC, a TC ballot shall take place under the same conditions as for a TC ballot on a WD/TR (see also 6.2.1).  
In the case of a TN prepared by a DR a divisional ad-hoc group shall be established to evaluate the necessity to publish the contents of the DR report as a TN. The judgement of the ad-hoc group shall replace the TC ballot.
- 3) CB prepares the Enquiry Draft Technical Note (ED/TN) on the basis of the WD/TN. Any inconsistencies shall be clarified in cooperation with TCC resp. DR, VPT, VPP and, if necessary, other stakeholders (DE, DD). The duration of the whole ED/TN preparation stage shall not exceed two months.
- 4) Enquiry Draft Technical Note (ED/TN) is submitted to BA and the relevant Division(s) for commenting. Time allowed for comments: one month.
- 5) Depending on the number and degree of comments received, TCC/DR shall prepare a new WD/TN (return to step 1) or an Approval Draft Technical Note (AD/TN) (duration: two months).
- 6) Approval Draft Technical Note (AD/TN) is submitted for ballot to BA and the relevant Division(s). If less than two thirds of the votes cast are positive or more than one quarter of the total number of votes cast are negative, return to step 1. Time for ballot: one month.
- 7) Approved AD/TN is submitted to CB for preparation for publication; final proofs signed off by VPP and VPT. Time allowed: one month.

## 6.7 Numbering of CIE Publications

The issuing of publication numbers is the sole responsibility of CB. This will be done only when the document has completed the full approval procedure in case of a Technical Report. An International Standard receives a number already before entering DIS stage. If a TC wishes to refer to a yet unpublished report, CB should be informed and the matter would be resolved in the final proofing stages. If a publication is supposed to be part of a series, the TCC shall inform the CB accordingly.

## 7 Reviewing of CIE Publications

### 7.1 General Guidelines

If, following review of an existing CIE publication, it is confirmed that the document is still current and no updates are required, a note shall be added to the list of publications on the CIE website to indicate the year of review. The publication number shall be unchanged. The description on the CIE website shall take the form 'nnn:yyyy Title (reviewed zzzz)' where "nnn:yyyy" is the number of the publication and "zzzz" is the year of review.

**NOTE** Occasionally a document may be found to be still current but to require reformatting to comply with latest CIE guidelines e.g. with respect to layout or notation. In this case, the publication shall be reissued as a new edition numbered as described at the end of this subclause. A note shall be added in brackets after the title stating that the document is identical in technical content to the original publication number.

If, following review of an existing CIE publication, it is found that the document requires significant updating, this update shall take place as quickly as possible. As soon as the updated publication has been approved by the Board, a note shall be added to the list of publications on the CIE website to indicate that a new edition is about to be issued. The description on the CIE website shall take the form 'nnn:yyyy Title (under revision zzzz)' where "nnn:yyyy" is the number of the publication and "zzzz" is the year of review. This new edition shall take the number of the previous edition and the year of issue of the new one, thus replacing its predecessor. The edition number shall form part of the title.

Example: CIE 15:2004 'Colorimetry, 3rd edition'

### 7.2 Categories for CIE Publications

All CIE publications must be allocated to one of the categories defined below. This category will be noted against the publication on the CIE website and all other places where the current status of the publication is relevant.

The categories are:

- a) **Current:** Publications that have been published within the past three years (CIE International Standard) respectively five years (CIE Technical Report), or that have been confirmed as being current during the most recent review (see 7.3 and 7.4).
- b) **Under review:** Publications that are undergoing a systematic review (see 7.3 and 7.4), or that have been identified as requiring revision/amendment during the most recent review.
- c) **Superseded:** Publications that have been superseded by a more recent edition or publication.
- d) **Archived:** Publications that have been identified during the most recent review (see 7.3 and 7.4) as being out of date and for which a decision has been taken that revision/amendment is not appropriate.
- e) **Withdrawn:** Publications that have been identified during the most recent review (see 7.3 and 7.4) as being out of date and for which a decision has been taken that the information contained therein is damaging to the CIE (this category will rarely apply).

### 7.3 CIE International Standards

Every CIE International Standard shall be subject to systematic review at the intervals defined below, in order to determine whether it should be confirmed, revised/amended, converted to another form of publication, or withdrawn. The first review shall be carried out three years after publication. Subsequent reviews shall be carried out at intervals of no greater than five years. If a CIE International Standard is later published as joint ISO/CIE or IEC/CIE or ISO/IEC/CIE International Standard, the first review of the joint standard shall be carried out three years after publication of the joint standard, with subsequent reviews at intervals of no greater than five years.

A systematic review will typically be initiated by one of the following:

- a) on the initiative and as a responsibility of the responsible Division, typically as the result of the elapse of the specified period since publication or the last confirmation of the document; or
- b) as a default action by CIE Central Bureau if a systematic review of the International Standard concerned has not been initiated by the responsible Division within five years; or
- c) at the request of one or more CIE National Committees.

The timing of a systematic review is normally based either on the year of publication or, where a document has already been confirmed, on the year in which it was last confirmed. However, it is not necessary to wait for the maximum period to elapse before a document is reviewed.

#### **7.4 CIE Technical Reports**

Every CIE Technical Report shall be subject to systematic review at least every five years, in order to determine whether it should be confirmed, revised/amended, converted to another form of publication, or withdrawn.

A systematic review will typically be initiated by one of the following:

- a) on the initiative and as a responsibility of the respective Division, typically as the result of the elapse of the specified period since publication or the last confirmation of the document; or
- b) as a default action by CIE Central Bureau if a systematic review of the Technical Report concerned has not been initiated by the responsible Division within five years; or
- c) at the request of one or more CIE National Committees.

The timing of a systematic review is normally based either on the year of publication or, where a document has already been confirmed, on the year in which it was last confirmed. However, it is not necessary to wait for the maximum period to elapse before a document is reviewed.

## 8 Instructions for the Preparation of CIE Publications

### 8.1 Introduction

The standard authoring tool for CIE publications is Microsoft Word.

This document is presented in such a way that it serves as an example of the rules that it provides.

For the handling of issues not covered in it, especially regarding the preparation of International Standards, the ISO/IEC Directives, Part 2 *Rules for the structure and drafting of International Standards* in their current edition shall be consulted (ISO/IEC, 2016b).

In order to take account of the needs of older persons and persons with disabilities CIE Technical Report 196:2011 *CIE Guide to Increasing Accessibility in Light and Lighting* should be consulted (freely available for authors of CIE publications on request).

### 8.2 Language

All Technical Reports shall be written in English. International Standards shall first be prepared in English and after finalization translated to French and German.

### 8.3 Page Setup

The paper size shall be set to A4. The margins of the document shall be set to 2,5 cm (top, bottom, left, right).

### 8.4 Font

The font Arial shall be used as standard font. The size of the font shall be 10 pt for normal text. For headings of main clauses the font size shall be 11 pt. For notes the font size shall be 9 pt (see also 8.8), for footnotes it shall be 8 pt (see also 8.9). The character spacing shall be set to 'Expanded by 0,4 pt'.

For symbols for quantities the font Times New Roman and the character format Italic shall be used (see also Annex A).

### 8.5 Clause

A clause is the basic component in the subdivision of the content of a document.

The clauses in each document or part shall be numbered with Arabic numerals, beginning with 1 for the first clause. The numbering shall be continuous up to but excluding any annexes (see 8.19).

Each clause shall have a title, placed immediately after its number, on a line separate from the text that follows it.

### 8.6 Subclause

A subclause is a numbered subdivision of a clause. A primary subclause (e.g. 5.1, 5.2, etc.) may be subdivided into secondary subclauses (e.g. 5.1.1, 5.1.2, etc.), and this process of subdivision may be continued as far as the fifth level (e.g. 5.1.1.1.1.1, 5.1.1.1.1.2, etc.).

Subclauses shall be numbered with Arabic numerals. A subclause shall not be created unless there is at least one further subclause at the same level. For example, text in Clause 10 shall not be designated subclause "10.1" unless there is also a subclause "10.2".

Each primary subclause should preferably be given a title, which shall be placed immediately after its number, on a line separate from the text that follows it. Secondary subclauses may be treated in the same way. Within a clause or subclause, the use of titles shall be uniform for subclauses at the same level, e.g. if 10.1 has a title, 10.2 shall also have a title. In the absence of titles, key terms or phrases (composed in distinctive type) appearing at the beginning of the text of the subclause may be used to call attention to the subject matter dealt with. Such terms or phrases shall not be listed in the table of contents.

## 8.7 Paragraphs

All paragraphs shall have the same style {Arial, character spacing expanded by 0,4 pt, justified, line spacing: single, no indentation, space before: 5 pt, space after 10 pt}. There shall be no difference between the first paragraph and following paragraphs.

## 8.8 Notes and Examples

Notes and examples integrated in the text of a document shall only be used for giving additional information intended to assist the understanding or use of the document. These elements shall not contain requirements or any information considered indispensable for the use of the document.

Notes and examples should preferably be placed at the end of the clause or subclause, or after the paragraph, to which they refer.

A single note in a clause or subclause shall be preceded by "NOTE", placed at the beginning of the first line of the text of the note. When several notes occur within the same clause or subclause, they shall be designated "NOTE 1", "NOTE 2", "NOTE 3", etc.

A single example in a clause or subclause shall be preceded by "EXAMPLE", placed at the beginning of the first line of the text of the example. When several examples occur within the same clause or subclause, they shall be designated "EXAMPLE 1", "EXAMPLE 2", "EXAMPLE 3", etc.

Notes and Examples shall have the following style {font size 9 pt}:

NOTE    This is a note.

## 8.9 Footnotes to the Text

Footnotes to the text give additional information; their use shall be kept to a minimum. A footnote shall not contain requirements or any information considered indispensable for the use of the document.

Footnotes to figures and tables follow different rules (see 8.13.5 and 8.14.6).

Footnotes to the text shall be placed at the foot of the relevant page and be separated from the text by a short thin horizontal line on the left of the page.

Footnotes shall be referenced in the text by an Arabic superscripted number. The footnotes shall appear at the bottom of the page and the numbering shall start at 1 and shall be continuous throughout the document.<sup>1</sup>

In certain cases, for example in order to avoid confusion with superscript numbers, one or more asterisks or other appropriate symbols may be used instead: \*, \*\*, \*\*\*, etc.; †, ‡, etc.

## 8.10 Lists

Lists should be introduced by a sentence (see Example 1), a complete grammatical proposition followed by a colon (see Example 2), or by the first part of a proposition (without a colon - see Example 3), completed by the items in the list.

Each item in a list shall be preceded by a dash or a bullet or, if necessary for identification, by a lower case letter followed by a parenthesis. If it is necessary to subdivide further an item in the latter type of list, Arabic numerals followed by a parenthesis shall be used (see Example 1).

EXAMPLE 1

The following basic principles shall apply to the drafting of definitions.

---

<sup>1</sup> The font size for footnotes shall be 8 pt.

- 1) The definition shall have the same grammatical form as the term:
  - to define a verb, a verbal phrase shall be used;
  - to define a singular noun, the singular shall be used.
- 2) The preferred structure of a definition is a basic part stating the class to which the concept belongs, and another part enumerating the characteristics that distinguish the concept from other members of the class.

#### EXAMPLE 2

The various sources of measurement uncertainty can be divided into the following six groups:

- accuracy of measurement instruments,
- influence of the measurement procedure,
- influence of data elaboration methods,
- lighting system characteristics,
- weather conditions,
- electrical power supply conditions.

#### EXAMPLE 3

Vibrations in the apparatus may be caused by

- unbalance in the rotating elements,
- slight deformations in the frame,
- the rolling bearings, and
- aerodynamic loads.

To aid comprehension, it may be preferable not to continue a sentence after the end of the type of list given in Example 3.

### 8.11 Definitions

Definitions of terms which appear in the current issue of the International Lighting Vocabulary (ILV) should not be repeated in the report. A reference to the ILV will suffice. This may be supplemented by simple explanations of terms in publications intended for non-specialist readers.

### 8.12 Abbreviations

Abbreviations should not be used alone in a document until the term has been introduced in full, e.g.: World Health Organization (WHO). Alternatively a list of abbreviations to be used can be given in the introduction to the document.

### 8.13 Presentation of Figures

Figures shall be inserted at appropriate positions throughout the text, i.e. not grouped at the end of the document.

#### 8.13.1 Designation

Figures shall be designated “Figure” and numbered with Arabic numerals, beginning with 1. This numbering shall be independent of the numbering of the clauses and of any tables. A single figure shall be designated “Figure 1”.

For the numbering of figures in annexes, see 8.19.

### **8.13.2 Layout of Figure Designation and Title**

The figure designation and title (if present) shall be centred horizontally below the figure and laid out as in the example below:

**Figure # — Caption for Figure #**

The figure designation and title shall be separated by a dash.

### **8.13.3 Layout of Figure**

Figures should be clear and precise. Colours and/or different line styles should be used to distinguish between different curves in a diagram. The font used in the figures should be the same as in the text {Arial, 10 pt}.

### **8.13.4 Notes to Figures**

Notes to figures shall be treated independently from notes integrated in the text (see 8.8). They shall be located above the designation of the relevant figure and shall precede figure footnotes. A single note in a figure shall be preceded by "NOTE", placed at the beginning of the first line of the text of the note. When several notes occur in the same figure, they shall be designated "NOTE 1", "NOTE 2", "NOTE 3", etc. A separate numbering sequence shall be used for each figure.

Notes to figures shall not contain requirements or any information considered indispensable for the use of the document. Any requirements relating to the content of a figure shall be given in the text, in a footnote to the figure or as a paragraph between the figure and its title. It is not necessary that notes to figures be referred to.

### **8.13.5 Footnotes to Figures**

Footnotes to figures shall be treated independently from footnotes to the text (see 8.9). They shall be located immediately above the designation of the relevant figure.

Footnotes to figures shall be distinguished by superscript lower case letters, beginning with "a". The footnotes shall be referred to in the figure by inserting the same superscript lower case letter.

Footnotes to figures may contain requirements.

## **8.14 Presentation of Tables**

Tables shall be inserted at appropriate positions throughout the text, i.e. not grouped at the end of the document.

### **8.14.1 Designation**

Tables shall be designated "Table" and numbered with Arabic numerals, beginning with 1. This numbering shall be independent of the numbering of the clauses and of any figures. A single table shall be designated "Table 1".

For the numbering of tables in annexes, see 8.19.

### **8.14.2 Layout of Table Designation and Title**

The table designation and title (if present) shall be centred horizontally above the table and laid out as in the example below:

**Table # — Caption for Table #**

The table designation and title shall be separated by a dash.

### **8.14.3 Layout of Table**

If reasonable the width of the table should be 16 cm (21 cm – 2 × {page margin} cm).

The table shall be centred.

The first word in the heading of each column or row shall begin with a capital letter. The units used in a given column shall generally be indicated under the column heading.

EXAMPLE 1

Type	Length mm	Width mm	Luminance $\text{cd} \cdot \text{m}^{-2}$

As an exception to this rule, when all units are the same, a suitable statement (for example, "Dimensions in millimetres") shall instead be placed above the right-hand corner of the table.

EXAMPLE 2

Type	Length	Inside diameter	Dimensions in millimetres
			Outside diameter

#### 8.14.4 Continuation of Tables

When a table is continued over several pages, it may be useful to repeat the table designation, followed by the title (optional) and by "(continued)", as in the following example:

**Table # (continued)**

The column headings together with any statement concerning units shall be repeated on all pages after the first.

#### 8.14.5 Notes to Tables

Notes to tables shall be treated independently from notes integrated in the text (see 8.8). They shall be located within the frame of the relevant table and shall precede table footnotes (see the following Example). A single note in a table shall be preceded by "NOTE", placed at the beginning of the first line of the text of the note. When several notes occur in the same table, they shall be designated "NOTE 1", "NOTE 2", "NOTE 3", etc. A separate numbering sequence shall be used for each table.

## EXAMPLE

**Table 1 – Colour combination of fundamental colours and its distinctiveness based on the span of fundamental colour for older people at photopic level**

	R	RY	Y	GY	G	BG	B	PB	P	RP	GRE	WHT	BLK
R		-	o	o	o	o	o	o	+	+	o	o	o
RY			+	o	o	o	o	o	+	+	+	o	o
Y				+	o	o	o	o	o	o	o	+	o
GY					+	+	o	o	o	o	+	+	+
G						-	+	o	o	o	+	o	+
BG							-	+	o	o	+	+	+
B								-	+	o	+	o	+
PB									+	o	+	o	+
P										-	+	o	+
RP											+	+	o
GRE												+	o
WHT													o
BLK													

NOTE 1 Symbol legend: [ o ] Extremely high distinctiveness, [ + ] Moderate distinctiveness, [ - ] Low distinctiveness

NOTE 2 Abbreviations of colour names: red (R), orange or red-yellow (RY), yellow (Y), green-yellow (GY), green (G), blue-green (BG), blue (B), purple-blue (PB), purple (P), red-purple (RP), grey (GRE), white (WHT), and black (BLK).

Notes to tables shall not contain requirements or any information considered indispensable for the use of the document. Any requirements relating to the content of a table shall be given in the text, in a footnote to the table or as a paragraph within the table. It is not necessary that notes to tables are referred to.

**8.14.6 Footnotes to Tables**

Footnotes to tables shall be treated independently from footnotes to the text (see 8.9). They shall be located within the frame of the relevant table, and shall appear at the foot of the table.

Footnotes to tables shall be distinguished by superscript lower case letters, beginning with “a”. The footnotes shall be referred to in the table by inserting the same superscript lower case letter.

Footnotes to tables may contain requirements.

**8.15 Equations**

Equations shall be prepared with the MathType equation editor. The style shown in the following example shall be followed.

## EXAMPLE

$$v = \frac{l}{t} \quad (1)$$

where

- $v$  is the speed of a point in uniform motion;
- $l$  is the distance travelled;
- $t$  is the duration.

Equations should be numbered, either sequentially throughout the document (i.e. 1, 2, ...) or, in long documents, per clause (e.g. 1.1, 1.2, ...). The equation number should be placed in line with the equation right adjusted and in round parentheses.

## 8.16 References

### 8.16.1 References to Elements of Text

Use, for example, the following forms:

- “in accordance with Clause 3”;
- “according to 3.1”;
- “as specified in 3.1 b)”;
- “details as given in 3.1.1”;
- “see Annex B”;
- “the requirements given in B.2”;
- “see the Note in Table 2”;
- “see 6.6.3, Example 2”;
- “see 3.1, Equation (3)”.

It is unnecessary to use the term “subclause”.

### 8.16.2 References to Figures and Tables

Every figure and table included in the document shall normally be referred to in the text. Use, for example, the following forms:

- “shown in Figure A.6”;
- “(see Figure 3)”;
- “given in Table 2”;
- “(see Table B.2)”.

### 8.16.3 Bibliographic References

Bibliographic references shall be indicated in the text by stating the first author or organization and the year of publication in brackets, e.g.: (Jerome, 1974) or (CIE, 1974). If more papers from the same source and year appear in the publication, some further identification should be used, e.g. name of further authors (Jerome, King, Pond, 1974) or (CIE 52, 1982) or (ISO, 1994a); (ISO, 1994b). The references shall be given in alphabetical order in a clause **References** at the end of the document.

The guidelines for the preparation of bibliographic references given in ISO 690:2010 (ISO, 2010) shall be followed. The styles below shall be used for the basic information of the reference:

For an article: AUTHOR’S FAMILY NAME (capital letters), initials(s) of the first name(s). Year of publication. Title of the article. *Name of the journal (italic)*, volume (and issue) number, page numbers.

#### EXAMPLE

ADRIAN, W. 1989. Visibility of Targets: Model for Calculation. *Lighting Res. Technol.*, 21, 181-188.

For a book: AUTHOR’S FAMILY NAME (capital letters), initials(s) of the first name(s). Year of publication. *Title of the book (italic)* (Page numbers if necessary). City of publication: Name of the publisher.

EXAMPLE

BOYCE, P.R. 2003. *Human Factors in Lighting, 2nd ed.* New York: Taylor and Francis.

For an official publication of an organization: Initials of the organization Year of publication  
Number of publication. *Title of the publication (italic)*. City of publication: Name of the publisher.

EXAMPLE

CIE 2010. CIE 191:2010. *Recommended System for Mesopic Photometry Based on Visual Performance*. Vienna: CIE.

### 8.17 Bibliography

A clause **Bibliography** can be introduced to list additional sources of information, not directly referred to in the text. The details of these publications should be shown in the same form as for **References**.

### 8.18 Trade and Proprietary Names

In spite of the inclusion of the disclaimer statements on the preface page of all publications, trade or proprietary names should be avoided; they should be used only where no other means can identify a material or product.

### 8.19 Annexes

Annexes shall appear in the order in which they are cited in the text. Each annex shall be designated by a heading comprising the word “Annex” followed by a capital letter designating its serial order, beginning with “A”, e.g. “Annex A”. In case of an International Standard the annex heading shall be followed by the indication “(normative)” or “(informative)”, and by the title, each on a separate line. Numbers given to the clauses, subclauses, tables, figures and mathematical formulae of an annex shall be preceded by the letter designating that annex followed by a full-stop. The numbering shall start afresh with each annex. A single annex shall be designated “Annex A”.

EXAMPLE Clauses in Annex A are designated “A.1”, “A.2”, “A.3”, etc.

### 8.20 Table of Contents

The table of contents is an obligatory preliminary element. The table of contents shall be entitled “CONTENTS” and shall list clauses and, if appropriate, subclauses with their titles (up to the third level). All the elements listed shall be cited with their full titles. (International Standards: Terms in the “Terms and definitions” clause shall not be listed in the table of contents.)

The table of contents shall be generated automatically and not composed manually.

### 8.21 Representation of Numbers and Numerical Values, Quantities, Units, Symbols and Signs

The *Guidelines for Notation to be used in CIE Publications* shall be consulted (see Annex A)

### 8.22 Basic Requirements

(adopted from ISO *eServices Guide*, ISO 2005)

DO	<p>Keep the file structure as simple as possible.</p> <p>Use the character and paragraph styles predefined in the CIE templates, in order to avoid their reformatting at later stages.</p> <p>Use Arial as the standard font.</p> <p>Use the following language/dictionary settings:</p> <p style="padding-left: 40px;">English — UK English or English (United Kingdom) [not English (United States) or any other type].</p> <p>Use spell checkers.</p> <p>Use an equation editor set to the values given in A.5.</p>
DO NOT	<p>Employ sophisticated formatting options except where they really add value to the comprehension of the text.</p> <p>Try and produce the final page layout; the final formatting of publications is carried out by the CIE CB.</p> <p>Insert blank pages.</p> <p>Insert unnecessary section breaks.</p> <p>Use special fonts.</p> <p>Create your own fonts.</p> <p>Use colour unless necessary.</p> <p>Use shading unless necessary.</p> <p>Use dashed, dotted or dashed-dotted borders (especially those with a very small pattern); instead use borders with a solid (continuous) line.</p> <p>Nest a table within another table.</p> <p>Place graphical elements in mathematical expressions.</p> <p>Use fields to insert equations or special symbols.</p> <p>Use the drawing capabilities of your word processor to produce graphical elements.</p> <p>Edit or format [i.e. crop, stretch, scale (enlarge/reduce), patch with text frames in order to correct or translate particular portions of text] figures (images) using word processing tools or other image processing programs. Figures shall only be edited using the graphics tool with which they were produced.</p>

## Annex A

### Guidelines for Notation to be used in CIE Publications

#### A.1 General

##### A.1.1

The default font for CIE publications shall be Arial 10 pt.

##### A.1.2

Quantity symbols shall be in italic Times New Roman font, or italic Word 'symbol' font in the case of Greek symbols.

##### A.1.3

Symbols for quantities and variables shall be in italics (see also A.1.2, A.2.5, A.2.14); symbols for units and for descriptive terms (e.g. *r* for relative) shall not be in italics.

##### A.1.4

Where spectral quantities are expressed in the form  $X_{\lambda}(\lambda)$ , the subscript  $\lambda$  indicates the quantity  $dX/d\lambda$  and shall therefore be in italics.

##### A.1.5

Arabic numerals shall be used for all numbers, whether in equations or free flowing text.

##### A.1.6

Every instance of a numerical value of a quantity shall be accompanied by the relevant unit for the quantity, e.g. 380 nm to 780 nm, not 380 to 780 nm.

##### A.1.7

Where numerical values of a quantity are given, the unit shall be expressed in abbreviated form (see also A.3.3), e.g. 380 nm, not 380 nanometres.

##### A.1.8

The unit symbols for degree, minute and second (for plane angle) shall follow immediately the numerical value; all other unit symbols shall be preceded by a space (also '%' and '°C').

##### A.1.9

Multiplication of numerical values shall be indicated by  $\times$  from the Word 'symbol' font, e.g.  $3 \times 4 = 12$  or  $1,8 \times 10^{-3}$  (not  $1,8 . 10^{-3}$  or  $1,8 \cdot 10^{-3}$ ).

##### A.1.10

If mathematical operators are used, it must be clear whether this applies to a quantity or a numerical value; e.g.  $20 \times 30$  m is not the same as  $20$  m  $\times$   $30$  m.

##### A.1.11

The decimal marker shall be a comma; for numbers less than 1 a zero shall be used before the decimal comma, e.g. 0,12.

##### A.1.12

Digits of numerical values either side of the decimal marker shall be split into groups of three using a fixed space e.g. 12 345,678 90; the exception is four digit numbers representing a year date, which should be written without a space, e.g. 2008.

**A.1.13**

Where used in the index and clause headings of documents, symbols shall always be in square brackets, but abbreviations, units and additional text shall be in round brackets.

**A.1.14**

All country abbreviations shall use the ISO country code.

**A.2 Symbols for Quantities and Functions****A.2.1**

Only SI quantities, or quantities defined by the CIE in the International Lighting Vocabulary, shall be used.

**A.2.2**

Where a quantity has a symbol that is recommended within the SI, then this symbol shall be used.

**A.2.3**

Quantity symbols shall be single letters or symbols; multiple letters shall not be used.

**A.2.4**

Subscripts shall be used to distinguish between related quantities; e.g. the subscript *v* is used for photometric quantities, such as illuminance, and the subscript *e* for radiometric quantities, such as irradiance.

**A.2.5**

All subscripts shall not be italicized unless the subscript represents a variable; e.g. the symbol for illuminance is  $E_v$  (*v* not in italics).

**A.2.6**

Multiple subscripts shall be separated by commas, with the inclusion of a space after the comma if this is required to prevent italicized characters overlapping, and must maintain the convention for use of italics; e.g. spectral irradiance has the subscript *e,λ* with *λ* in italics.

**A.2.7**

Where a subscripted quantity is used with a bracket, with the bracketed quantity indicating a variable, the subscript shall be placed before the bracket, e.g.  $L_e(\lambda)$ .

**A.2.8**

Variables with both a superscript and a subscript shall be set using the equation editor so that the superscript is placed over the subscript, e.g.  $\Delta E_{ab}^*$ .

**A.2.9**

Where symbols use a 'dash', this shall be represented by the Word 'symbol' font character ' instead of the single quote character ', e.g.  $u'$ ,  $v'$  and not  $u',v'$ .

**A.2.10**

Symbols for mathematical functions, such as cos for cosine and log for logarithm, shall be in Arial font and should not be italicized.

**A.2.11**

Where several quantity symbols are multiplied together, these shall be separated by a space, e.g.  $l = v \ t$ .

**A.2.12**

Where a numerical value is multiplied with a quantity symbol, they shall be separated by a space, e.g.  $l = 3 \ t$ .

**A.2.13**

Where quantities are divided by one another, the use of negative exponents is preferred, although the fractional form or divisor symbol may be used in cases where this cannot lead to any ambiguity or confusion; e.g. the following are all acceptable:

$$\nu = d_0 \log 0,05 (\log T)^{-1}$$

$$D = 1/\Phi_m$$

$$q = \frac{L}{E}.$$

**A.2.14**

Symbols for functions and function variables shall be in Arial font, or Word 'symbol' font in the case of Greek symbols.

**A.2.15**

Integrals shall include a space before the integrand symbol, the 'd' in the integrand shall not be italicized and all other rules for symbols shall be observed, as in the following examples:

$$H_v = \int_{\Delta t} E_v dt$$

$$\int \varphi(\lambda) \cos \varepsilon d\lambda.$$

**A.3 Units****A.3.1**

Only SI units or units recognized for use with SI shall be used.

**A.3.2**

Only accepted abbreviations of units shall be used.

**A.3.3**

Abbreviations for units shall only be used in association with numerical values or quantity symbols; e.g. 'the resistance is 10  $\Omega$ ', 'resistance measured in ohms' or a graph axis labelled ' $R/\Omega$ ' are all acceptable but 'resistance measured in  $\Omega$ ' is not.

**A.3.4**

Names of units shall always be lowercase, e.g. watt.

**A.3.5**

Abbreviations for units shall be lowercase unless the unit is named after an individual; e.g. the abbreviation for the metre is m whereas the abbreviation for the watt is W.

**A.3.6**

Prefix symbols for mega and larger shall be capitalized, e.g. MHz for megahertz.

**A.3.7**

Prefix symbols for kilo and smaller shall be lower case, e.g. mm for millimetre.

**A.3.8**

Names, symbols, abbreviations and prefixes for units shall all be in Arial font, non-italic.

**A.3.9**

Where several units are combined for a given quantity, the units shall be separated by a mid-centred dot, e.g. A·s.

**A.3.10**

Negative exponents shall be used in cases where units are divided by one another, e.g.  $\text{cd}\cdot\text{m}^{-2}$ ,  $\text{W}\cdot\text{m}^{-2}\cdot\text{sr}^{-1}$ .

**A.4 Checklist**

<b>Guideline</b>	<b>Guideline reference(s)</b>	<b>Y/N?</b>
All general text Arial 10 pt with all numbers in Arabic numerals?	A.1.1, A.1.5	
Symbols in correct font and correctly aligned? <ul style="list-style-type: none"> <li>Quantities and variables: Italic Times New Roman font or italic Word 'symbol' font for Greek symbols, and Word 'symbol' font for 'dash' symbol</li> <li>Units, descriptive terms and mathematical functions: Arial, non-italics</li> <li>Symbol 'dash' represented by ' not '</li> <li>All subscriptswith comma separators if appropriate, and only in italics if they represent a variable?</li> <li>Subscripts before brackets, if used</li> <li>Superscripts placed over subscripts, if both used</li> </ul>	A.1.2, A.1.3, A.1.4, A.2.4, A.2.5, A.2.6, A.2.7, A.2.8, A.2.9, A.2.13, A.2.14, A.3.8	
Units, in abbreviated form, given for all numerical values of quantities?	A.1.6, A.1.7	
Space between numerical value and units?	A.1.8	
Multiplication of numerical values indicated by $\times$ ?	A.1.9	
Clear whether mathematical operator applies to a quantity or a numerical value?	A.1.10	
Comma used as decimal marker?	A.1.11	
Digits split into groups of three either side of decimal marker (except for year dates)?	A.1.12	
Correct use of brackets in index and clause headings?	A.1.13	
Country abbreviations use the ISO country code	A.1.14	
SI quantities and units used?	A.2.1, A.3.1	
SI symbols used for quantities where available?	A.2.2	
Quantity symbols all single letter or symbols?	A.2.3	
Space between multiplied quantities?	A.2.11, A.2.12	
Negative exponents used; fraction form or divisor symbol for simple cases only?	A.2.13	
Integrals have space before integrand symbol, with d not italicized	A.2.15	
Correct SI symbols used for units (including correct case for unit abbreviations and prefixes) and all in Arial font?	A.3.2, A.3.5, A.3.6, A.3.7, A.3.8	
Abbreviations for units only used with numerical values or quantity symbols	A.3.3	
Unit names all lowercase?	A.3.4	
Units separated by mid centred dot with negative exponents used for divided units?	A.3.9, A.3.10	

## A.5 Recommended MathType Equation Editor Settings

(adopted from ISO *eServices Guide*, ISO 2005)

### a) Setting 1: Format / Spacing...

Line spacing	150 %
Matrix row spacing	120 %
Matrix column spacing	100 %
Superscript height	45 %
Subscript depth	25 %
Sub/superscript gap	15 %
Limit height	25 %
Limit depth	100 %
Limit line spacing	100 %
Numerator height	35 %
Denominator depth	100 %
Fraction bar overhang	1 pt
Fraction bar thickness	0,5 pt
Sub-fraction bar thickness	0,25 pt
Slash/diagonal fraction gap	8 %
Fence overhang	1 pt
Horizontal fence gap	10 %
Operator spacing (% of normal)	100 %
Non-operator spacing (% of normal)	100 %
Character width adjustment	0 %
Minimum gap	8 %
Radical gap (vertical)	17 %
Radical gap (horizontal)	8 %
Radical width (% of normal)	100 %
Embellishment gap	1,5 pt
Prime height	45 %
Box stroke thickness	5 %
Strike-through thickness	5 %
Matrix partition line thickness	5 %
Radical stroke thickness	5 %

**b) Setting 2: Style / Define...**

Style	Font		Character format	
	Type 1 Base 13	True Type	Bold	Italic
Text	Helvetica	Arial		
Function	Helvetica	Arial		
Variable	Times	Times New Roman		<input type="checkbox"/>
L.C. Greek	Symbol	Symbol		<input type="checkbox"/>
U.C. Greek	Symbol	Symbol		<input type="checkbox"/>
Symbol	Symbol	Symbol		
Matrix-Vector	Times	Times New Roman	<input type="checkbox"/>	<input type="checkbox"/>
Number	Helvetica	Arial		

**c) Setting 3: Size / Define...**

Full	10 pt
Subscript/Superscript	80 %
Sub- Subscript/Superscript	70 %
Symbol	170 %
Sub-Symbol	120 %

## Annex B

### Flow Diagrams for the Drafting and Approval Procedures of Technical Reports, International Standards in Fast Track, International Standards and Technical Notes

**Table B.1 — Flow Diagram for the Drafting and Approval Procedures of Technical Reports**

Process Stage Number	Process Stage Description	Process Owner	Other Stakeholders	Eligible	Action	Time Frame	Comments
1	Work item proposal	DMT	DM, DA				
2	BA Ballot	CB	BA			1 month	
3	New TC	CB	TCC			6 months	TCC must prepare work plan with timetable
4	Preparation of Working Drafts (WD)	TCC	TCM			According to work plan and schedule	Typically several iterations of WD before stage 5
5	TC Ballot on WD	TCC		TCM	Commenting + Y/N/A voting	1 month	Negative votes -> return to stage 4 Any comments are addressed during stage 6
6	Preparation of Committee Draft (CD)	CB	TCC, DE, DD, VPT, VPP			3 months	Comments raised during stage 5 are addressed by TCC and DE CB, VPT, VPP, DD review document and raise any additional comments, which are addressed by TCC Any points of dispute to be resolved by DD, VPT and VPP with CB
7	TC Ballot on CD	CB		TCM	Commenting + Y/N/A voting	1 month	Less than 2/3 positive votes or more than 25 % negative votes of the votes cast-> return to stage 4 Any comments are addressed during stage 8
8	Preparation of Enquiry Draft (ED)	CB	TCC, DE, DD, VPT, VPP			1 month	Comments raised during stage 7 are addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD)
9	BA/DIV Commenting on ED	CB		BA/DIV	Only commenting	2 months	Substantial comments -> return to stage 8 Any comments are addressed during stage 10
10	Preparation of Approval Draft (AD)	CB	TCC, DE, DD, VPT, VPP			3 months	Comments raised during stage 9 are addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD)
11	BA/DIV ballot on AD	CB		BA/DIV	Only Y/N/A voting	1 month	Less than 2/3 positive votes or more than 25 % negative votes of the votes cast -> return to stage 10 No comments allowed
12	Publication	CB				1 month	Proofs signed off by VPP, VPT and TCC prior to publication
<b>TOTAL TIME AFTER STAGE 4: 13 months</b>							

**Table B.2 — Flow Diagram for the Drafting and Approval Procedures of International Standards in Fast Track**

Process Stage Number	Process Stage Description	Process Owner	Other Stakeholders	Eligible	Action	Time Frame	Comments
1	Preparation of Enquiry Draft International Standard (ED/IS)	CB	TCC, DE, DD, VPT, VPP			3 months	
2	BA/DIV Commenting on ED/IS	CB		BA/DIV	Only commenting	2 months	Substantial comments -> return to stage 1 Any comments are addressed during stage 3
3	Preparation of Approval Draft International Standard (AD/IS)	CB	TCC, DE, DD, VPT, VPP			3 months	Comments raised during stage 2 are addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD)
4	BA/DIV ballot on AD/IS	CB		BA/DIV	Only Y/N/A voting	1 month	Less than 2/3 positive votes or more than 25 % negative votes of the votes cast -> return to stage 3 No comments allowed
5	Preparation of Draft International Standard (DIS)	CB	TCC, DE, DD, VPP, VPT			1 month	CB turns AD/IS into DIS and publishes DIS
6	NC Commenting on DIS	CB		NCs	Only commenting	5 months	
7	Preparation of Final Draft International Standard (FDIS)	CB	TCC, DE, DD, VPP, VPT			3 months	Comments raised during stage 5 are addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD)
8	NC Ballot on FDIS	CB		NCs	Only Y/N/A voting	2 months	Less than 2/3 positive votes or more than 25 % negative votes of the votes cast -> return to stage 6
9	Publication	CB				1 month	Proofs signed off by VPP, VPT and TCC prior to publication
<b>TOTAL TIME: 21 months</b>							

**Table B.3 — Flow Diagram for the Drafting and Approval Procedures of International Standards**

Process Stage Number	Process Stage Description	Process Owner	Other Stakeholders	Eligible	Action	Time Frame	Comments
1	Work item proposal	DMT	DM, DA				
2	BA Ballot	CB	BA			4 weeks	
3	New TC	CB	TCC			24 weeks	TCC must prepare work plan with timetable.
4	Preparation of Working Drafts International Standard (WD/IS)	TCC	TCM			According to work plan and schedule	Typically several iterations of WD before Stage 5.
5	TC Ballot on WD/IS	TCC		TCM	Commenting + Y/N/A voting	4 weeks	No consensus > return to Stage 4. Any comments are addressed during Stage 6.
6	Preparation of Committee Draft International Standard (CD/IS)	CB	TCC, DE, DD, VPT, VPP, VPS			4 weeks <sup>2</sup>	If no technical changes are included, neither in TC Ballot on WD/IS nor raised by CB during review → Stage 8. Otherwise: Comments raised during Stage 5 and by CB are addressed by CB <sup>1</sup> .
7	TC Ballot on CD/IS	CB		TCM	Commenting + Y/N/A voting	4 weeks	Less than 2/3 positive votes or more than 25 % negative votes with substantial comments → return to Stage 4. Any other comments are addressed during Stage 8.
8	Preparation of Enquiry Draft International Standard (ED/IS)	CB	TCC, DE, DD, VPT, VPP, VPS			4 weeks <sup>2</sup>	Comments raised during Stage 7, or Stage 5 if Stage 7 was skipped, are addressed by CB <sup>1</sup> .
9	BA/DIV Ballot on ED/IS	CB		BA/DIV	Commenting + Y/N/A voting	8 weeks default (or 12 or 16 weeks as agreed by the Division(s))	Less than 2/3 positive votes or more than 25 % negative votes with substantial comments → return to Stage 8. Any other comments are addressed during stage 10.
10	Preparation of Draft International Standard (DIS)	CB	TCC, DE, DD, VPT, VPP, VPS			4 weeks <sup>2</sup>	Comments raised during Stage 9 are addressed by CB <sup>1</sup> . CB turns ED/IS into DIS and publishes DIS.
11	NC ballot on DIS	CB		NCs	Commenting + Y/N/A voting	12 weeks	Less than 2/3 positive votes or more than 25 % negative votes with substantial comments → return to Stage 10. Any other comments are addressed during Stage 12.
12	Preparation of Final Draft International Standard (FDIS)	CB	TCC, DE, DD, VPP, VPT, VPS			4 weeks <sup>2</sup>	If no technical changes are included → Stage 14. Otherwise: Comments raised during Stage 11 are addressed by CB <sup>1</sup> .
13	NC Ballot on FDIS	CB		NCs	Y/N/A	8 weeks	Optional – see Stage 12. Less than 2/3 positive votes or more than 25 % negative votes with substantial comments → return to stage 12.
14	Publication	CB				4 weeks	Proofs signed off by VPP, VPT, VPS and TCC prior to publication.
<sup>1</sup> in cooperation with TCC, and, if necessary, other stakeholders (VPT, VPP, VPS, DE, DD).							
<sup>2</sup> The time frame might be extended if the stakeholders are not able to respond to comments in a timely manner.							
<b>TOTAL TIME AFTER STAGE 4: 36–56 weeks</b>							
<b>depending on the options taken after the TC Ballot on WD/IS and the NC Ballot on DIS</b>							

**Table B.4 — Flow Diagram for the Drafting and Approval Procedures of Technical Notes**

Process Stage Number	Process Stage Description	Process Owner	Other Stakeholders	Eligible	Action	Time Frame	Comments
1	Work item proposal	TCC DD	TCM				
2	Preparation of Working Drafts (WD/TN)	TCC DR	TCM				Typically several iterations of WD before stage 3
3	TC Ballot on WD/IS*	TCC DIV ad-hoc group		TCM DIV ad-hoc group	Commenting + Y/N/A voting	1 month	No consensus > return to stage 2 Any comments are addressed during stage 3
4	Preparation of Enquiry Draft (ED/TN)	CB	TCC/DR, DE, DD, VPT, VPP			2 months	
5	BA/DIV Commenting on ED/TN	CB		BA/DIV	Only commenting	1 month	Depending on the number and degree of comments received, preparation of a new WD/TN (return to stage 2) or of an Approval Draft Technical Note (AD/TN)
6	Preparation of Approval Draft (AD/TN)	CB	TCC, DE, DD, VPT, VPP			2 months	Comments raised during stage 5 are addressed by CB in cooperation with TCC, VPT, VPP and, if necessary, other stakeholders (DE, DD)
7	BA/DIV Ballot on AD/TN	CB		BA/DIV	Only Y/N/A voting	1 month	Less than 2/3 positive votes or more than 25 % negative votes of the votes cast -> return to stage 2 No comments allowed
8	Publication	CB				1 month	Proofs signed off by VPP, VPT and TCC prior to publication
<b>TOTAL TIME AFTER STAGE 2: 7 months</b>							
* In the case of a TN prepared by a DR a divisional ad-hoc group shall be established to evaluate the necessity to publish the contents of the DR report as a TN. The judgement of the ad-hoc group shall replace the TC ballot.							

## References

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