



IEC ACADEMY WEBINAR Q&A

Good practice in Drafting and Editing IEC Standards, 9 June 2020

Questions	Answers	Relevant rules from ISO/IEC Directives, Part 2: 2018 (or other document)
<p>Would you please, during the Webinar, introduce a presentation of specific rules for writing IEV documents.</p> <p>I was told that some rules are different from those for writing standards.</p> <p>In addition, would you please clarify what the rules are for the French translations for IEV documents and for standards documents?</p>	<p>IEC non-IEV documents are translated by AFNOR before circulation of the CDV and during the circulation of the FDIS.</p> <p>IEV standards are always bilingual, in English and French. The CDV and FDIS are both submitted to AFNOR for the preparation of the French version before the draft is edited and submitted for ballot.</p>	<p>Clause 16.</p> <p>ISO/IEC Directives, Part 1, IEC Supplement:2020: Annex SK: this provides rules for terminology work in the IEC as well as some rules particular to the development of IEC 60050, International Electrotechnical Vocabulary (IEV). These rules for terminology work are in conformity with the ISO/IEC Directives, Part 2, but provide additional rules specific to the drafting, structuring and presentation of terminology in the IEC.</p>
<p>As liaison member of TC 1, when we verify the French translation, we find from time to time that the English version is not perfect or has some editorial errors.</p> <p>The translator noted those comments but was not able to produce a correct French version. Could we imagine in that case a fast-track exchange with the corresponding Secretary to try to publish without delays, and simultaneously, correct English and French versions?</p>	<p>Thank you for your comment. Please notify the TC 1 Secretary, Assistant Secretary and Terminology Coordinator of any errors found in the English and French versions. They will coordinate with the respective Convenor.</p> <p>If there is agreement on the legitimacy to correct the editorial errors notified, and there is time to do so, corrections can be made before publication of the document.</p> <p>In any case, we will discuss with you the possible actions depending on the case at hand.</p>	

<p>When is it appropriate to use words “can”, “should” and “may” in notes?</p>	<p>"Can" is allowed, but not "may", "shall" or "should".</p> <p>Notes shall not contain requirements (e.g. use of "shall") or any information considered indispensable for the use of the document, for example instructions (imperative mood), recommendations (e.g. use of "should") or permission (e.g. use of "may"). Notes should be written as a statement of fact. The verbal form "can" therefore may be used in a note, but not "should" or "may".</p>	<p>24.5</p>
<p>Is it appropriate to use both “should” and “shall” when making normative references?</p>	<p>Normative references are documents that are referred to in the text in such a way that some or all of their content constitutes requirements of the International Standard you are drafting.</p> <p>Requirements are expressed using the form “shall”.</p> <p>The verbal form “should” is used to express a recommendation rather than a requirement; therefore, a reference cited with “should” is an informative reference, rather than a normative reference, and shall be listed in the Bibliography of the document.</p>	<p>15.5.3</p>
<p>When using the term "may" as in "you may use IEC 60601-1....", is this publication to be cited in the Bibliography?</p>	<p>The verbal form “may” expresses permission in IEC documents.</p> <p>If users are simply permitted to refer to a publication in order to carry out something, then this is an informative reference and the publication shall be listed in the Bibliography (unless it is cited normatively elsewhere in the document).</p>	<p>7.4</p>
<p>You covered "shall" and "should". Could you comment on the uses (generally) of "must", "may" and "could" (in the body of the text, not references)</p>	<p>In IEC documents, the verbal form "must" is used to express an external constraint (e.g. laws of nature or particular conditions existing in some countries or regions).</p> <p>The verb "may" is used to express permission.</p> <p>The verbal form "can" is used to express a possibility.</p> <p>It is best to avoid the use of "could", as confusion can exist between its use as the past tense of "can" as opposed to the modal verb (verbal form expressing necessity or possibility).</p> <ul style="list-style-type: none"> • When "could" is used to mean the past tense of "can", it expresses a possibility or ability to do something in the past and its usage follows the same rules as those 	<p>For use of “must”, see 3.3.8 and 7.6 For “may”, see 7.4 For “can”, see 7.5</p>

	<p>for "can". For example: "Floppy disk drives could be found on computers".</p> <ul style="list-style-type: none"> The use of the modal verb "could" should be avoided. Besides expressing a wish or a different version of events, it can be used to express a condition for something to occur, e.g. "the test could fail if the ambient temperature is in excess of the defined limit". <p>These differences are subtle, and it is therefore best to find alternative expressions to avoid "could". For example, the conditional form is the one that is most frequently encountered in draft International Standards, but it can be easily avoided by replacing the conditional "could" with "can": "The test can fail...". The onus is now on the possibility for failure rather than the conditions that will lead to failure.</p>	
<p>Regarding choice of wording - shall, should, etc - we argued for hours in a standard's meeting about the wording for conducting a study, e.g. if doubt exists, a system study shall/should/ etc. be conducted. But the question then came up that conducting the study does not solve the problem, and rather using the results of the study does. Seems like common sense, but apparently not. What is the best way to state what should be obvious in the standard?</p>	<p>If you are talking about recommended best practice, use "should". If you are expressing a required practice, use "shall". Whether the study you are referring to resolves the issue or not is a separate problem.</p> <p>However, nothing should be left to interpretation or be down to "common sense". We advise that you be as explicit as possible even if this results in content that would not be regarded as elegant from a literary perspective!</p>	<p>7.1, 7.2 and 7.3</p>
<p>In China, shall and should translate to the same word, which is understood to be a requirement in both cases. Another form of "should" to avoid this problem is "It is recommended that".</p>	<p>It is true that in some languages, a strict equivalence in translation is not possible. In that case, you need to agree on a convention/appropriate words to use for the expression of requirements and recommendations to be applied to ALL your national translated versions.</p>	
<p>What is the difference between "Note" and "Note to entry"?</p>	<p>Notes integrated in the text are used for giving additional information intended to assist the understanding or use of the text of the document. The document shall be usable without the notes; it shall not contain permissions, recommendations, or requirements.</p> <p>A note to a terminological entry (referred to as "Note # to entry") is used only in terminology and follows different rules from a note ("NOTE #") integrated in the text (see Clause 24 of ISO/IEC Directives Part 2). It provides additional information that supplements the terminological data. A note to entry can contain recommendation and requirements (related to the use of the term).</p>	<p>16.5.9 and Clause 24</p>

<p>The abbreviations for “alternating current” and “direct current” were AC and DC, then became a.c. and d.c., and were again reversed to AC and DC. Is there any particular reason for the use of one or the other?</p>	<p>The abbreviated forms "AC" and "DC", and "a.c." and "d.c." represent different concepts and are not alternate forms. It is intentional that their presentation differs.</p> <p>"AC" and "DC" are qualifiers as defined in IEV 151-15-01 and 151-15-02 respectively. Example of usage: "DC traction" as defined in IEV 811-01-02.</p> <p>"a.c." and "d.c." are abbreviated forms for the nouns "alternating current" as defined in IEV 131-11-24 and "direct current" as defined in IEV 131-11-22.</p>	
<p>Is it acceptable not to use bold font in the Preface for words that are defined later in the text? As an example, is it acceptable to remove the bold font in the following extract from a Preface: “International Standard IEC 62040-3 was prepared by subcommittee 22H: Uninterruptible power systems (UPS) of IEC technical committee 22: Power electronic systems and equipment. This edition includes the following significant technical changes with respect to the previous edition: (...) non-linear step load is no longer a type test and was removed from 6.4 in consistency with requirements for switch mode power supplies incorporating inrush current controls; (...)”</p>	<p>It is not necessary to make cross-references to terms defined elsewhere, or to identify such terms using typographical mark-up, such as bold, small caps, etc. Identifying terms by typographical convention is done in some series for reasons of historical consistency but is not encouraged.</p> <p>If you choose to identify terms defined elsewhere, the preference is to use a numbered reference to the terminological entry, rather than to use a typographical convention.</p> <p>The responsibility for correctly identifying and marking up the terms to be cross-referenced lies with the relevant in the TC. Such markup is potentially risky, as term numbers frequently change, and grammatical variants are difficult to spot.</p> <p>Whatever the choice that is made, it shall be used consistently throughout the text. Any special conventions have to be described in the foreword.</p>	16.5.10
<p>How to overcome the blocking of the convenor to correct technical errors in published documents?</p>	<p>You may contact directly the Secretary, keeping in copy the Convenor.</p>	
<p>Can the Convenor check the PDF file before it is distributed as an IS? Reason: sometimes formatting errors occur when IEC converts the final .docx version to PDF.</p>	<p>This is currently not part of IEC practice: by publication stage, the IEC community wants to have access to the contents as rapidly as possible, so introducing further time for proofing is not desirable. Any obvious errors resulting from conversion to PDF can be resolved quickly.</p>	
<p>Please explain or talk about best practices about relationship and communication between TC/SC/WG/PT and secretary, and Central Office editors.</p>	<p>The best practice is to ensure transparency of the communication. This can be achieved by copying the concerned stakeholders in the emails. Specific joint meetings can also be organized, either face to face or virtual.</p>	

<p>What is the IEC's stance on SVG graphics?</p>	<p>They are accepted.</p> <p>In practical terms, at the IEC, the graphics and figures team opens a copy of the file with Adobe Illustrator and saves them in a .pdf format. From this, we generate both a png for the word file, as well as keeping a revisable version should any updates be necessary.</p>	
<p>How do I access the symbols and where do I find them?</p>	<p>Please contact your national committee to gain access to the databases IEC 60617, Graphical Symbols for Diagrams, IEC 60417 and ISO 7000, Graphical Symbols for Use on Equipment.</p>	
<p>Is the use of graphical symbols free of charge in general, e.g. when we want to use it on products?</p>	<p>Database elements such as graphical symbols intended to be on equipment for commercial sale may be applied to a user's equipment provided the user has paid any necessary fee to access the database. When elements from the graphical symbols database are used, IEC must be referenced as the source and, where practicable, a link to the reference in the database must be included, for example in supporting material for equipment. Replication of all or a substantial part of graphical symbols database is subject to a commercial arrangement with the IEC.</p>	
<p>Regarding formulas, does every formula need the key or can we bundle formulas and have the key bundled after all these formulas?</p>	<p>There is no set rule on this. For the sake of readability, it is preferable to have a key directly after each formula, e.g.</p> $a + b = c$ <p>where:</p> <p><i>a</i> is the...</p> <p><i>b</i> is the...</p> <p><i>c</i> is the...</p> <p>The key shall be as close to the formula as possible. In cases where there are many formulae on one page, it can be acceptable to group the keys in one place. The important aspect is to avoid keys that are far away from the formula, as this diminishes readability.</p> <p>In cases where many symbols are frequently used throughout a document (not sporadically or on just one page), a viable alternative is to list all the symbols used in the document in a subclause "Symbols" in Clause 3.</p>	

<p>How do you decide for an ISO/IEC standard that the ISO name is first and the IEC name after? Why not IEC/ISO, i.e. first the IEC name?</p>	<p>Jointly developed standards hold both IEC and ISO logos. These standards are developed by a JWG. If the administrative lead of the JWG is at IEC, the IEC logo will be first.</p> <p>With respect to the header "ISO/IEC", this is done by convention between IEC and ISO.</p>	
<p>What is the experience with different versions of Word and open source software in the drafting process? How to repair documents not opened in recommended software?</p>	<p>MS Word has always been the software of choice because of its universal nature. IEC documents are presently drafted in the .docx format, so Word 2007 or later is necessary. While adequate results might be possible in open source software such as Libre Office, the IEC only provides support for issues encountered with MS Word and cannot advise how to proceed with repairing documents created with any other software.</p> <p>However, the drafting of IEC documents will soon be conducted with XML-based authoring. The IEC and ISO are currently in the process of creating an Online collaborative authoring platform which will be free for standards developers and will ensure that proprietary products such as MS Word and Wiris/MathType will no longer be necessary.</p>	
<p>No mention of IEC Glossary, is this not valid?</p>	<p>The IEC Glossary comprises an extract of all the terminological entries published in IEC documents between the years 2002 and 2015, and thus the terminological entries from IEC documents published since 2016 are not present. Before using a term and definition from the Glossary we suggest that you check whether it is still valid or whether there is a more recent edition of the standard. Your IEC Editor can help you on this.</p> <p>In the future, the IEC will replace the Glossary by a search tool that queries the XML database of standards. This search tool is currently under development.</p>	
<p>Where can we find an exhaustive glossary of the so many acronyms used in IEC documents?</p>	<p>For the abbreviations you find the list here: https://www.iec.ch/members_experts/refdocs/abbreviations.htm</p>	
<p>Going back to the topic of editors - when I look on my committee page, I seem to be both the convenor and the editor. Is this an issue?</p>	<p>Please contact the Technical officer of your TC to correct this.</p>	
<p>Will the difference between Notes and Annexes be discussed - and what their implications are (are they de facto normative)?</p>	<p>Annexes are used to provide additional information to the main body of the document, for example when the information or table is very long; to set apart special</p>	<p>Clause 20, Clause 24</p>

	<p>types of information (e.g. software, example forms, results of tests); or to present information regarding a particular application of the document. Annexes can be normative or informative elements. Normative annexes provide additional normative text to the main body of the document. Informative annexes provide additional information intended to assist the understanding or use of the document.</p> <p>Notes are used for giving additional information intended to assist the understanding or use of the text of the document. However, the text contained in a note is generally much shorter than the text contained in an annex. The text contained in a note is also always informative (as opposed to being normative) in nature.</p>	
<p>Notes and footnotes to the text seem to have the same purpose (IEC Directives Part 2, Table 8). Is there any preference between the two inside IEC documents? In my opinion, footnotes should be used only for figures and tables.</p>	<p>In IEC documents, footnotes are used to give additional contextual information to a specific item in the text, whereas notes are used more generally to give additional information to assist the understanding or use of the document.</p>	<p>Clause 26</p>
<p>Who is responsible for updating references in an updated standard?</p>	<p>When writing a standard, the author shall ensure that the references being cited point to the correct target. This is true for normative and informative references, but also for internal cross-references to numbered items such as clauses and subclauses.</p> <p>When the document is submitted to IEC for editing, the IEC Editor checks that these are all correct and if necessary, corrects them (after consultation with the author).</p> <p>A very useful tool for authors in MS Word is the "cross-reference" function, which creates a hyperlink to the target of the internal reference. This saves a lot of time, as it ensures that even if the structure of the document is changed, the link always remains valid.</p>	<p>How to create cross-references in MS Word:</p> <p>www.iec.ch/standardsdev/resources/draftingpublications/writing_formatting/tips_recommendations/cross_references.htm</p>
<p>In case of a particular standard (e.g. 60601-2-xx), should the general standard (60601-1) and collateral standards (60601-1-xx) be listed in the Normative References clause</p>	<p>If a standard requires the user to consult another standard, it shall be listed in the Normative references section. This requirement shall be explicitly expressed in the text.</p>	<p>Clause 10.</p>

even if no explicit mention of a requirement is made in the particular standard?		
What are the rules on reference to standards EN, ANSI, etc.?	References to IEC and ISO standards are preferred, but if suitable standards do not exist in IEC and ISO, any publicly available document can be listed as a normative reference, as long as it is considered authoritative by the TC concerned.	10.2
How could files be synchronized between IEC document server (https://collaborate.iec.ch) and a local computer for working in offline mode?	The IEC Collaboration Platform (CP) is not a file server but a system designed for online collaboration. It has been designed as the first module of the IEC future business and standards development platform where several users will collaborate working on standards in the near future. We do not recommend downloading the entire directory tree of a committee as you will miss updates and the history of documents as well as discussions and tasks assigned to you. The system is designed to work online while you have the possibility to download single files if you need to work on these offline.	
How to download a complete directory tree (including all files in a (sub)directory structure? Former "N document list" was much easier to synchronize with local file storage.	The IEC Collaboration Platform (CP) is not a file server but a system designed for online collaboration. It has been designed as the first module of the IEC future business and standards development platform where several users will collaborate working on standards in the near future. We do not recommend downloading the entire directory tree of a committee as you will miss updates and the history of documents as well as discussions and tasks assigned to you. The system is designed to work online while you have the possibility to download single files if you need to work on these offline.	
PATENTS – COPYRIGHT		
I read in the latest version of the Directives Part 1 that patents do not have to be listed in the Introduction anymore. Can you please confirm?	Yes, this change has just been made. Patents no longer have to be listed in the introduction. But the general principles regarding Patents laid out in ISO/IEC Directives, Part 1 remain valid.	ISO/IEC DIR 1:2020, 2.14.2
What happens if after drafting a standard a patent right is upcoming valid for a certain region, e.g. only US, which covers the method described in the draft standard?	When the patent is only declared in one country, the concerned National Committee should be informed and invited to help establish a patent agreement.	

What sort of patents are relevant in the context of drafting a standard?	This applies when a standard contains provisions originating from patented technology. This patented technology can be a test method, a measuring instrument, etc.	
What is relationship between patents and intellectual property?	A patent is a legal means to protect intellectual property.	
How to proceed with large companies which do not mention patents at the NP level to get broad acceptance but introduce them later?	Such an attitude is against the Directives. An appeal can be made against this and the standard can be re-written to avoid the patent. But this delays the project.	
What is the limit of a copy right? and can I for example publish a part of IEC 60335-1 clause 7.1. to my factory just to make them understand the requirements?	All IEC Publications are protected by the publisher's copyright and no part of any IEC Publication can be reproduced or utilized in any form or by any means (graphic, electronic or mechanical including photocopying) without the written permission of the publisher. To grant you reproduction authorization please mention your complete contact information (name, company, address) and the full reference (publication and edition number) together with the clause or table number you wish to use. Send your request to: info@iec.ch	
Would you please give more explanation on patents	You may find more information on patents here: https://www.iec.ch/members_experts/tools/patents/patent_policy.htm	
Copyright for external materials - does that apply to all documents produced in preparation of draft standards?	If you reproduce any material from another copyrighted source, you need to have the appropriate permission to do so.	32
Do we need permission to use pictures, graphs, etc. from other IEC documents? Is it different if the other IEC document references a copyright owner, i.e. do we need a separate approval as well?	Rather than copying material from other IEC standards, you should use a normative reference, e.g. Use the test method given in IEC 61076-1:2018, Clause 4.	10.1
IEC 60617 only has poor quality bitmaps. Are there any sources or plans to make vector drawn versions available?	IEC is currently working on updating all of these to vector drawings.	
How to indicate changes in an existing document during updating?	During drafting, the best way to show changes between one version of a document and another is to use the tracked changes function in MS Word.	

Will the copyright be picked up by the Editors, or does it need to be highlighted?	It needs to be highlighted, as Editors are not present during the drafting process and cannot know what has been copied from exterior sources.	
Normative reference		
Is it allowed to use standards from the EU or the US, or some other NCs as normative references?	References to IEC and ISO standards are preferred, but if suitable standards do not exist in IEC and ISO, any publicly available document can be listed as a normative reference, as long as it is considered authoritative by the TC concerned.	10.2
Standards listed in Clause 3, are they normative references or do they belong in the Bibliography?	<p>When a publication is given as a source of terms and definitions in the introductory paragraph to Clause 3, it is a normative reference, for example:</p> <p>"For the purposes of this document, the terms and definitions given in IEC 61234 apply."</p> <p>In this case, the reader must refer to this standard to consult the terminology.</p> <p>However, a publication given as a source of a terminological entry is informative.</p> <p>For example:</p> <p>cable</p> <p>assembly of one or more conductors and/or optical fibres, with a protective covering and possibly filling, insulating and protective material</p> <p>[SOURCE: IEC 60050-151:2001, 151-12-48]</p> <p>In this case, the reader does not have to refer to this standard: the terminological entry is already there. The source is added to the Bibliography, unless it is cited normatively elsewhere in the document (in which case, it is listed in Clause 2).</p>	16.5.10
Dated references: is it enough to give the precise dates for a standard in clause 2 (e.g IECxxx:2019+A1:2020) and adding an explanation stating that everywhere in the standard, when a reference to a standard in clause 2 is made, the same dates apply? So that you can write in the body of the standard only IECxxx, without adding the dates?	<p>No. If you wish users to refer to a specific edition, the reference always needs to be dated.</p> <p>There is a good reason for this: if part of your document containing an undated reference is referred to by another document or is taken out of context, the reader would not know that a particular edition of that reference applies.</p>	10.5

<p>Is a citation of an IS allowed in a definition? Example: 3.3.53 Precision Time Protocol PTP protocol defined by IEC 61588:2009 Note 1 to entry: As an adjective it indicates that the modified noun is specified in or interpreted in the context of IEC 61588:2009.</p> <p>[SOURCE: IEC 61588:2009 3.1.28 modified – second sentence changed to a Note]"</p>	<p>The definition "shall completely describe the concept from the viewpoint of the electrical engineer ... [and] ... contain all the characteristics of the concept necessary and sufficient to enable the concept considered to be well understood and its boundaries to be defined".</p> <p>Although it is permissible in some instances to cite an IS in a definition, in the example given from IEC 61588-6-2:2014, 3.3.53:</p> <p>Precision Time Protocol PTP protocol defined by IEC 61588:2009</p> <p>Note 1 to entry: As an adjective it indicates that the modified noun is specified in or interpreted in the context of IEC 61588:2009.</p> <p>[SOURCE: IEC 61588:2009, 3.1.28, modified – second sentence changed to a Note]"</p> <p>this cannot really be considered to be a definition. Rather the text "protocol defined by IEC 61588:2009" is functioning as a cross-reference. For example, compare it with the text "... using test A defined in IEC xxxxx".</p>	
<p>Is the Introduction an optional part of the content?</p>	<p>Yes. Its purpose is to provide specific information or commentary about the content of the document, such as the reasons prompting its preparation.</p>	<p>13.1</p>
<p>Some interpret the Directive 1 requirement that an IEC technical report "...shall be entirely informative in nature and shall not contain matter implying that it is normative" as meaning the sections that Directive 2 would always require be normative (e.g., definitions, scope) are not normative in an IEC technical report. For example, the use of defined terms in the document would not have to conform to the definition if the Terms and definitions subdivision was not normative. Such an interpretation would also forbid an IEC technical report from containing optional requirements in informative annexes or having a measurement and test method subdivision. Please comment on what should be the interpretation of Directive 2 requirements in the context of this statement in Directive 1 regarding IEC Technical Reports?</p>	<p>A Technical Report as a whole, is not normative. This means that it should not contain requirements, or "shall" statements. Its structure can contain a scope, references to standards, terms and definitions.</p> <p>However, if a Technical report contains a reference to a standard that is required to be consulted to understand the Technical report, that standard is listed in the normative references, for example:</p> <p>"For the purposes of this document, the terms and definitions given in IEC 60601 apply"</p> <p>In this case, the reader needs to consult IEC 60601 and therefore that reference is added to the Normative references.</p>	

<p>If documents are the sources of definitions (which are a normative part of the document) may they also be listed in the normative references?</p>	<p>A publication given as a source of a terminological entry is informative (i.e. not normative) in nature.</p> <p>For example:</p> <p>cable</p> <p>assembly of one or more conductors and/or optical fibres, with a protective covering and possibly filling, insulating and protective material</p> <p>[SOURCE: IEC 60050-151:2001, 151-12-48]</p> <p>List IEC 60050-151:2001 in the Bibliography, not in Clause 2.</p>	<p>16.5.2</p>
<p>Please give advice on adding references to standards that have been published, where an amendment is in progress to the part to be referenced!</p>	<p>If a general reference is made, it does not need to be dated: an undated reference implies that the latest valid edition of the standard (including any amendments) applies.</p> <p>However, if you are referring to a specific element (clause, subclause, figure, table, etc.) of the publication that has been amended, the reference needs to be dated. If the content being referred to has been amended, a dated reference needs to be made to the standard and its amendment:</p> <p style="padding-left: 40px;">The test frequency described in IEC 61000-4-16:1998, 6.1.3 and IEC 61000-4-16:1998/AMD2:2009, 6.1.3 shall be used.</p> <p>If the content being referred to has not been amended, a dated reference only needs to be made to the base standard:</p> <p style="padding-left: 40px;">The test frequency described in IEC 61000-4-16:1998, 6.1.3 shall be used.</p> <p>In the case where an amendment is in progress, which modifies the content being cited, the example above would be presented as follows:</p> <p style="padding-left: 40px;">The test frequency described in IEC 61000-4-16:1998, 6.1.3 and IEC 61000-4-16:1998/AMD2:—¹, 6.1.3 shall be used.</p>	<p>10.5</p>

	<p>Notice the footnote, to be added at the bottom of the page on which the reference appears:</p> <p>¹ Under preparation. Stage at the time of publication: IEC FDIS [or CDV] 61000-4:1998/AMD2:2020.</p>	
<p>WANO reports can be listed in normative references clause? I mean report issued by other private (not normative!) organizations, even if known worldwide...I believe it was forbidden.</p>	<p>References to IEC and ISO standards are preferred, but if suitable standards do not exist in IEC and ISO, any publicly available document can be listed as a normative reference, as long as it is considered authoritative by the TC concerned.</p>	10.2
<p>If a standard refers to a document as an undated Normative Reference, is it assumed that the most recent edition of the document is meant?</p>	<p>For an undated reference listed as a normative reference in Clause 2, the latest edition of the referenced document (including any amendments) applies.</p>	15.5.2
<p>Is it allowed to cite a withdrawn standard (or a standard which has its new version) as a normative reference?</p>	<p>It is preferable not to cite withdrawn standards as normative references, but to make reference to the latest valid version of the standard. However, if there is a strong reason to do so, references to withdrawn standards are possible.</p>	Clause 10
EDITING CDV, FDIS		
<p>At CDV stage, there are sometimes some question from editor. Should we answer the questions, or simply select the correct text to modify in the draft?</p>	<p>In general, you should modify the text (or not) in response to the editor's comment. However, in some cases, it can be very useful for the editor to have a reply to a query raised at CDV stage, so that the issue can be more easily resolved at FDIS stage.</p>	
<p>All standardization work I participated so far in, goes on in English. Isn't the translation into French already at CDV stage unnecessarily prolonging the standardization work?"</p>	<p>At the CDV stage, the 6-week period before the circulation is made available for ALL National Committees for translation. This allows countries whose national language is not English to prepare translations and, if necessary, National consultations.</p>	ISO/IEC Directives, Part 1, IEC Supplement:2020: E.3.1.1
<p>What is the duration of the FDIS evaluation stage?</p>	<p>The time allowed for FDIS editing and preparation before vote is maximum 12 weeks (normally, this process is much quicker).</p> <p>After that, the FDIS voting period lasts for 6 weeks.</p>	ISO/IEC Directives, Part 1, IEC Supplement:2020: 2.7.1
<p>Can the translation be organized in parallel to the voting process - meaning immediately distributing the English version, giving all NC's more time for considering a draft?</p>	<p>This is what happens at the FDIS stage.</p>	ISO/IEC Directives, Part 1, IEC Supplement:2020: E.3.1.2

<p>It is my experience that formatting problems occur between the WORD version of the CDV/FDIS submitted and the PDF circulated for vote. The Word version is prepared using the IEC template so why does this happen?</p>	<p>Microsoft Word and Adobe Acrobat are products from two different companies, which sometimes have compatibility issues. Our documents are complex, and we have to continuously monitor the situation. Before publication, the PDF goes through a final round of quality control to ensure that any issues are resolved.</p>	
<p>The principle given at the beginning that the draft should be traceable is made difficult by IEC CO when editing the draft in parallel to the CDV by providing the resulting comments embedded instead of in the comment form that NCs have to use. With that we have two different sources for comments. Proposal: IEC CO deliver the resulting editing comments also in the comment form.</p>	<p>The problem resides in the fact that the nature of the comments from IEC Editing is different in nature to that of the NCs, which are more technical, but it is acknowledged that the situation is not ideal. In the future, it is intended that a system will be put in place to facilitate the resolution of ALL comments. IEC and ISO are currently working on a project for online collaborative authoring which should enable this.</p>	
<p>What happens with the comments received in the FDIS voting if the FDIS is voted positive?</p>	<p>The comments are archived for the next maintenance cycle of the standard.</p>	
<p>When the document of draft in working group WD can be changed to CD for circulation?</p>	<p>This is usually a consensus decision of the WG to evaluate if the working draft is mature enough to be submitted for comments to the P-Members. Formally (as per the Directives) the decision about the circulation of a CD is to the secretary.</p>	
<p>Will the commenting process be simplified in the future? It is very time-consuming to incorporate the various comments per country - per line.</p>	<p>In the future, it is intended that a system will be put in place to facilitate the resolution of ALL comments. IEC and ISO are currently working on a project for online collaborative authoring which should enable this.</p>	
<p>CDV then can be cited? Always keep a tracked version and a clean version, is that correct?</p>	<p>It is possible to cite documents that are at CDV stage. However, normative references to enquiry or final drafts are potentially risky, and are strongly discouraged, as the referenced document can change before publication.</p>	10.5
<p>Is it up to the Secretary to decide on answers to comments from various NC (on CDV) or on suggestions from the editing team - should it not be done by working group experts? In my opinion - it should be only experts - not Secretary of TC. Comments?</p>	<p>The Directives require that the resolutions of the comments be "decisions from the secretariat". In practice, the comments are resolved by consensus in the WG and then provided to the secretary for circulation. In IEC (and ISO) the secretary is the person responsible for the content of all the documents circulated in the TC.</p>	
<p>in the voting period, the document IS editable, right?</p>	<p>During the voting period, TCs should abstain from modifying the document, as the reference version is at the IEC. It is</p>	

	highly probably that you no longer have the latest version of the file since it has been or is being edited by the IEC.	
What is the editing timing on DTS?	At DTS, the editing takes place in parallel to the vote, so no time is taken up by editorial processes.	ISO/IEC Directives, Part 1, IEC Supplement:2020: 3.1
Where can we find an explanation of the different stages of document, such as DV, CDV, FDIS, etc.? Thank you.	You may find a description of the stage codes on the IEC website under the TC/SC resource area : see “Processes & Procedures”	
IEC TEMPLATE		
Can the IEC Standard template be used with Office 365?	Yes, it can be. If you use the template (.dot) as the basis of the document, it can be saved in compatibility mode as a docx. The template can also be attached to a docx document.	
Can the Word formula creator be used?	MS Word used to have a professional-quality equation editor, but this was deleted. The current editor is not good enough for publishing purposes. IEC recommends WIRIS/MathType (www.wiris.com/mathtype) as the best solution. We are still searching for an acceptable free version. IEC and ISO are currently in the process of creating an Online collaborative authoring platform which will be free for standards developers and will ensure that proprietary products such as MS Word and Wiris/MathType will no longer be necessary.	
When will a new template be distributed with the latest boilerplates? At least there should be a warning that the boilerplates are obsolete	The boilerplates have been recently updated and are available on the website. The text included in the add-ins menu of the template is also up to date.	
Will there be finally latex templates?	No, it is not intended for the IEC to provide Latex templates.	
Which is the tool to be used for creating equations? Mathtype is not anymore available as freeware and in addition I am not allowed to install software which is not authorized by my company.	MS Word used to have a professional-quality equation editor, but this was deleted. The current editor is not good enough for publishing purposes. IEC recommends WIRIS/MathType (www.wiris.com/mathtype) as the best solution. We are still searching for an acceptable free version. If you cannot access this software and need to modify some equations, IEC Editors can help you. IEC and ISO are currently in the process of creating an Online collaborative authoring platform which will be free for standards developers and will ensure that proprietary products	

	<p>such as MS Word and Wiris/MathType will no longer be necessary.</p>	
<p>Why are we required to use MathType software for equations? We have to pay for it. Can the IEC get a general licence? Or else allow the use of the Word equation.</p>	<p>MS Word used to have a professional-quality equation editor, but this was deleted. The current editor is not good enough for publishing purposes. IEC recommends WIRIS/MathType (www.wiris.com/mathtype) as the best solution. We are still searching for an acceptable free version.</p> <p>If you cannot access this software and need to modify some equations, IEC Editors can help you.</p> <p>IEC and ISO are currently in the process of creating an Online collaborative authoring platform which will be free for standards developers and will ensure that proprietary products such as MS Word and Wiris/MathType will no longer be necessary.</p>	
<p>Is there any alternative to Math Type Editor to edit equations?</p>	<p>MS Word used to have a professional-quality equation editor, but this was deleted. The current editor is not good enough for publishing purposes. IEC recommends WIRIS/MathType (www.wiris.com/mathtype) as the best solution. We are still searching for an acceptable free version.</p> <p>If you cannot access this software and need to modify some equations, IEC Editors can help you.</p> <p>IEC and ISO are currently in the process of creating an Online collaborative authoring platform which will be free for standards developers and will ensure that proprietary products such as MS Word and Wiris/MathType will no longer be necessary.</p>	
<p>Traditionally, we have problems with WORD (different versions, localisations, formulae inside). Why do you use a private product of MICROSOFT we have to buy and time by time up to date from our budget? Why don't you use some version of TeX, like AmsTeX from American Mathematicians?</p>	<p>MS Word was chosen as a compromise at a time when free products were either not good enough for publishing, or not user-friendly enough. It was assumed that MS Word was present on the majority of the experts' computers and relatively well known by the majority of users.</p> <p>Being a compromise, it is not and will probably never be ideal, but is the one which causes the fewest problems all round.</p> <p>However, IEC and ISO are currently in the process of creating an Online collaborative authoring platform which will be free for standards developers and will ensure that proprietary</p>	

	products such as MS Word and Wiris/MathType will no longer be necessary.	
When will a DOCX version of the STD template be available?	The current .dot version is compatible with the latest version of Word and works very well. We are currently working on a dotx version of the template and should be available shortly.	
Is there an equivalent ISO styles add in for MS Word?	The IEC template is available here: https://www.iec.ch/standardsdev/resources/draftingpublications/writing_formatting/IEC_template/iec_template.htm The ISO template is available here: https://www.iso.org/iso-templates.html	
which version of MS Word is currently preferred?	IEC uses the latest version of Word from Microsoft 365.	
Is it not ironic that in its working procedures for standards development IEC, as a major global standards organisation, uses word processing software (Word) from an organisation (Microsoft) that has built its commercial success and profitability on persuading or forcing the world to use its own expensive, proprietary word processing systems? Is it time for IEC to explore the case for using open source software for drafting and exchanging texts of standards?	<p>MS Word was chosen as a compromise at a time when free products were either not good enough for publishing, or not user-friendly enough. It was assumed that MS Word was present on the majority of the experts' computers and relatively well known by the majority of users.</p> <p>Being a compromise, it is not and will probably never be ideal, but is the one which causes the fewest problems all round.</p> <p>IEC's Layout service reviews each incoming document and will perform all necessary steps to ensure that the documents are clearly and rigorously structured so as to ensure stability through the subsequent steps (further review by TC, Editing, Publishing, etc.).</p> <p>However, IEC and ISO are currently in the process of creating an Online collaborative authoring platform which will be free for standards developers and will ensure that proprietary products such as MS Word and Wiris/MathType will no longer be necessary.</p>	

<p>Can you use the word guide or guidance in the title of a standard?</p>	<p>The word "Guide" shall not be used in titles of documents developed by technical committees and subcommittees as it corresponds to a specific document type developed under the authority of the management boards (see the ISO/IEC Directives, Part 1).</p> <p>Titles using the words "Guidance" or "Guidelines" are acceptable (e.g. "ISO 26000, Guidance on social responsibility").</p>	<p>11.5.2</p>
<p>MISCELLANEOUS</p>		
<p>Should the language be UK English or American English? I see a mix of both, even in just a single standard at times.</p>	<p>The preference is to use British English, but American English can also be used. Regardless of whether British or American English is used, the spelling needs to be consistent throughout a document.</p>	
<p>Can I publish my Solar PV technology related work in IEC?</p>	<p>No, IEC documents are supposed to be the result of an international consensus. You may submit your work as a draft TR (TR project subject to approval by the TC) to be reviewed and completed by the experts in the WG.</p>	
<p>What are the capitalization rules in IEC documents (i.e. which words, like "Standard", must be written with initial uppercase)?</p>	<p>Categories of documents which need to be written with an initial capital are listed in Clause 3 of ISO/IEC Directives, Part 2: 2018</p> <p>Apart from these, when a reference is made to a specific numbered item, such as a table, figure, clause or annex, the name of the element shall be capitalised: Table 3, Figure 2, Clause 6, Annex B, etc.</p>	<p>Clause 3</p>
<p>Does IEC use SMALL CAPITALS - to mean a defined term? I mainly work in the IEC 60825 series, which doesn't - not any more anyway. But some series still seem to, e.g. the IEC 60601 series.</p>	<p>It is not necessary to make cross-references to terms defined elsewhere, or to identify such terms using typographical mark-up, such as bold, small caps, etc. Identifying terms by typographical convention is done in some series for reasons of historical consistency but is not encouraged.</p> <p>If you choose to identify terms defined elsewhere, the preference is to use a numbered reference to the terminological entry, rather than to use a typographical convention.</p> <p>The responsibility for correctly identifying and marking up the terms to be cross-referenced lies with the relevant in the TC.</p>	<p>16.5.10</p>

	<p>Such markup is potentially risky, as term numbers frequently change, and grammatical variants are difficult to spot.</p> <p>Whatever the choice that is made, it shall be used consistently throughout the text. Any special conventions have to be described in the foreword.</p>	
Will you be talking about the way e.g. IEC 60601-2-22 relates to IEC 60601-2? It seems to be basically a “delta document” - i.e. it documents <i>differences</i> between the -2-22 and the -2. Is that the basic idea?		
Are Annexes in IEC standards <i>always</i> informative only?	No. Annexes can be both informative and normative.	20.2
Does IEC have anything like the CEN “A-deviation” process? Or maybe such a thing would not be appropriate at IEC level?	IEC allows "in country clauses" which mention country specific deviations in a standard.	
Who takes over responsibility if requirements are insufficient and may become subject to a legal claim for liability? E.g. if a person dies due to a misleading standard?	The manufacturer is legally responsible for the safety of its products, even in the case of compliance with imperfect standards.	
Dated references: Can a standard refer to different versions of a referenced standard e.g. one clause to IEC 6XXXX:2015 and different clause to IEC 6XXXX:2015+AMD1?	In theory, yes, but it is best to avoid this.	10.5
When we need to coordinate with other standards, such as: ISA99 for cybersecurity, how can we coordinate the usage of terms and definitions to match specific definitions and avoid contradictions?	<p>To ensure coherence between standards, it is possible to cite terms from other standards. Please see the ISO/IEC Directives, Part 2, 2018, 16.5.10.</p> <p>For further information, please send a mail to terminology@iec.ch.</p>	
Why is the numbering of figures, formulae, and tables sequential? In most publications, the numbering is by chapter. This is much more convenient when updating a document.	<p>This has been the convention at IEC and ISO for decades and has never caused any particular issues. All Figures and Tables should be autonumbered, which means that when they are moved in the course of the authoring process, the number is automatically updated.</p> <p>Further information of the use of the IEC Template, captions, labels and autonumbering can be found here:</p> <p>https://www.iec.ch/standardsdev/resources/draftingpublications/writing_formatting/IEC_template/iec_template.htm</p> <p>and</p>	

	https://www.iec.ch/standardsdev/resources/draftingpublications/writing_formatting/tips_recommendations/	
Is there a guide for holding virtual meetings for the development of standards?	Yes, and it is available on the IEC Website through: https://www.iec.ch/tools/pdf/zoom_guide.pdf	
Are these slides and presentation shareable with other SDO's for training purposes? So that they can develop standards consistent in development with the IEC standards?	A recording of this webinar, all questions and answers and the slides will be shared a few days after the webinar on www.iec.ch/academy . On top of this, you can find recordings and slides of all our webinars since 2018.	
To be clear, this presentation can be shared with members of non-IEC Standardization Development Organizations?	The IEC Webinars are publicly available on the IEC Academy page , so, yes, please feel free to direct other experts to this page.	
Is there any tool available to track issues in IEC collaborative tool, like Gitlab for example? If not would it be good to have one?	There is currently no ticketing tool connected / integrated to the Collaboration Platform: there is no strong case yet to justify the related development. The existing Task entity could somehow address this requirement as it comes with Title, Description, Priority, Deadline and Assignee attributes.	
Where can I find the full names of abbreviations used in the presentation.	You can find them here: https://www.iec.ch/members_experts/refdocs/abbreviations.htm	
How to get a "red-line" version after creating a new edition of an existing standard. Is it automatically created or does it need extra decision and efforts?	<p>The Redline version of a renewed edition is not an automatically generated product. It requires human intervention to ensure that the product presents the changes in a precise legible form with the right level of granularity to make it usable.</p> <p>A new Redline is created in this way for almost all new editions, with a few exceptions:</p> <ul style="list-style-type: none"> – availability of the revisable file of the previous edition – modifications and structural changes from the previous edition (estimate by CO) which are compatible with a readable and usable end product. <p>The development of RLV is made using a combination of the automatic comparison of content as well as a number of manual interventions to:</p>	

	<ul style="list-style-type: none">- identify and remove/accept non-relevant changes- clean up, rewrite or restructure highlighted changes- correct technical bugs in complex parts of the content such as lists, tables, figures. <p>There lies the true added value of the RLV.</p>	
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