



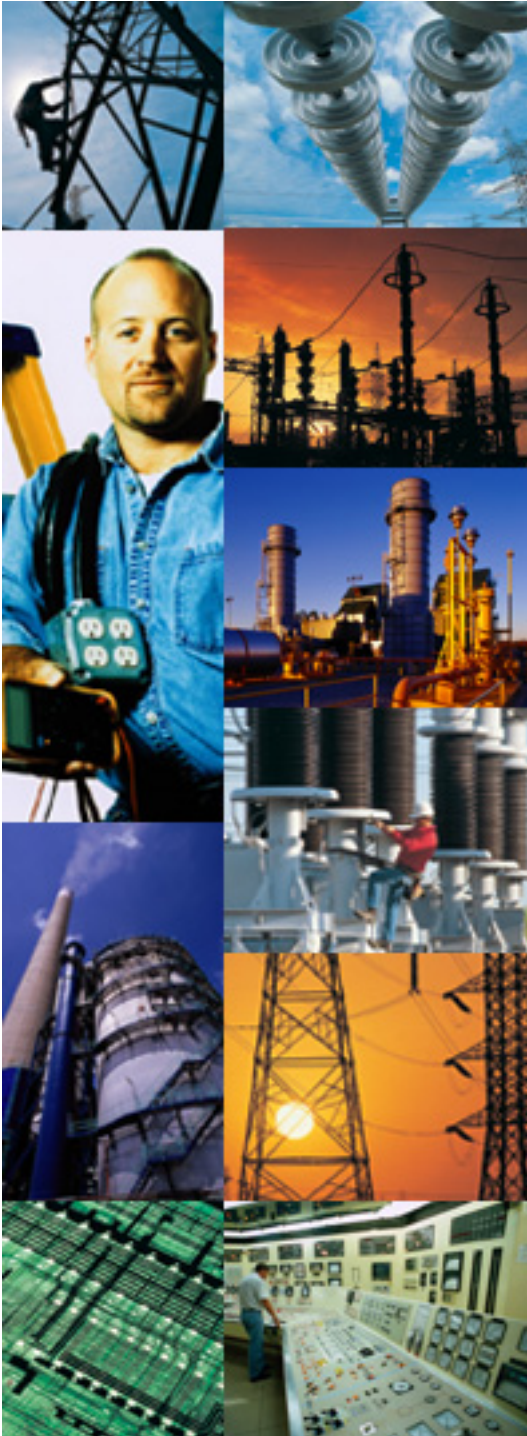
USNC Constituent Training Program

Module IV

Standards Development and the Stages of Technical Work

First edition: June 2005

This training material has been developed with content provided by the
USNC/IEC Communications and Continuing Education Committee and
the ANSI Education and Training Services Team



Module IV: Learning Objectives

- This module provides an overview of the IEC standards development process, including:
 - Project development principles
 - *ISO/IEC Directives*
 - Project stages of IEC standards development work, documents and time frames
 - Technical Specifications, Publicly Available Specifications and Technical Reports
 - Maintenance procedures
 - Amendments
 - Global relevance policy and procedures
 - “In Some Countries” Clauses
 - Normative references
 - Double-logo Standards
 - Fast-track processing

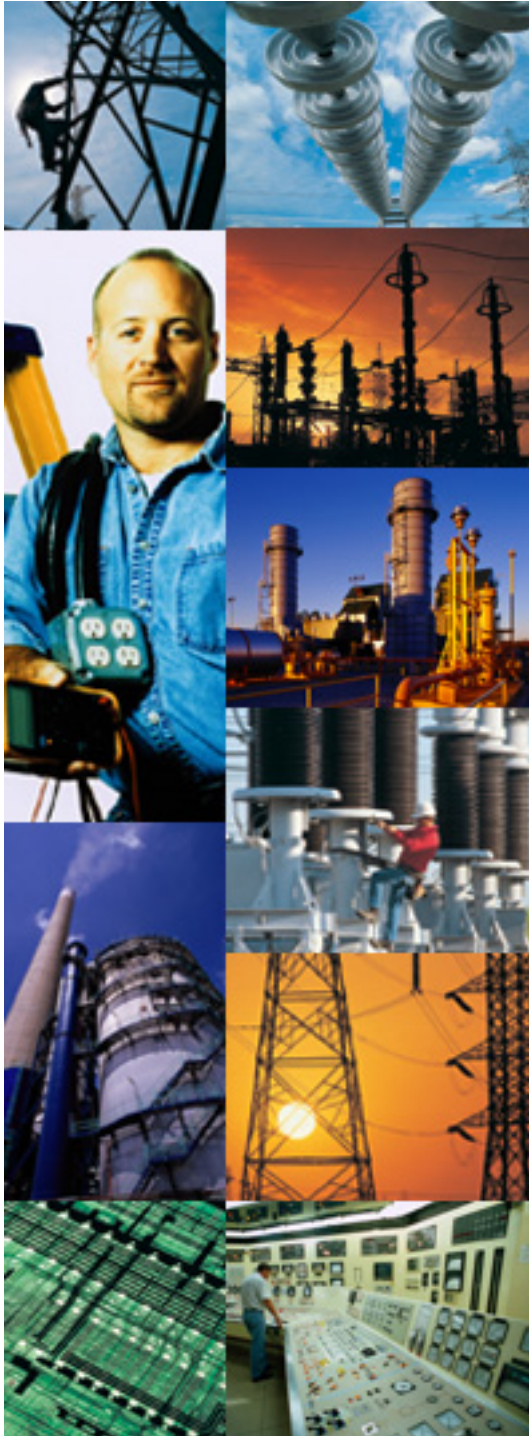


Module IV: Disclaimer

- The information contained in this self-taught learning module is intended as a summary of documents and procedures frequently used within the IEC and the USNC/IEC.
- The topics that follow are presented in summary format only. For additional information about content addressed in this module, please contact the USNC/IEC staff.
- Additional information is also available via [ANSI Education and Training Services](#).



The “Question Mark” icon indicates that optional supplemental information is available for review. The additional text will only be displayed if the user clicks directly on the “Question Mark” icon.



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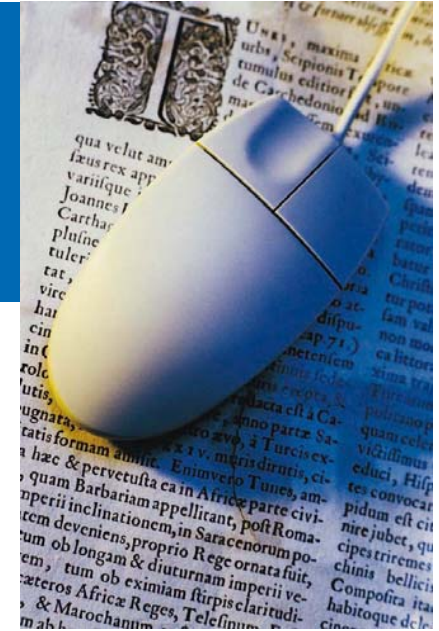
See, we told you it would work!

This is an example of the pop-up box that will appear if you click on the “Question Mark” icons that appear on the following slides.

Click elsewhere on the page and you’ll advance to the next slide.



Reference Materials and Source Documents



- ISO/IEC Directives, Part 1:2004
Procedures for the technical work
- ISO/IEC Directives, Part 2:2004
Rules for the structure and drafting of International Standards
- ISO/IEC Directives, IEC Supplement:2004
Procedures specific to IEC
- IEC Statutes and Rules of Procedures
IEC membership and participation procedures
- USNC Rules of Procedure
- USNC Statutes
- USNC Operating Procedures for USNC/IEC TAGS
- Guide for U.S. Delegates to meetings of ISO and the IEC



ISO/IEC Directives

Part 1

- **Procedures for the technical work**
 - Fifth edition, 2004
 - Sets out the procedures to be followed within ISO and IEC in developing, approving and maintaining International Standards, and for the administration of TCs and subsidiary bodies

[Click here to see the Table of Contents for Part I](#)



ISO/IEC Directives

Part 1

■ Procedures for the technical work

- Fifth edition, 2004
- Sets out the procedures to be followed within ISO and IEC in developing, approving and maintaining International Standards, and for the administration of TCs and subsidiary bodies

[Click here to see the Table of Contents for Part I](#)

ISO/IEC Directives – Part 1 Procedures for the technical work

Table of Contents

- Organizational structure and responsibilities for the technical work
- Development of international standards
- Development of other deliverables
- Meetings
- Appeals
- Annexes A-H



ISO/IEC Directives

Part 2

- Rules for the structure and drafting of International Standards
 - Fifth edition, 2004
 - Sets out the specific rules for the structure and drafting of documents so that International Standards, Technical Reports or Guides are drafted in as uniform a manner as possible, irrespective of technical content

[Click here to see the Table of Contents for Part 2](#)



ISO/IEC Directives

Part 2

- Rules for the structure and drafting of International Standards
 - Fifth edition, 2004
 - Sets out the specific rules for the structure and drafting of documents so that International Standards, Technical Reports or Draft International Standards are drafted in as uniform a manner as possible, irrespective of technical content

[Click here to see the Table of Contents for Part 2](#)

ISO/IEC Directives – Part 2 *Rules for the structure and drafting of* *International Standards*

Table of Contents

- Scope
- Normative references
- Terms and definitions
- General principles
- Structure
- Drafting
- Preparation and presentation of documents
- Annexes A-I
- Tables



IEC Supplement

- Outlines procedures unique to IEC
 - Second edition, 2004
 - Complements the ISO/IEC Directives
 - Includes useful Annexes, as well as the IEC Forms

[Click here to see the Table of Contents for the IEC Supplement](#)



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ISO/IEC Directives – IEC Supplement Procedures unique to IEC

Table of Contents

- Scope
- Guidelines on drafting scopes of committees
- Chairmen of technical committees and subcommittees
- Maintenance
- Inclusion of text concerning particular conditions existing in certain countries (exceptions)
- Interpretation sheets
- Conformity assessment issues
- References materials for secretaries
- Distribution of documents in the IEC
- Reporting
- Project stages
- Number of documents
- Forms
- Procedures for developing the IEV, graphical symbols and letter symbols
- Annexes A-M

[Click here to see the Table of Contents for the IEC Supplement](#)



Guiding Principles

- International standards should meet societal and market needs and should not be developed to act as barriers to trade
- ISO and IEC follow globally accepted principles of standards development
 - Transparency
 - Openness
 - Impartiality
 - Effectiveness and relevance
 - Consensus
 - Performance-based
 - Coherence
 - Due process
 - Technical Assistance





Guiding Principles

- International standards should meet societal and market needs and should not be developed in a way that creates unnecessary technical barriers to trade.

- ISO and IEC standards should be developed in a way that:

- Transparency
- Openness
- Impartiality
- Effectiveness and relevance
- Consensus
- Performance-based
- Technical Assistance

DID YOU KNOW . . . ?

World Trade Organization

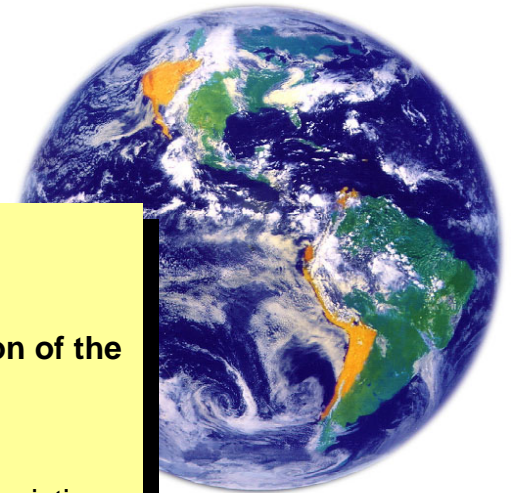
Second Triennial Review of the Operation and Implementation of the Agreement on Technical Barriers to Trade

Annex 4, Paragraph D. 10

International standards “should not give preference to the characteristics or requirements of specific countries or regions when different needs or interests exist in other countries or regions.”

DID YOU KNOW . . . ?

Many U.S. interests also strongly agree that the international standards-setting process must be **flexible, timely and balanced.**





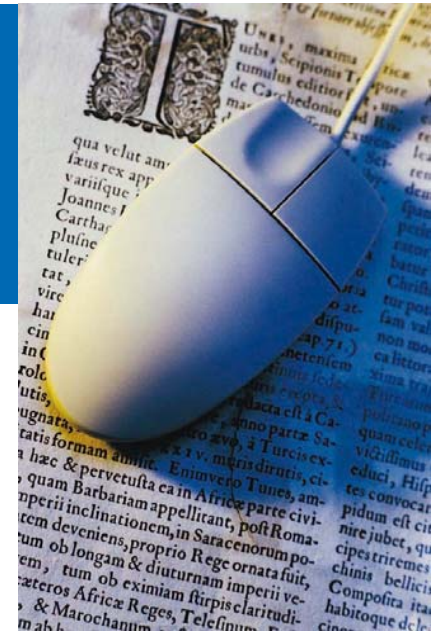
Definition

■ Consensus

- General agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments

Source: ISO/IEC Guide 2

IMPORTANT NOTE: *Consensus does not imply unanimity*





Project Development

- The primary duty of an IEC Technical Committee (TC) or Subcommittee (SC) is to develop and maintain International Standards and other alternative deliverables
- A project is any work intended to lead to the issue of a new or revised IEC standard



Project Development

- Projects must fall within the overall area of work of the committee
 - projects must be defined and accepted in accordance with relevant procedures
 - projects must be managed through a defined process in accordance with strict target dates
 - projects are often sub-assigned to Working Groups for development

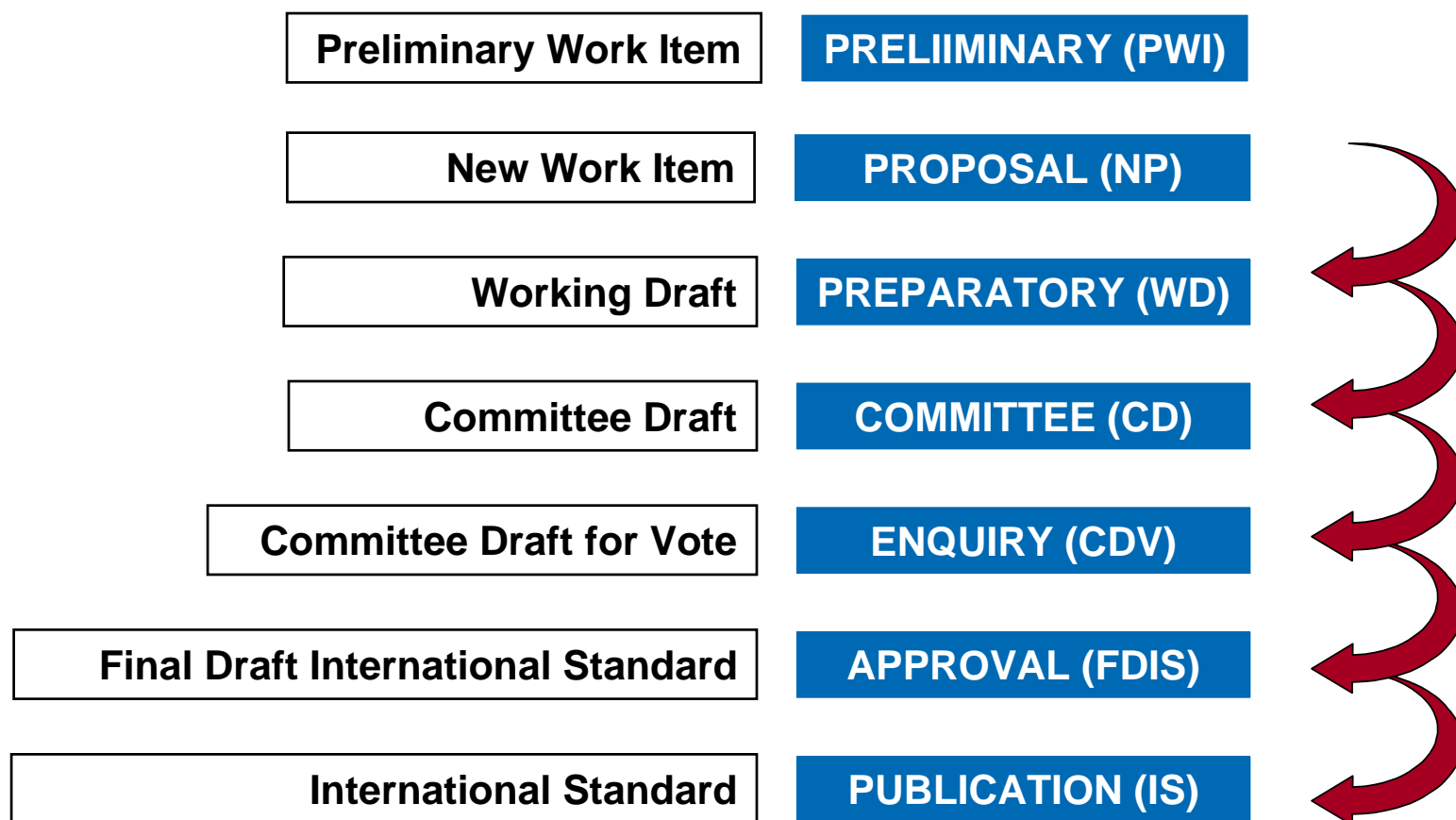


Progress Control

- Target dates shall be established that
 - correspond to the shortest possible development times
 - consider relationships between projects
 - priority shall be given to International Standards upon which other standards will depend for implementation
 - highest priority shall be given to projects having significant effect on international trade

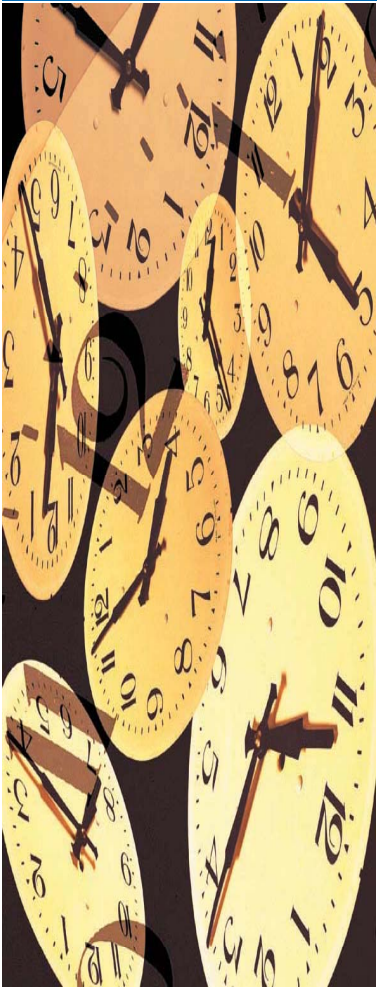


Project Stages and Associated Document References





Recommended Timeframe for Establishing Target Dates



NOTE: *Clock starts upon acceptance of the NP*

- Availability of the first working draft
(if not supplied with the original new work proposal)
 - within six months
- Availability of the first committee draft
 - within 12 months
- Availability of the enquiry draft -
 - within 24 months
- Availability of the approval draft -
 - within 33 months
- Availability of published standard -
 - within 36 months



Recommended Timeframe for Establishing Target Dates

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 - within 33 months
- Availability of published standard -
 - within 36 months





Preliminary Stage (PWI)

- A TC or SC may introduce into its work program “preliminary work items” (PWI) that are not yet sufficiently mature for processing to further stages such as emerging technologies
- Addition to program of work requires approval by a simple majority of the P-members of the TC or SC
- Subject to regular review by the committee
 - All PWIs must be either advanced or deleted within two years of being registered on the program of work
- Agreement to ballot a new work item proposal or to remove PWI from work program concludes Preliminary Stage





Preliminary Stage (PWI)

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STRATEGIC CONSIDERATION

- The Preliminary Stage is an ideal opportunity to develop a document without the IEC clock being activated. This permits some of the groundwork to be accomplished without the pressure of meeting time limits. Drafts can be issued as Documents for Comment (DC) to the P-members of the committee.
- Agreement to ballot a new work item proposal or to remove PWI from work program concludes Preliminary Stage



Proposal Stage (NP)

- New Work Item Proposals (NP) can be for a:
 - new standard;
 - new part of an existing standard;
 - Technical Specification
 - Publicly Available Specification
- All USNC NPs must be approved by the relevant TAG and submitted to IEC via the USNC Office





Proposal Stage (NP)

- New Work Item Proposals (NP) can be for a:
 - new standard;
 - new part of an existing standard;
 - Technical Specification
 - Publicly Available Specification

- All USNC TAG and

DID YOU KNOW . . . ?

All official U.S. National Committee positions must be approved by the relevant TAG and submitted to IEC via the USNC Office; this rule applies throughout this module.





Proposal Stage (NP)

- From submission of new work item proposal to acceptance of new project

- Main steps
 - Submission of the proposal for a new project
 - New project ballot circulated to P-members for vote, with or without comment, and to O-members for information
 - Voting summary circulated
 - Proposal returned for further definition
 - New project accepted or rejected
 - Project team set up based on the nominations of P-members
 - Project leader nominated by proposer
 - Work plan with target dates



Proposal Stage (NP)

- The originator of an NP can be . . .
 - a National Committee
 - the Secretariat of the TC or SC
 - another TC or SC
 - an organization in liaison
 - the SMB or an advisory committee
 - the General Secretary
 - Where both ISO and IEC are concerned, the Chief Executive Officers shall arrange for necessary coordination



Proposal Stage (NP)

- Each new work item proposal shall be submitted on the appropriate form (IEC Form NP) and shall be fully justified
- Elements of the New Work Item include:
 - Title
 - Scope
 - Purpose and justification
 - Target dates
 - Relevant documents to be considered
 - Recommended liaisons
 - Cooperation/coordination within ISO or IEC
 - Preparatory work (see next slide)
 - Concerns over known patented items





Proposal Stage (NP)

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 - Concerns over known patented items

DID YOU KNOW . . . ?

The purpose and justification statement is a very important element of the new proposal form, especially in terms of evaluating the (1) market need and (2) global relevance of the proposed standard.





Proposal Stage (NP)

- The New Work Item Proposal (NP) Form
 - Supplemental Material
 - Working draft or at least an outline for the proposed document
 - Nomination of project editor



Proposal Stage (NP)

■ NP Acceptance

– Acceptance Criteria

- Approval by a simple majority of the P-members voting

AND

- A commitment to participate actively by a minimum number of P-members approving the work item
 - At least four (4) P-members in committees of 16 P-members or less
 - At least five (5) P-members in committees with 16 or more P-members





Proposal Stage (NP)

■ NP Acceptance

– Acceptance Criteria

- Approval by a simple majority of voting members

AND

- A commitment to the development of a U.S. position on a proposed international standard by a minimum number of P-members
 - At least four P-members in committees with 16 or fewer P-members
 - At least five (5) P-members in committees with 16 or more P-members

DID YOU KNOW . . . ?

The development of a U.S. position on a proposed international standard is a matter of great complexity. Consideration must be given to factors such as the existence of other national standards, the requirements contained within the proposed international standard, and whether U.S. consensus has been established.

Tips for developing an effective U.S. position on an IEC proposal or draft can be found in an Annex of the *Guide for U.S. Delegates to Meetings of ISO and IEC*.

[Click here to take an Internet Field Trip now.](#)





Proposal Stage (NP)

■ NP Acceptance

- Acceptance may be decided by correspondence (letter ballot) or at a meeting
 - for decision at a meeting, proposal must be circulated four months prior to the meeting
 - letter ballot is three months





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DID YOU KNOW . . . ?

If a mature draft has been circulated with the NP ballot, and the results of voting are positive with few comments to resolve, it may be possible to omit both the Preparatory Stage and the Committee Stage.



Proposal Stage (NP) Conclusion

- Once accepted, the project is registered in the program of work of the relevant TC or SC
 - The project may be assigned by the TC or SC to a WG or Project Team for development purposes
- Acceptance of the New Project (NP) concludes Proposal Stage



Preparatory Stage (WD)

- Inclusion of new project in program of work for development of a Working Draft as a Committee Draft
 - Technical content of future standard is defined

- Main steps
 - Project registered in program of work
 - Working Draft (WD) study initiated
 - Comments summary circulated
 - Agreement to register draft as a CD



Preparatory Stage (WD)

■ Timeline

- A first working draft must be available within six months of the date that the project was added to the program of work
 - This criteria has been met if a draft text was submitted with the NP ballot



Preparatory Stage (WD)

- Working drafts prepared by working group (WG) or project team (PT)
 - PT/WG members act as technical experts
 - Electronic tools utilized to the fullest extent possible as a means of facilitating development of the draft
- This stage covers the preparation of a working draft (WD) in conformity with Part 2 of the ISO/IEC Directives
 - Procedures for the development of English to French and French to English translation
(reference Appendix M of the IEC Supplement – “Preparation of French versions of documents”)





Preparatory Stage (WD)

- Working drafts prepared by working group (WG) or project team (PT)

- PT/WG meetings
- Electronic means of communication

DID YOU KNOW . . . ?

While it is true that electronic tools are used to the fullest extent possible, it is not uncommon for much of the standards development work to be done in face-to-face meetings. In some cases, these meetings will be Working Groups and you will be attending as an individual subject matter expert. In other cases, you may be attending as a USNC-appointed delegate to a TC or SC meeting.

- This stage can be completed in conformity with the IEC procedures

- Procedure for preparing French to English translations

Guidelines for preparing for, participating at, and following-up after meetings can be found in the *Guide for U.S. Delegates to Meetings of ISO and IEC*. The Guide is considered **REQUIRED READING** for all new delegates (and it's a good reminder for experienced delegates, too)!

[Click here to take an Internet Field Trip now.](#)

(reference Appendix M of the IEC Supplement – “Preparation of French versions of documents”)





Preparatory Stage (WD) Conclusion

- Successive drafts are considered until the WD is available for circulation to the TC/SC as a first CD
- Agreement to register project as Committee Draft (CD) concludes Preparatory Stage
 - Committee may decide to publish as a Technical Specification (TS) or Publicly Available Specification (PAS) to respond to particular market needs.



Committee Stage (CD)

- From registration of first Committee Draft to Committee Draft for Vote
 - National Committee consensus on draft standard is established
- Main Steps
 - Committee Draft developed (CD)
 - CD study/ballot initiated
 - Comments/voting summary circulated
 - CD referred back to TC or SC (or WG)
 - CD approved as CDV



Committee Draft (CD)

- This is the principal stage at which National Committee comments are considered
- National Committees should submit substantive technical comments as early in the process as possible





Committee Draft (CD)

- This is the principal stage at which National Committee comments are considered
- National Committees should submit substantive technical comments as early in the process as possible

DID YOU KNOW . . . ?

Once a text is approved for progression to Committee Draft for Vote (CDV) ballot, there should be very few, if any, technical comments. National bodies shall, therefore, carefully study the texts of Committee Drafts (CDs) and submit all pertinent comments, particularly technical comments, **as early in the standards development process as possible.**





Committee Stage (CD)

■ Timeline

- A first CD must be available within twelve (12) months of the date that the project was added to the program of work
- This first Committee Draft, submitted with the appropriate form, is circulated to P- and O-members of TC/SC for a three-month comment period



Committee Stage (CD)

- Within four (4) weeks after the deadline for comments, a Compilation of Comments report is circulated by the TC/SC Secretary
 - In consultation with the TC/SC Chair and the Project Leader, the proposal recommends
 - a) discussion of the CD and comments at next meeting
 - b) circulation of a revised CD for vote
 - c) registration of the CD for Enquiry Stage
 - If two (2) or more P-members disagree with proposal (b) or (c), the CD shall be discussed at a meeting of the full committee



Committee Stage (CD)

- Consideration of successive drafts continues until consensus of P-members is obtained or a decision is made to abandon or defer the project
 - Each successive CD is considered for a three (3) month comment period





Committee Stage (CD)

Another consideration is that much of the technical discussion typically takes place in Working Group meetings for new documents or in Maintenance Team meetings for revision of existing publications. This is often the key opportunity to convince experts from other countries of the need for a particular test or requirement so that US concerns are addressed.

is made to abandon or defer the project

- Each successive CD is considered for a three (3) month comment period





Committee Stage (CD)

- Consideration of successive drafts continues until consensus of P members is obtained or a decision is made.

DID YOU KNOW ... ?

When drafts are considered at an IEC committee meeting, a delegation will have an opportunity to defend its contributions or comment on other proposals when the appropriate item on the agenda is considered.

- E The Head of Delegation (HoD) is the official spokesperson; other delegates may be designated to speak on a particular point. **Whoever speaks does so on behalf of the entire delegation.**

Differences that exist among the members of the delegation should never be aired in front of delegates from other countries. Delegate must not undermine or disassociate himself/ herself from the officially approved U.S. position.

If an issue arises during a meeting on which the U.S. position is not absolutely clear the HoD may request a recess.* If the delegation is not sure what position to take, the delegation may call for the issue be deferred to a future meeting or handled by correspondence.

*NOTE: Most international meetings are not held following the standard *Robert's Rules of Order*.





Committee Stage (CD) Conclusion

- Decision to circulate Enquiry Draft taken on the basis of the consensus principle
 - Consideration by the TC/SC Chair, in consultation with the Secretary and, if necessary, the Project Leader
 - When consensus is reached, the Secretary submits, within four (4) months, a finalized version of text in electronic format for distribution of the Enquiry Draft
 - If consensus cannot be reached within prescribed time limits, the TC/SC should consider publishing a Technical Specification
 - Committee Stage ends when a CD is accepted for circulation as an enquiry draft and is registered



Enquiry Stage (CDV)

- From Committee Draft for Vote (CDV) to approval as a Final Draft International Standard (FDIS)
 - Allows all IEC national committees to vote and comment on proposed International Standard
- Last opportunity for technical comments
- The enquiry draft is referred to as:
 - Committee Draft for Vote (CDV) within IEC
 - Draft International Standard (DIS) within ISO





Enquiry Stage (CDV)

STRATEGY

The ability of all IEC national committees to vote and comment provides an opportunity to obtain more support for US positions but the reverse is also true. This reinforces the need to be active in lobbying wherever possible to gain support.

(FDIS)

- Allows all IEC national committees to vote and comment on proposed International Standard

TECHNICAL COMMENTS

While it is permitted to submit technical comments at this stage, the committee must be careful not to accept technical changes that could put a favorable vote at the next FDIS stage in jeopardy. Thus unless there is “violent agreement” that a technical revision is desperately needed, it may be better to put off the revision until the next maintenance cycle. That is unless a significant amount of lobbying can take place among all of the potential voting National Committees.

Conversely, if a decision is made to include a technical change, this could be used as part of the commenting to justify a negative vote, should that be the US position.





Enquiry Stage (CDV)

■ MAIN STEPS

- CDV registered
- CDV ballot initiated
- Committee draft for vote circulated to national committees for vote and comments
 - Full report circulated
 - Authorization for CDV processing
 - Decision for new CDV ballot
 - Referral back to TC or SC



Enquiry Stage (CDV)

■ Timeline

- CDV text must be submitted to the office of the General Secretary by the Secretary within four months of the determination that consensus has been reached.
 - This must be within 24 months from the date of NP registration



Enquiry Stage (CDV)

- Each CDV text shall be submitted with an Explanatory Report (IEC RVC)
- Office of General Secretary assigns response date and within four weeks issues CDV to all National Committees for a five month vote
- At the end of the voting period, the IEC General Secretary sends, within four (4) weeks, to TC/SC Officers the results of voting and any comments received



Enquiry Stage (CDV)

- Types of Votes
 - We approve the technical content of the draft
 - as presented or with comments (editorial or other)
 - We disapprove for the technical reasons stated
 - Must include technical reasons for negative
 - May indicate that acceptance of specific technical modifications will change “No” vote to “Yes”
 - We abstain
- NOTE: The IEC Central Office provides late comments to the committee secretariat for consideration at the time of the next review of the International Standard





Enquiry Stage (CDV)

DID YOU KNOW . . . ?

While many countries respect U.S. technical competence and productive know-how, the best way to win acceptance of your point of view is always to present it on its technical merits. Coordinate with your likely allies. In cases when the U.S. raises many issues, it is often helpful to have an ally present a proposal to the international group and give the U.S. the opportunity to agree with someone else, rather than raising every issue ourselves.

Networking is an important means for winning acceptance. Agreements at an international meeting are commonly first formed in a social setting and then later finalized across the conference table. You, and anyone who may accompany you, should try to get to know the delegates from other countries. Establishing friendly relationships is not only personally rewarding, but also provides an opportunity for other delegates to know you and your thinking on related technical subjects. These allies are extremely important.

In some cases, it may be helpful to bring samples of your related products to meetings (and to encourage other experts/delegates from other countries to do the same)

Please keep in mind that English is not everyone's native language and that you will need to speak slowly and concisely when presenting or clarifying your points. Confusion is often inevitable when verbal and non-verbal communication passes across languages and cultures.



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Enquiry Stage (CDV)

■ Criteria for Approval

- Acceptance by a 2/3 majority of P-members voting
AND
- Not more than 1/4 of the total votes cast are negative



X Excluded from tally:

- Abstentions
 - Negative votes not accompanied by technical reasons
-
- Voting results and comments are sent to the TC/SC Officers



Enquiry Stage (CDV)

■ Criteria for Approval

- Acceptance by a 2/3 majority of P-members voting
AND
- Not more than 1/4 of the total votes cast are negative



There have been numerous times when the “technical reasons” are questionable under that qualification. US participants must be diligent in their review of comments submitted in support of negative votes when the US preference is to approve the document. Conversely, the US needs to ensure that its comments supporting a negative vote are unquestioningly technical in nature.

- Voting results and comments are sent to the TC/SC Officers



Enquiry Stage (CDV)

- Chair, in cooperation with the Secretary and Project Leader and in consultation with the IEC Central Office, shall take one of the following actions
 - a) when approval criteria met, to register the CDV as a Final Draft International Standard (FDIS), or
 - b) in case of a CDV where no negative votes have been received, to proceed directly to publication, or
 - c) when approval criteria are not met
 - 1) to circulate a revised CDV for voting
 - 2) to circulate a revised CDV for comment
 - 3) to circulate a revised CDV for discussion at the next meeting



Enquiry Stage (CDV)

- Full report circulated not later than three (3) months following the end of the voting period
 - If, within two (2) months from the date of dispatch, two (2) or more P-members disagree with decision C1 or C2, the draft shall be discussed at the meeting





Enquiry Stage (CDV)

- Full report circulated not later than three (3) months following the end of the voting period
 - If, within two (2) months from the date of dispatch, two (2) or more P-members disagree with decision C1 or C2, the draft shall be discussed at the meeting



DID YOU KNOW . . . ?

The Approval Stage (FDIS) may be omitted if the Enquiry draft (CDV) was approved and no negative votes were received.



Enquiry Stage (CDV) Conclusion

- Following approval of the CDV, the Secretariat provides, within a maximum of four months, both paper and machine-readable text for FDIS ballot
 - Texts which do not comply with Part 2 of the ISO/IEC Directives will be returned to the Secretariat for correction before registration as FDIS
- Approval to register the project as a Final Draft International Standard (FDIS) for circulation concludes Enquiry Stage



Approval Stage (FDIS)

- From registration as an FDIS to approval for publication
 - Allows all IEC member bodies to review and vote on final version of proposed International Standard

- Main Steps
 - FDIS registered
 - FDIS ballot initiated
 - Final Draft International Standards circulated for formal approval
 - FDIS referred back to TC or SC
 - FDIS approved for publication



Approval Stage (FDIS)

- **Allows all IEC member bodies to review and vote on final version of proposed International Standard**
- This cannot be emphasized enough for tactical consideration in lobbying for support of the US position.
 - FDIS ballot initiated
 - Final Draft International Standards circulated for formal approval
 - FDIS referred back to TC or SC
 - FDIS approved for publication



Approval Stage (FDIS)

- Timeline

- FDIS text must be available within 33 months of the date that the project was added to the program of work



Approval Stage (FDIS)

- The FDIS text shall also be submitted with an Explanatory Report (IEC RVD)
- Office of General Secretary assigns a response date and issues the FDIS ballot to all national bodies for a two-month simple “Yes or No” vote
 - The TC/SC Secretariat, in consultation with the Project Leader, is responsible for bringing any errors to the attention of the office of the General Secretary
 - Technical amendments are not acceptable at this stage



Approval Stage (FDIS)

- Types of Votes
 - Positive (no comments to be submitted)
 - Negative (technical reasons **must be** provided)
 - Abstain



Approval Stage (FDIS)

■ Criteria for Approval

- Acceptance by a 2/3 majority of P-members voting

AND

- Not more than 1/4 of the total votes cast are negative

- Excluded from tally:



- Abstentions
- Negative votes not accompanied by technical reasons



Approval Stage (FDIS)

- Within two (2) weeks of the end of the voting period, the IEC Central Office shall circulate a report showing the results of voting and indicating either formal approval or formal rejection
 - Technical reasons for negative votes are appended for information only



Approval Stage (FDIS) Conclusion

- Following approval of the FDIS the IEC Central Office proceeds immediately with publication of the text
 - Minor editorial changes requested during the ballot (e.g., correction of a typographical error) may be incorporated
- If FDIS is not approved, it is referred to the TC or SC for reconsideration in light of the negative votes and comments
- Approval to submit project for publication concludes Approval Stage



Publication Stage

- From submission of final text for publication to publication of International Standard

- Main Steps
 - Document published as International Standard within 2 months after FDIS voting period



Publication Stage

- IEC's Publishing Requirements
 - Complete text
 - Electronic text
 - Clean hard copy of text
 - All required language versions
 - Compliance with Directives Part 2



Publication Stage Conclusion

- Other considerations
 - IEC Directives require that the International System of Units (SI) be used in International Standards
 - IEC has approved a procedure for the inclusion of statements on conditions existing in certain countries, called “In Some Countries clauses”

- Publication of International Standard (IS) concludes Publication Stage



Other Deliverables

Technical Specification (TS)

- Subject still under development and insufficient consensus for development of an International Standard (IS)
- Three month voting period
- Approval: 2/3 majority of voting P-members
- After publication: consideration of the possibility of transforming the TS into an IS
- TS are subject to the same maintenance procedures as IEC standards, but they are subjected to review by the responsible TC/SC not later than three (3) years following publication





Other Deliverables Technical Specification (TS)

- Subject for development by consensus
- Three months for development
- Approved by the IEC Council
- After publication, TS are subject to the same maintenance procedures as IEC standards, but they are subjected to review by the responsible TC/SC not later than three (3) years
- TS are subject to the same maintenance procedures as IEC standards, but they are subjected to review by the responsible TC/SC not later than three (3) years

DID YOU KNOW . . . ?

While the Technical Specification (TS) is a publication of the IEC, it is not an international standard.

In summary, a TS is used for “pre-standardization purposes” when there is an urgent need for guidance on how standards in a particular field should be used to meet an identified need.

TS are proposed as provisional applications so that information and experience of its use in practice may be gathered. Subsequent conversion into an International Standard is possible, or it may simply be withdrawn.

OTHER DELIVERABLES

While TS, PAS and TR may be IEC published documents, certification bodies have refused to use them for evaluating products. They do, however, give the world an opportunity to examine the content and determine whether it is acceptable or if modifications are needed.





Other Deliverables

Publicly Available Specification (PAS)

- Document not fulfilling the requirements of a standard
 - May be an intermediate specification, or a double-logo document published in collaboration with an external organization
- Proposal can be made by any P-member, A-liaison, or D-liaison
- Approval requires a simple majority of voting P-members
 - Three (3) month voting period
- After publication, consideration is given to transforming the PAS into an IS





Other Deliverables

Publicly Available Specification (PAS)

- Document not fulfilling the requirements of a standard
 - May be an intermediate specification, or a double-logo document published in collaboration with an external organization
- Proposal can be made by any P-member, A-liaison, or D-liaison
- Approval requires a simple majority of voting P-members
 - Three (3) month voting period
- After publication, consider at the PAS into an IS

DID YOU KNOW . . . ?

Similar to the TS, while the Publicly Available Specification (PAS) is a publication of the IEC, it is not an international standard.





Other Deliverables

Technical Reports (TR)

- Document not fulfilling the requirements of a standard
 - Might include a collection of data, results obtained from a survey, state of the art information, supplementary information or explanation or guidance text
- Proposal can be made by any P-member, A-liaison, or D-liaison
- Approval requires a simple majority of voting P-members
 - Two (2) month voting period
- After publication, TRs are regularly reviewed to ensure that they remain valid





Other Deliverables

Technical Reports (TR)

- Document not fulfilling the requirements of a standard
 - Might include a collection of data, results obtained from a survey, state of the art information, supplementary information or explanation or guidance text
- Proposal can be made by any P-member, A-liaison, or D-liaison
- Approval requires a simple majority of voting P-members
 - Two (2) month voting period
- After publication, TRs are regular that they remain valid

DID YOU KNOW . . . ?

While the Technical Report (TR) is a publication of the IEC, it is not an international standard.





Maintenance Procedures

- Maintenance Teams (MT) are responsible for keeping an existing IS, TS or Technical Report (TR) updated
 - Each committee sets up one or more maintenance teams
 - MT members may be the same or different from those who developed the original publication
 - The convenor shall be appointed by the TC/SC
 - Secretary sends the finalist list of experts to IEC Central Office for circulation



Maintenance Procedures

- Maintenance Cycle
 - Period over which the publication is stable [remains unchanged]
 - Typically between 2 and 12 years (maximum of three years for a technical specification)
 - Agreed by the committee before submission of the draft at the approval stage (FDIS)
 - Information shall be included in the foreword of the final publication
 - MT activated at the appropriate point to implement a project plan so that maintenance cycle dates can be met
 - Responsible for reviewing and recommending confirmation, withdrawal, amendment, or development of a new edition



Maintenance Procedures

- Revision work carried out by MT
 - Timeframe for review and submission of changes communicated to the committee
 - Individual proposals for changes catalogued by the Secretary until the review period begins

- Steps for revision or amendment of a publication are the same as those for preparation of a new publication or part
 - Target dates are required



Maintenance Procedures

- Revision work carried out by MT
 - Timeframe for review and submission of changes communicated to the committee
 - Individual proposals for changes catalogued by the Secretary until the review period begins

MAINTENANCE REVISIONS

Proposals to be considered for the next maintenance cycle can be submitted at any time. It is the responsibility of the committee Secretary to hold those proposals until the start of the maintenance work and to provide them to the MT. Occasionally, a Draft for Comment (DC) will be distributed to National Committees for review of a long or complex proposal. This provides an opportunity for addressing concerns prior to incorporating the revision into the document for an “official” Committee Draft (CD) document distribution.

- Target dates are required



Maintenance Procedures

- Amendments to or new editions of publications
- In IEC: maintenance procedures
 - In ISO: proposal stage, etc.
- Maintenance result date (validity date) available on IEC web site
- TC/SC agrees on confirmation, withdrawal, amendment, or new edition
- Decision made through Maintenance Cycle Report (MCR)
- Revision work carried out by Maintenance Team (MT)



Amendments

- Purpose
 - To alter or add to agreed technical provisions in an existing published International Standard

- Procedure
 - Development proceeds according to the IEC Maintenance Procedures

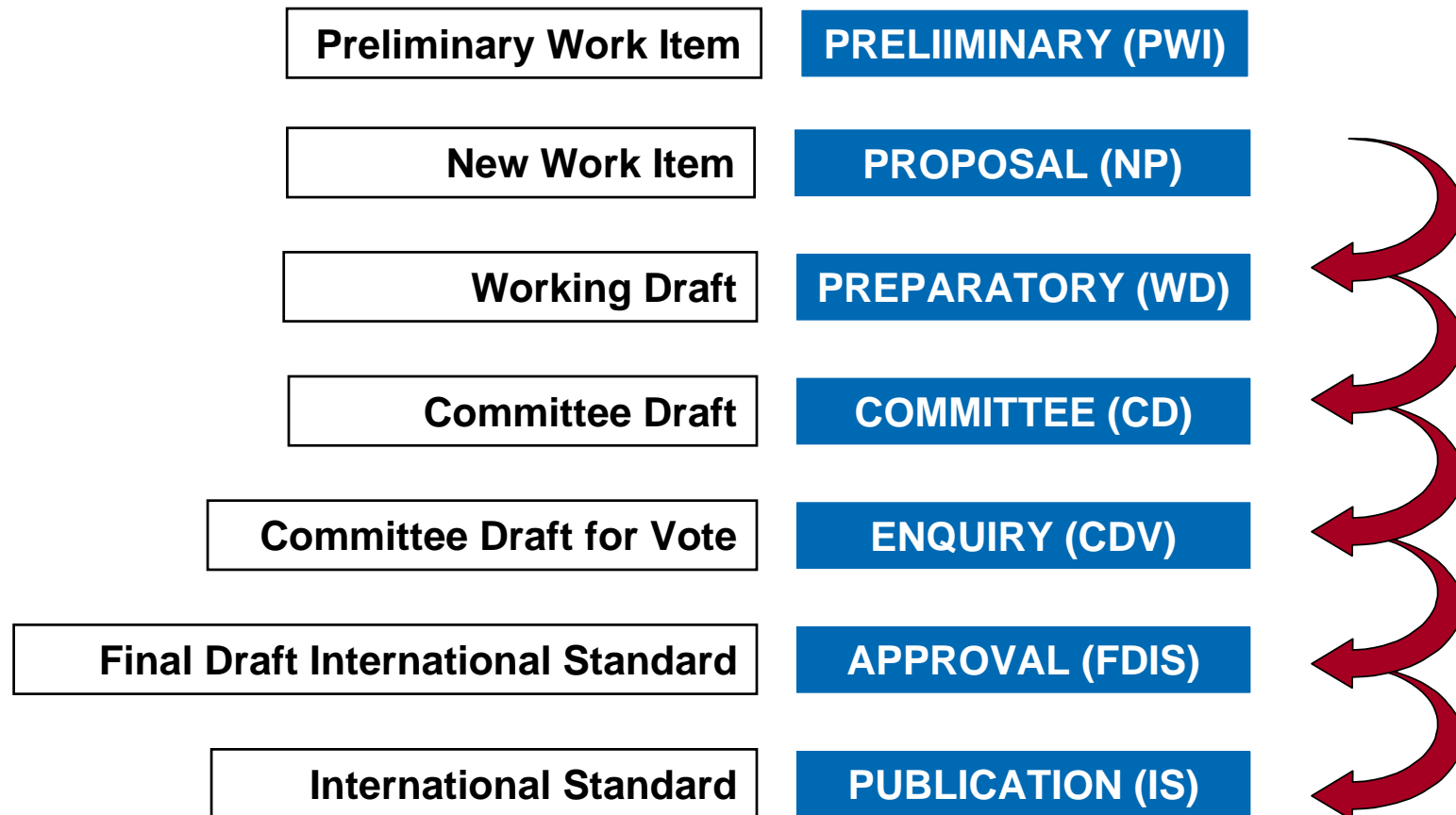


Amendments

- When approved for publication, decision by General Secretary (in consultation with Secretary) to publish as
 - a separate document or
 - incorporate into a new edition of the International Standard
 - Normally no more than two amendments are published separately



Summary Review: Stages of Development





Tips and Techniques

Key Policies and Standards Development Alternatives

The following topics are presented in summary format only.

For more information, please contact the [USNC/IEC staff](#) to register for a web-based training seminar that will explore the following topics in additional detail



Global Relevance Policy and Procedures

- A formal IEC policy to provide for the implementation of essential differences in requirements in IEC standards
 - Normative requirements included in the main body or in a normative annex
 - Essential differences based on:
 - national (or regional) differences in technical infrastructures (frequencies, voltages, etc.)
 - climatic conditions
 - Submitted by National Committees to the relevant TCs/SCs with technical and market justification



“In Some Countries”

- Informative (not normative) text concerning particular conditions existing in certain countries (exceptions)
 - Any statement of compliance with a standard requires compliance with the *normative* elements of that standard, not the *informative* elements

- Statement is provided by an IEC National Committee to be included in an IS, informing the user of the standard of particular conditions existing in its country
 - Two cases are distinguished
 - Conditions of a permanent nature, such as main voltages, mains frequencies or climates
 - Differing practices of a less permanent nature



“In Some Countries”

- Final point for submission of the text is on receipt of the voting report of the CDV
 - Submission does not require approval of the relevant TC or SC, its chairman or secretary
 - Submitting National Committee has the final say as to where to place the clause
 - Every effort shall be made to find solutions that would make statements regarding particular conditions unnecessary
 - Inclusion of the clause is *not* a reason for a negative vote by the other National Committees



“In Some Countries”

- Final point for submission of the text is on receipt of the voting report of the CDV
 - Submission does not require approval of the relevant TC or SC, its chairman or secretary

The IEC Standardization Management Board (SMB) has given permission for TC64 to place all “in some countries” notes in an informative annex, rather than in the body of the document. The TC64 argument was that many of its standards were riddled with these notes and it was disruptive to the flow of the document. If this practice catches on then it may have both negative and positive results.

Negative - Where the US has specified such a note then moving it to an annex may reduce its visibility to those who wish to market in the US. Of course, in a national adoption of the standard, the US version could incorporate those into the body, rather than an annex.

Positive – Where other countries have inserted these notes into documents supported by the US, it will also reduce the visibility of that material to users of the standard. This could have a limiting effect on the bias that could be caused by the note being adjacent to the referenced requirement.



Normative References within IEC Standards

- Normative References

- A list of related standards that are required for full implementation of the standard in hand
- The normative referenced document list shall be introduced by the following wording:

"The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies."

- Informative References

- For information only or background reading and listed in the Bibliography



Normative References within IEC Standards

- Normative references in IEC standards should be to other relevant IEC standards, where they exist
 - If a relevant IEC standard does exist, but the committee wishes normative reference to a non-IEC standard, a request for an exception with justification can be reviewed and approved by the SMB
- Where relevant IEC standards do not exist, normative reference to any publicly available non-IEC standard agreed to by the committee is acceptable



Double-Logo Standards

- IEC can enter in cooperation to publish double-logo standards (for example, IEC and the IEEE) under certain conditions, including
 - Adherence to IEC requirements for consensus
 - Implementation Agreements (a code of practice)
 - Intellectual Property Rights (IPR)
 - Copyright arrangements (usually held by the originator of the text)
 - Procedures for maintenance (amendments, modifications, updates, etc.) and withdrawal





Double-Logo Standards

- IEC can enter in cooperation to publish double-logo standards (for example, IEC and the IEEE) under certain conditions, including
 - Adherence to IEC requirements for consensus

DID YOU KNOW . . . ?

The subject of IPR in standards-setting is complex enough that it could warrant its own course. In fact, IPR will be covered in more detail during a follow-on web-based, instructor-led training session. In the meantime, for those constituents who are interested in background reading on IPR, please visit ANSI's website (www.ansi.org/news) and review some of the articles that have been published on the topic.

[Click here to take an Internet Field Trip now.](#)



updates, etc.) and withdrawal



Fast Track Processing

- Purpose is to rapidly progress an existing standard from any source

- Proposed by
 - Any P-Member or Category A liaison organization
 - process begins at Enquiry Stage (CDV ballot)
 - Any organization having entered into a formal technical agreement with IEC may propose
 - process begins at Enquiry Stage (CDV ballot)
 - International Standardization Body recognized by IEC
 - process begins at Approval Stage (FDIS ballot)



Fast Track (continued)

- Before initiating the ballot, the IEC Central Office must confirm copyright and/or trademark situation with the organization having originated the proposed document

- Conditions for approval are the same as for a normal CDV or FDIS ballot
 - If no TC is involved, condition for approval of a draft International Standard is no more than one-quarter of the total votes cast are negative



Summary Standard Development Options

Project stage	Normal procedure	Draft submitted with proposal	"Fast-track procedure"	Technical Specification	Publicly Available Specification	Technical Report
Proposal	NP	NP	NP	NP	NP	
Working draft	ANW	ANW		ANW	ANW	
Committee	CD	CD		DTS		DTR
Enquiry	CDV	CDV	CDV			
Approval	FDIS	FDIS	FDIS			
Publication	IS	IS	PUB	TS	PAS	TR



Internet resources: International



Follow hyperlink
for more information

ISO/IEC Information Center



International Electrotechnical Commission

IEC Technical Information Support and Services



International Organization for Standardization



Internet resources: Regional Organizations



Americas

- [CANENA - Council for Harmonization of Electrotechnical Standards of the Nations of the Americas](#)
- [COPANT - Pan American Standards Commission](#)

Europe

- [CENELEC - European Committee for Electrotechnical Standardization](#)
- [ETSI - European Telecommunications Standards Institute](#)

Pacific Rim

- [PASC - Pacific Area Standards Congress](#)





Internet resources: United States



Follow hyperlink
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Standards Development and the Stages of Technical Work
Provided by the U.S. National Committee of the IEC

Ask a Question

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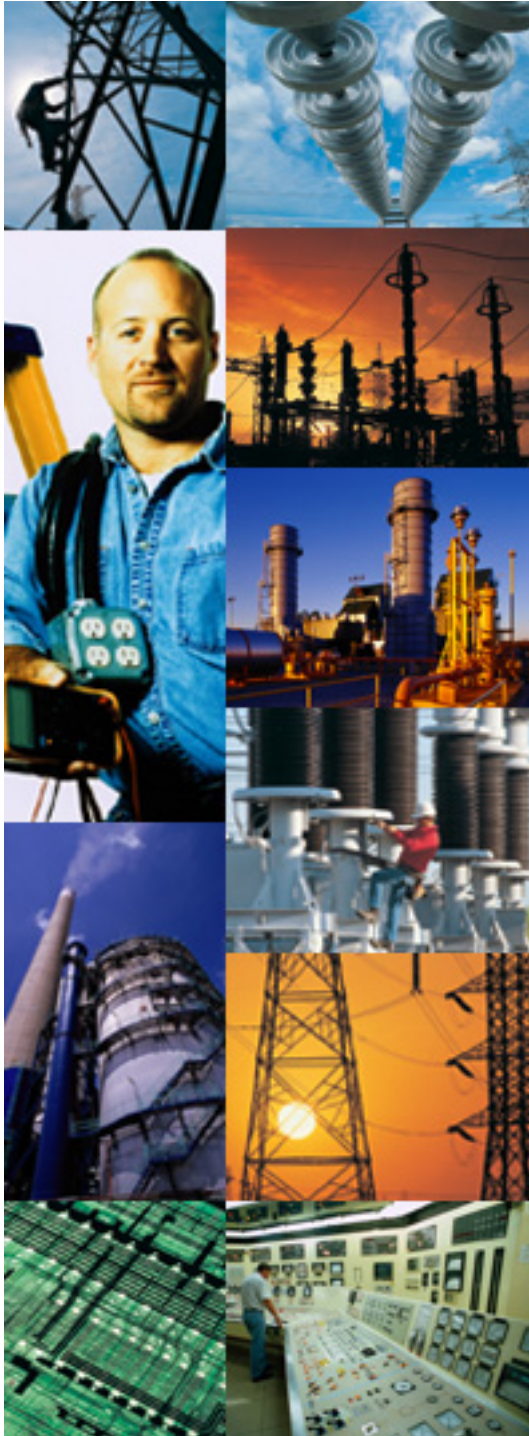
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