# ISO/IEC JTC1 Relations with T10 and T11:

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The process of making a T10 or T11 (T1n) draft or standard into an international standard is not difficult but a different set of procedures and definitions are used in international meetings than in T1n. The connection between the T1n committee and the international committee is via the International Representative, IR.

There are also procedures for an Amendment, a Technical Report, an ISP, and a Technical Corrigendum which a shown in the last attachment which is taken from the JTC1 Directives.

The national committee in the case of T1n is ANSI. The international committee ISO/IEC JTC1 / SC25 / WG4, or International Organization for Standardization / International Electrotechnical Commission Joint Technical Committee 1 / SubCommittee 25 / Working Group 4.

The process can take a few different paths, such as:

A. Develop standard in JTC1
B. Contribute a design to JTC1 for further development
C. Contribute a document to JTC1/SC25 and go through their complete process
D. Contribute a completed and national standard to JTC1 and use their Fast Track process.

Path A. is not used very often in SC25/WG4
Path B. is not used very often in SC25/WG4
Path C. this is the process which T1n will probably use most often. It is called the classic path.
Path D. is the Fast Track process, but since Path C. is just as fast, this path is only used when someone wants to for their own reasons.

Attached, Annex I, at the end of this document is an extract from the JTC1 Directives where this process is discussed

Attached, Annex II, after the Directives is a Sample of ISO editing.

Below is a description of the process to be followed in T1n:

Process Path C, Classic Path:

1. T1n decides to contribute a document to JTC1 which may or may not be an ANSI approved standard.
   1.1. The trigger for this is when a draft standard goes to Public Review in the US.
   1.2. The T1n committee votes to initiate an international project (Attachment A) and requests that the IR generate a NWIP. New Work Item Proposal. *This step can be informal within T1n and not a ballot.*
   1.3. A T1n editor shall be defined. This is the person that is responsible for generating the text needed for each phase of the JTC1 process and is the technical support for the JTC1 Project Editor which is usually the IR.
   1.4. If there are any patents essential for this project the letters of assurance must be addressed to ISO/IEC Central Secretariat.

1.5. The IR generates an NWIP which will be contributed to JTC1/SC25. (Attachment B)
1.6. T1n must have a role call motion to forward the project to JTC1/SC25 and to recommend that the USA JTC1/SC25 TAG vote to support when the ballot is issued. This is defined as a SubCommittee originated NWIP. (Attachment C)
1.7. The JTC1 Project Editor will be the IR unless someone else wants the responsibility.
1.8. The NWIP and the role call motion are sent to INCITS for their ballot.

2. The IR sends the NWIP to SubCommittee 25 via INCITS for ballot.

3. JTC1/SC25 TAG ballots on the NWIP
   3.1. When the NWIP is approved in JTC1/SC25, T1n contributes the document via INCITS as a FCD, Final Committee Draft. ( If a document is contributed at the same time as the NWIP it must be a CD, Committee Draft, and will be balloted with the NWIP which is an unnecessary extra step for T1n.)
   3.2. The text for the FCD must be in ISO/IEC style. This style replaces most INCITS and/or ANSI front matter with ISO/IEC front matter. Furthermore, all references to US standards and other US related information needs to be converted to references to ISO or IEC standards or should be removed. (See Sample at end of this document)
   3.3. The T1n editor sends the JTC1 style text to the IR in both PDF and editable forms such as Frame or WORD. The IR forwards the text to SC25 via INCITS as a FCD for letter ballot.
   3.4. T1n must then have a role call Motion to recommend to JTC1 SC25 TAG to vote yes on the FCD, (Attachment D)

4. SC25 ballots on the FCD

   4.1. SC25 generates a ballot tally (Results of Voting) and a list of comments (Collation of Comments), if any.
   4.2. The Project Editor and theT1n editor then review the list of comments and generate a Disposition of Comments, DoC, which either accepts or rejects each comment along with an explanation of a change or why rejected.
   4.3. If any changes must be made to the document, a vote by T1n is necessary.
   4.4. The T1n editor then incorporates the changes, if any, into the document and the Project Editor forwards the document in PDF and editable form along with the DoC to SC25. The FCD now becomes a FDIS, Final Draft International Standard.
   4.5. T1n then must have a role call Motion to recommend to JTC1 TAG to vote yes on the FDIS. (Attachment E)

5. JTC1 (ITTF) ballots on the FDIS

   5.1. ISO/IEC JTC1 (ITTF) generates a ballot tally and a list of comments, if any.
   5.2. ISO/IEC JTC1 ITTF Central Secretariat then reviews any comments and makes the necessary changes. It now becomes an IS, International Standard.

6. The document is now an International Standard

7. There are also motions required for ISO/IEC issues which require a role call vote, such as:
   7.1. Approved list of delegates to a JTC1 meeting (Attachment F)
   7.2. Five (5) year review of a standard. Where one can Reconfirm, withdraw, or revise. (Attachment G)
   7.3. Fast Track project where JTC1/SC25/WG4 is the responsible body as defined by JTC1.

## ATTACHMENTS:

## ATTACHMENT A, Optional

*MOTION: T11 recognizes the completion of Fibre Channel Backbone (FC-BB) and requests that the IR prepare a NWIP that will be forwarded to JTC1 TAG upon approval by T1n. The T1n editor will be …..*

## ATTACHMENT B

### *Proposal for a new work item*

**Title:** Information technology --- Fibre Channel Backbone (FC-BB)

**PROPOSAL FOR A NEW WORK ITEM**

| | |
|---|---|
| Date of presentation of proposal: 2001-04-20 | Proposer: ISO/IEC JTC 1 / SC 25 |
| Secretariat: Germany(DIN) | ISO/IEC JTC 1 / SC 25 N |

A **proposal for a new work item** shall be submitted to the secretariat of the Subcommittee of ISO/IEC joint technical committee 1 concerned with a copy to the secretariat of ISO/IEC JTC1 and to the ISO Central Secretariat.
**Presentation of the proposal** - to be completed by the proposer Guidelines for proposing and justifying a new work item are given in ISO Guide 26.

| **Title ISO/IEC: INFORMATION TECHNOLOGY - Fibre Channel - Backbone, FC- BB** |
|---|
| **Scope:** A FibreChannel Backbone standard which defines the functions and mappings necessary to bridge between physically-separate instances of he same network definition. |
| **Purpose and justification:**<br><br>Included within this standard are:<br><br>a) The definition of Media Access Control (MAC) - level address mappings and translations and the provision of support for configuration discovery functions;<br><br>b) The provision of necessary management, control and remote monitoring functions to support existing application packages;<br><br>c) The definition of mappings between Fibre Channel services, and other equivalent definitions as necessary;<br><br>d) Other capabilities which fit within the general scope of implementing a transparent homogenous backbone.<br><br>Candidate network definitions for inclusion in this project are the various types of Ethernet, Fast Ethernet and the developing Gigabit Ethernet, and the Fiber Distributed Data Interface (FDDI) etc. The exact definitions included in this function will be a function of the participants and their willingness to contribute resources.<br><br>Note that the scope of this project is specifically limited to the transparent interconnection of like instances. The existing |

| |
|---|
| Fibre Channel - Link Encapsulation project addresses the use of a single higher-level protocol to integrate networks with different lower levels, and there are existing definitions for high-level protocol translation. The multiplexing abilities of Fibre Channel will be used, however, to support multiple, completely-separate bridges simultaneously over the same Fibre Channel infrastructure. |
| **Programme of work: If the proposed new work item is approved, which of the following document(s)is (are) expected to be developed?**<br>**__X__ a single International Standard more than one International Standard** |
| **Relevant documents to be considered:** |
| **Cooperation and liaison: None.** |
| **Preparatory work offered with target date(s):** FC BB-2 available 8/2002 |
| **Signature: Dr . Walter v. Pattay, Secretary of ISO/IEC JTC 1/SC 25** |
| Will the service of a maintenance agency or registration authority be required? .....No..... Are there any known requirements for coding? .....No.....Does the proposed standard concern known patented items? ... No. |
| **Comments with respect to the proposal in general, and recommendations thereon:**<br>**It is proposed to assign this new item to JTC 1/SC 25 as project 1.25.13.nn.nn .** |

**Voting on the proposal - Each P-member of the ISO/IEC JTC 1/SC 25 has an obligation to vote within the time limits laid down.**

| Date of circulation: | Closing date for voting: | Signature of |
|---|---|---|
| | | |

| ***NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCECRITERIA*** | | |
|---|---|---|
| **Criterion** | **Validity** | **Explanation** |
| **A Business Requirement** | | |
| A.1 Market Requirement | Essential _X__<br>Desirable ___<br>Supportive ___ | This interface is widely available on PCs and servers. |
| A.2 Regulatory Context | Essential ___<br>Desirable __X_<br>Supportive ___<br>Not Relevant ___ | |
| **B. Related Work** | | |
| B.1 Completion/Maintenance of current standards | Yes __<br>No__X_ | |
| B.2 Commitment to other organization | Yes ___<br>No__X_ | |
| B.3 Other Source of standards | Yes ___<br>No__X_ | |
| **C. Technical Status** | | |
| C.1 Mature Technology | Yes _X_<br>No___ | The technology for FC is mature. |

| | | |
|---|---|---|
| C.2 Prospective Technology | Yes ___<br>No__X_ | The standard is needed now. |
| C.3 Models/Tools | Yes ___<br>No__X_ | |
| **D. Conformity Assessment and Interoperability** | | |
| D.1 Conformity Assessment | Yes ___<br>No__X_ | |
| D.2 Interoperability | Yes _X__<br>No___ | If standard approved as this is the prime objective. |
| **E. Other Justification** | | |

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**Notes to Proforma**

**A. Business Relevance.** That which identifies market place relevance in terms of what problem is being solved and or need being addressed.

A.1. Market Requirement. When submitting a NP, the proposer shall identify the nature of the Market Requirement, assessing the extent to which it is essential, desirable or merely supportive of some other project.

A.2 Technical Regulation. If a Regulatory requirement is deemed to exist- e.g. for an area of public concern e.g. Information Security, Data protection, potentially leading to regulatory/public interest action based on the use of this voluntary international standard - the proposer shall identify this here.

**B. Related Work.** Aspects of the relationship of this NP to other areas of standardization work shall be identified in this section.

B.1 Competition/Maintenance. If this NP is concerned with completing or maintaining existing standards, those concerned shall be identified here.

B.2 External Commitment. Groups, bodies, or for a external to JTC1 to which a commitment has been made by JTC for cooperation and or collaboration on this NP shall be identified here.

B.3 External Std/Specification. If other activities creating standards or specifications in this topic area are known to exist or be planned, and which might be available to JTC1 as PAS, they shall be identified here.

**C. Technical Status.** The proposer shall indicate here an assessment of the extent to which the proposed standard is supported by current technology.

C.1 Mature Technology. Indicate here the extent to which the technology is reasonably stable and ripe for standardization.

C.2 Prospective Technology. If the NP is anticipatory in nature based on expected or forecasted need, this shall be indicated here.

C.3 Models/Tools. If the NP relates to the creation of supportive reference models or tools, this shall be indicated here.

D. Any other aspects of background information justifying this NP shall be indicated here.

**D. Conformity Assessment and Interoperability**

D.1 Indicate here if Conformity Assessment is relevant to your project. If so, indicate how it is addressed in your project plan.

D.2 Indicate here if Interoperability is relevant to your project. If so, indicate how it is addressed in your project plan.

**ATTACHMENT C**

**Motion to Approve Forwarding of NWIP to JTC1/SC25 and Recommend SC25 TAG Vote YES on SC25 Ballot**

MOTION: T11 has reviewed the new work item proposal, and recommends the NWIP (T11/03-083v0) as a US contribution to JTC1/SC25 and to approve the NP to be issued by SC25, answering the 6 questions 'Yes' and naming Gary S. Robinson as project editor.

YES NO ABS

**ATTACHMENT D Motion to Approve or Disapprove FCD**

*MOTION: T10 has reviewed the FCD, SC25 14776-326 (RBC) and recommends that the JTC1/SC25 TAG vote to approve FCD, SC25 14776-326 (RBC), Reduced Block Commands*

*OR*

*MOTION: T10 has reviewed the FCD, SC25 14776-362 (MMC-2) and recommends that the JTC1 TAG vote to disapprove FCD, SC25 14776-362 (MMC-2), Multi-Media Command Set – 2 and include the following comments to the ballot:*

"Comment from the USA: The USA will change its vote to approve if the following changes are made:

* Table 369 on page 268. The opcode for command SEND EVENT should be A2, not 5D (5D is opcode for command Send Cue Sheet)
* Table 370 on page 269. The Notification Class should not be 01h, it should be 011h(for Class External Request)."

**ATTACHMENT E Motion to Approve FDIS**

*MOTION: T10 has reviewed the FDIS, SC25 14776-331 (SSC) and recommends that the JTC1 TAG vote to approve FDIS, SC25 14776-331 (SCC), SCSI Stream Commands*

YES NO ABS

*OR*

*MOTION: T10 has reviewed the FDIS, SC25 14776-331 (SSC) and recommends that the JTC1 TAG vote to disapprove FDIS, SC25 14776-331 (SCC), SCSI Stream Commands with the following comments: (see form below)*

YES NO ABS

| Date: 2001-10-21 | Document: **ISO/ FDIS, SC25 14776-362** |
|---|---|

| **Member body** | **Clause / subclause** | **Paragraph / Figure / Table** | **Type of comment** (general / technical / editorial) | **Comment** | **Proposed change** | **Observations of the secretariat** on each comment submitted |
|---|---|---|---|---|---|---|
| ANSI | 6.1.33 | Table 369 | Editorial | . The opcode for command SEND EVENT is wrong | The opcode for command SEND EVENT should be A2, not 5D (5D is opcode for | |

| Date: 2001-10-21 | Document: **ISO/ FDIS, SC25 14776-362** |
|---|---|

| Member body | Clause / subclause | Paragraph / Figure / Table | Type of comment (general / technical / editorial) | Comment | Proposed change | Observations of the secretariat on each comment submitted |
|---|---|---|---|---|---|---|
| | | | | | command Send Cue Sheet) | |
| ANSI | 6.1.33 | Table 370 | Editorial | The Notification class is wrong | The Notification Class should not be 01h, it should be 011h(for Class External Request) | |

## ATTACHMENT F

*MOTION: T10 recommends the following list of delegates to the JTC1/SC25 and WG4 meeting the last week of August 2001 in Germany.*

*Gary S Robinson EMC$^2$ Corporation. Address, email, tel numbers*

YES NO ABS

## ATTACHMENT G

### Motions for Reaffirmation of a Standard

*MOTION: has reviewed the IS 14776-331 (SSC) and recommends that the JTC1 TAG vote to reaffirm IS 14776-331 (SCC), SCSI Stream Commands*

YES NO ABS

### Motions for Withdrawal of a Standard

*MOTION: has reviewed the IS 14776-331 (SSC) and recommends that the JTC1 TAG vote to withdraw IS 14776-331 (SCC), SCSI Stream Commands*

YES NO ABS

### Motions for Revise of Standard

*MOTION: has reviewed the IS 14776-331 (SSC) and will begin a new project in order to revise IS 14776-331 (SCC), SCSI Stream Commands*

YES NO ABS

## Annex I

# BACKGROUND INFORMATION,

## International Representative's Guidelines

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### Stages of the development of International Standards from ISO/IEC JTC1 Directives

### 12.1 Stages of Technical Work

The successive stages of the technical work are referenced 0 to 5. These are defined as follows:

- Stage 0 (preliminary stage): A study period is underway.
- Stage 1 (proposal stage): An NP is under consideration.
- Stage 2 (preparatory stage): A WD is under consideration.
- Stage 3 (committee stage): A CD/FCD is under consideration.
- Stage 4 (approval stage): An FDIS is under consideration.
- Stage 5 (publication stage): An IS is being prepared for publication.

Annex B illustrates the stages of progression for work items.

### Annex B: JTC 1 Standards Development Stages

| Stage | Standard | Amendment | Fast Track | Technical Report | ISP | Technical Corrigendum | Time |
|---|---|---|---|---|---|---|---|
| **Stage 0 -**<br><br>**Preliminary Stage** | | | | | | | |
| **Stage 1 -**<br><br>**Proposal Stage**<br>***SC vote*** | ***NP*** | **NP** | | **NP** | **NP** | | |
| **Stage 2 -**<br><br>**Preparatory Stage** | **WD** | **WD** | | **WD** | **WD** | **Defect Report** | |
| **Stage 3 -**<br><br>**Committee Stage**<br>***SC vote*** | **CD**<br>***FCD*** | **PDAM**<br>**FPDAM** | | **PDTR** | **PDISP**<br>**FPDISP** | **DCOR** | ***4 months*** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Stage 4 -**<br><br>**Approval Stage**<br>***JTC1 vote*** | ***FDIS*** | **FDAM** | **DIS** | **DTR** | **FDISP** | | ***2 months*** |
| **Stage 5 -**<br><br>**Publication** | **IS** | **AMD** | **IS** | **TR** | **ISP** | **COR** | |

**NOTES:**

1) **Prior to the WD stage, new work is introduced into the programme of work via either a New Work Item Proposal (NP) for JTC 1 letter ballot (see 6.2.1) or a programme subdivision document for JTC 1 endorsement (see 6.2.2).**
2) **CDs, FCDs, PDAMs, FPDAMs, PDTRs, PDISPs, FPDISPs and DCORs are balloted at the subcommittee level.**
3) **DTRs are balloted at the JTC 1 level.**
4) **DIS, FDIS, FDAMs and FDISPs are balloted at the ISO/IEC National Body level.**
5) **Subsequent to the publication of an IS, AMD or ISP, Technical Corrigenda may be published to correct technical defects which adversely affect implementation.**
6) **The text of each abbreviation is given in full on page v.**

*Italicized text is what T1n uses, Stage 1, 3 (FCD), 4, and 5*

## 12.2 General

**12.2.1** The social and economic long-term benefits of an IS should justify the total cost of preparing, adopting and maintaining the standard. The technical consideration should demonstrate that the proposed standard is technically feasible and timely and that it is not likely to be made obsolete quickly by advancing technology or to inhibit the benefits of technology to users.

**12.2.2** It is vital for the success of the technical work, and thus for the general reputation of ISO and IEC, that ISs be published without delay. To this end all persons involved shall ensure the rapid and smooth passage of technical documents from one stage to another. Consultation shall be maintained between those responsible for decisions at the different stages.

**12.2.3** In the interest of rapid progress of work, JTC 1 shall avoid discussion of a document successively at more than two levels -- WG/SC. Discussion at two levels is appropriate and adequate. These two levels are the expert level where technical proposals are discussed and drafts prepared (i.e., WG) and the committee level (i.e., SC) at which final NB vote on the draft is expressed within JTC 1. If no WG is involved, discussion shall be limited to one level. Care shall be taken to ensure that all parties and P-members have been involved at those levels, and their views properly considered.

Except for fast-track processing, stage 3 is the last at which submission of comments is permissible (including editorial comments and those of ITTF editors). JTC 1 P-members and the ITTF shall try to input their comments at the earliest possible stage.

**12.2.4** In order to facilitate the examination of successive versions of CDs at various stages of processing, JTC 1 and its SCs shall suitably identify all parts of the text which have been changed since the previous version by issuing the appropriate disposition of comments report.

**12.2.5** Every effort shall then be made by JTC 1 or the SC to ensure that the results of its deliberations will achieve the necessary majority for their publication as ISs. (The provisions concerning WG experts (see 2.5.1.3) and coordination (see 3.4) are particularly important in this respect.)

**12.2.6** Both NBs and any representatives presenting views at previous levels shall attempt to avoid confusion and delay that could result from different positions being declared (see 2.5.1.3) at different levels. NBs shall fulfill their obligation as P-members to vote (see 3.1.1).

**12.2.7** In order to accelerate the approval process in cases where an SC already has a draft that it considers to be of suitable maturity, the SC may choose, by letter ballot or agreement at a meeting, to accompany an NP with a complete technical specification and initiate simultaneous NP and CD ballots. In this event, the SC Secretariat shall so inform the JTC 1 Secretariat and forward the NP and its related technical specification to the JTC 1 Secretariat for NP ballot in accordance with 6.2. The SC Secretariat shall simultaneously circulate a CD ballot on the technical specification in accordance with 12.6.3.2 bearing the SC's N number only. [Note: In this case, the CD ballot is distributed prior to registration with ITTF and assignment of a project number. For clarity, the JTC 1 NP and the SC CD should cross reference each other’s document numbers. Simultaneous NP and FCD ballots are not permitted.]

**12.2.7.1** If the result of the JTC 1 NP ballot is negative, the results of the CD ballot are disregarded and the work item is not added to the JTC 1 programme of work.

**12.2.7.2** If the NP is approved and the CD receives substantial support, the project is registered in accordance with 12.5.1 and processing continues with an FCD in accordance with 12.6.1.2.

**12.2.7.3** If the NP is approved and the CD does not receive substantial support, the project reverts to Stage 2 and processing continues in accordance with 12.5.

## 12.3 Stage 0, Study Period Underway

This stage is usually optional. An SC may approve a study period when it is too early to identify precise NPs, but agreement exists that the subject area is likely to need future standardization (see 6.2.1.3). Under certain conditions, a study of a new work area should be undertaken (see 6.2.3.1).

## 12.4 Stage 1, NP under Consideration

This stage is described in 6.2.

## 12.5 Stage 2, WD under Consideration

**12.5.1** Upon approval of the NP by JTC 1, the project will be assigned to an SC.

**12.5.1.1** ITTF shall be informed of the assignment, shall register the project in the JTC 1 programme of work and shall advise the secretariat of the responsible SC, and the secretariat of JTC 1, of the assigned project number. For this purpose, ITTF shall be informed of the relationship of the NP to existing JTC 1 standards, i.e., whether the NP is a completely new project (requiring a new number) or a revision, extension (new part) or amendment of an existing standard.

**12.5.1.2** The number assigned to a project shall be subject to the following:

- The number allocated to a project shall remain the same throughout subsequent reporting stages (WD, CD and DIS) and for the published IS. No number shall be allocated to a project for a new standard which has already been used for a DIS or an IS.
- The number allocated to a project shall be a pure registration and reference number and has no meaning whatsoever in the sense of classification or chronological order.
- The numbers allocated to withdrawn projects shall not be used again, unless this is a consequence of restructuring of a multipart standard.

**12.5.1.3** Registration and numbering of projects at the ITTF is undertaken on the basis of the following criteria:

- For new standards: ITTF will assign a completely new project number.
- For revisions to existing standards: The project will carry the same number as the existing IS. If, however, the scope is substantially changed, the revision shall require an NP and a new project number may be assigned.
- For amendments: The project will carry the number of the existing IS followed by "/PDAM" and the sequential number of the PDAM (e.g., ISO/IEC 1234/PDAM 1).
- For standards to be published in separate parts: ITTF will assign a project number which shall be suffixed by a hyphen followed by the relevant part number (e.g., ISO/IEC 1234-1).

**12.5.1.4** When, in the course of its preparation, the title of a project is modified, ITTF shall immediately be informed so that the new title can be registered in the JTC 1 programme of work.

**12.5.2** The SC may assign the project to a WG or develop the document within the SC itself. For simplicity, the following sections assume assignment to a WG, but in cases where the SC does the development, references to the WG should be understood as references to the SC. Similarly, in rare instances a WG may report directly to JTC 1 rather than to an SC; in such cases, references to the SC should be understood as references to JTC 1.

**12.5.3** A Project Editor should be identified (see 5.7). The WG develops one or more WDs of the standard. Usually, a WD undergoes several revisions before the WG recommends that it be progressed to stage 3. As decisions are made regarding the content of the WD, the convener should take care to assure consensus, not only

of the individual participating experts, but also of the NBs represented in the WG. This will enhance the likelihood of achieving successful CD/FCD and FDIS ballots.

**12.5.4** Successive WDs on the same subject shall be marked "second working draft," "third working draft," etc., and the original WD number shall be supplemented by .2, .3, etc. (e.g., WD 1234.2).

**12.5.5** In the preparation of a WD, every effort shall be made to ensure that it will not require substantial redrafting in JTC 1 or the SC, in particular by ensuring that from the very beginning the draft is in conformity with the rules for the presentation of ISs (see ISO/IEC Directives, Part 3 - Drafting and presentation of International Standards).

**12.5.6** The project editor shall include an Executive Summary with information highlighting the content of the standard such that it could be used, for example, in promotional activities. This Executive Summary shall be circulated for comment with CD, FCD and FDIS ballots but shall not affect the outcome of these ballots.

**12.5.7** The WD remains in Stage 2 until:

- the main elements have been included in the document;
- it is presented in a form which is essentially that envisaged for the future IS;
- it has been dealt with at least once by JTC 1 or by a working body of JTC 1;
- the SC has decided in a resolution during a meeting or by letter ballot that the WD be forwarded to the ITTF for registration as a CD.

Optionally, an SC may authorize a WG to decide that a WD should be forwarded, via the SC Secretariat, for registration as a CD.

In cases where an SC believes that a future WD may receive substantial technical agreement, the SC may optionally authorize its Secretariat to issue a combined ballot for CD registration and consideration of the CD/FCD.

**12.5.8** If a work item has not progressed to Stage 3 by the third anniversary of project initiation (NP approval or project subdivision), the SC is required to take action as specified in 6.4.1.5.

## 12.6 Stage 3, CD under Consideration

# 12.6.1 Registration of CD

**12.6.1.1** The SC Secretariat forwards a copy of the WD in question to the ITTF which registers it as a CD. The ITTF shall confirm the registration to the JTC 1 Secretariat.

**12.6.1.2** The project editor, after consultation with the SC secretariat and, if necessary, the SC chairman, shall indicate if it is the case that the proposed CD is intended to be the final CD (FCD) on this subject. If so, the cover letter of the FCD shall explicitly indicate this intention and consideration of the FCD shall be by letter ballot. If the criteria for finalization of the FCD are satisfied (see 12.6.3), the FCD progresses to Stage 4. In other circumstances, a further CD or FCD ballot may be required.

A similar indication shall also be made if a particular PDAM ballot is intended to be the final PDAM (FPDAM) ballot. In this case, the cover letter of the FPDAM ballot shall explicitly indicate this intention.

[NOTE: NBs wishing to conduct an enquiry may find the FCD ballot period an appropriate time for this purpose.]

**12.6.1.3** Successive CDs on the same subject shall be marked "second committee draft," "third committee draft," etc., (see Form G5) and the original CD number shall be supplemented by .2, .3, etc. (e.g., CD 1234.2).

**12.6.1.4** When, in the course of its preparation, the title of a CD is modified, this information shall immediately be submitted to the ITTF for amendment to the project records.

# 12.6.2 Distribution of CDs

**12.6.2.1** The SC Secretariat distributes the CD (see Form G5). For an FCD (see Form G6), the Secretariat also forwards the FCD to ITTF for notification of availability to other NBs and organizations in liaison for information and comments. The introductory note should indicate, as appropriate, the sources used as a basis for the proposal and the background and aim of the proposal. The note should include among other things:

- the date when the work item was introduced into the programme of work;
- identification of the original proposer; and
- extent of liaison with other internal and external organizations.

**12.6.2.2** The CD may be distributed for discussion at an SC meeting, for comment by correspondence or for letter ballot. Frequently it will be dealt with in more than one of these ways in the course of reaching agreement.

**12.6.2.3** Organizations which can make an effective contribution to the application of ISs in a given area should be expressly invited to comment on all relevant CDs.

**12.6.2.4** Any editorial comments from the ITTF should be made during the FCD ballot (see 12.2.3).

# 12.6.3 Finalization of CDs

**12.6.3.1** The Secretariat of the SC responsible for the CD shall ensure that the CD fully embodies the decisions reached by the majority vote either at meetings or by correspondence.

**12.6.3.2** If the consideration of a CD is dealt with by correspondence, P-members and TCs and organizations in liaison are asked to submit their comments (and P-members their votes, see 9.1.5) by a specified date (see Form G7). In the case of CDs, this date should be no less than three months from the date of notification of issue. For an FCD, the ballot period shall be no less than four months. The SC may extend the ballot period in instances when the complexity of the text requires additional time for review or to allow additional time for enquiry, as long as the total ballot period does not exceed six months. Comments and votes shall be sent to the Secretariat of the SC within the period specified, and shall be summarized by the Secretariat and distributed in accordance with 8.3. The Secretariat shall also distribute a report clearly indicating the action taken as a result of the comments received and shall distribute, if necessary, a further CD. Abstention by an NB on a CD ballot does not bar the NB from voting on subsequent versions of the document (see 3.1.1).

**12.6.3.3** If a CD is considered at a meeting, the Secretariat shall distribute (in accordance with 8.3) a revised CD, prepared in accordance with the decisions taken at the meeting, for consideration either by correspondence or at a subsequent meeting.

**12.6.3.4** The Secretariat of the committee responsible for the draft shall decide whether to continue consideration of successive CDs by correspondence or by convening a meeting, according to the nature of the comments received. If at least three P-members disagree with the proposal of the Secretariat, and so notify the Secretariat within four weeks, the CD shall be discussed at a meeting.

**12.6.3.5** Consideration of successive CDs shall continue until the substantial support of the P-members of the committee has been obtained for an FCD or a decision to abandon or defer the project has been reached.

**12.6.3.6** It is the responsibility of the SC Secretariat, if necessary in consultation with the ITTF, to judge when substantial support has been obtained. In this connection attention should be given not only to the numerical voting results but also to the attempts made to resolve negative votes and the nature of success or failure to do so.

So that comments accompanying votes on a CD may be properly considered, the relevant Secretariat is instructed to refer all such comments to the SC. For an FCD, the SC shall also consider any comments received from ISO member bodies and IEC national committees. The SC shall review the comments and make a recommendation to the relevant Secretariat before further processing. Within an SC, responsibility for the preparation of a revised CD text, disposition of comments report, and a recommendation on further processing may be delegated to a WG, OWG (see 2.5.2), or Project Editor who reports back to the SC.

The proposed or approved disposition of comments report, or both, should be produced within three months of the close of the CD or FCD ballot. When exceptional circumstances warrant a longer time frame for the preparation of the disposition of comments report, these circumstances shall be communicated to the JTC 1 Secretariat.

**12.6.3.7** Substantial support for an FCD shall be obtained by correspondence; this may be either on the FCD as it was distributed or, more usually, subject to the necessary corrections being made. In the latter case, the SC may instruct its Secretariat or the Project Editor to modify the FCD. The revised FCD shall be submitted directly to the ITTF by the Secretariat of the appropriate committee (usually the SC).

**12.6.3.8** Whenever appropriate, SCs entrusting tasks to WGs or OWGs should empower them to produce on behalf of the SCs the CD, FCD or FDIS text for direct submission to ITTF via the SC Secretariat.

**12.6.3.9** An FCD shall be advanced to FDIS only if the text has been stabilized, consensus has been demonstrated, and the substantial support of the P-members of the SC has been obtained. The SC Secretariat shall submit the following within a maximum of three months to the ITTF for FDIS registration :

- the final electronic text, including figures and graphics, of the FCD for distribution as an FDIS, in accordance with the ITSIG guide;
- an explanatory report (see Form G8, obtainable from the ITTF).

The explanatory report shall contain:

- a brief history of the draft;
- a record of the voting on the FCD listing those P-members who voted in favour, those who voted against and those who did not vote;
- a brief statement of all technical objections which have not been resolved and the reasons why it has not been possible to resolve them; in the case of a revision of an existing IS, a summary of the main changes in the previous edition of the IS now proposed for technical revision and the reasons therefor.

**12.6.3.10** If a work item has not progressed to Stage 4 by the fourth anniversary of the first CD, the SC is required to take action as specified in 6.4.1.6.

### 12.7 Stage 4, FDIS under Consideration

## 12.7.1 Registration and Distribution of FDIS

**12.7.1.1** The ITTF shall register the FCD as an FDIS.

**12.7.1.2** The ITTF shall distribute the FDIS (see Form G9) together with the explanatory report to all NBs for a two-month letter ballot (see Form G10). The ITTF shall at the same time send it to all other TCs and organizations in liaison with JTC 1 or the SC responsible for preparing the draft.

At this stage, the ITTF shall make no changes to the text of the FDIS, which shall be distributed as presented. If the explanatory report lacks necessary information, the ITTF shall request the relevant Secretariat to appropriately modify the explanatory report prior to distribution.

## 12.7.2 Processing of FDIS ballots

**12.7.2.1** The ITTF shall implement the combined voting procedure (see 9.5).

**12.7.2.2** When an FDIS ballot closes, the ITTF shall inform the JTC 1 and SC Secretariat accordingly and communicate to the SC Secretariat the results of voting. At the same time, the ITTF shall transmit the results of voting to the NBs.

**12.7.2.3** If the FDIS has been approved in accordance with 9.6, the SC Secretariat shall take into consideration any minor corrections (see 9.7) and promptly forward the document to ITTF for publication. ITTF shall inform all NBs that the FDIS has been accepted for publication. The document is now at stage 5.

**12.7.2.4** If the FDIS has not been approved, the document reverts to Stage 2 (12.5.2) and is referred back to the appropriate SC for consideration and recommendation for further processing.

**12.7.2.5** In the absence of the necessary approval, JTC 1 may decide at any stage to request the publication of the draft as a TR, if the majority of the P-members agree (see 15).

## 12.8 Stage 5, IS Publication

The final electronic text shall be sent to the ITTF in an acceptable form for publication (see Form G13).

# 13 Preparation and Adoption of International Standards - Fast-Track Processing

**13.1** Any P-member of JTC 1 or organization in Category A liaison with JTC 1 may propose that an existing standard (or amendment with the approval of the responsible SC) from any source be submitted without modification directly for vote as a DIS (or DAM). The criteria for proposing an existing standard for the fast-track procedure is a matter for each proposer to decide.

Prior to submission of a document for fast-track processing, a P-member or Category A liaison organization of JTC 1 may request that the document be submitted through the JTC 1 Secretariat to one or more SCs for informal comment or discussion among the interested parties. Any comments on format, technical content, completeness, etc. could be considered by the requester prior to formal submission of the document for fast-track procedure.

The proposer of a fast-track document is encouraged to make a recommendation concerning the assignment of the document to a given SC. The proposer of a fast-track document shall submit the name of an individual who has agreed to serve as project editor for the fast-track document. This recommendation (or in its absence, the JTC 1 Secretariat's recommendation) shall be circulated to JTC 1 NBs together with the DIS ballot (see Form G12). Separately from its vote on the technical content of the standard, NBs shall be given the opportunity to comment on the specific assignment. However, comments on assignment shall not prejudice the vote on technical content. In cases where the SC assignment is in question or where the fast-track document does not appear appropriate for any existing SC, the JTC 1 Secretariat may perform the duties normally assigned to the SC Secretariat until the final SC assignment is determined. The JTC 1 Secretariat shall ensure that the ballot resolution meeting is open to representation from all affected interests and is convened in a timely manner in keeping with the spirit of the fast-track process.

[Note**:** For an existing project which has not yet reached Stage 3 (see 12.1), an SC may suspend the 5-stage process in favor of the fast-track procedure (to be initiated by a P-member or a Category A liaison organization of JTC 1) provided that:

- the SC agrees that the intended fast-track document is suitable to satisfy the requirements of the existing project; and
- the SC agrees to the use of the fast-track procedure and so notifies JTC 1.]

**13.2** The proposal shall be received by the ITTF which shall take the following actions:

- settle the copyright or trademark situation, or both, with the proposer, so that the proposed text can be freely copied and distributed within ISO/IEC without restriction;
- assess in consultation with the JTC 1 Secretariat that JTC 1 is the competent committee for the subject covered in the proposed standard and ascertain that there is no evident contradiction with other ISO/IEC standards;

- distribute the text of the proposed standard (or amendment) as a DIS (or DAM), indicating that the standard belongs in the domain of JTC 1 (see Form G11). In case of particularly bulky documents the ITTF may demand the necessary number of copies from the proposer.

**13.3** The period for combined DIS (or DAM) voting shall be six months. In order to be accepted the document must meet the criteria of 9.6.

**13.4** Upon receipt of notification from the ITTF that a document has been registered for fast-track processing, the JTC 1 Secretariat shall inform the Secretariat of the SC recommended for assignment of the project of the fast-track processed DIS (or DAM) number, title, and ballot period dates, and shall send the SC Secretariat a copy of the DIS (or DAM). The JTC 1 Secretariat shall also inform the ITTF of the SC that will deal with the ballot results, in order that the table of replies and any comments accompanying the votes may be sent by ITTF directly to the SC Secretariat as well as to the JTC 1 Secretariat.

**13.5** Upon receipt of the notification from the JTC 1 Secretariat that its SC has been assigned the responsibility for dealing with a fast-track processed DIS (or DAM), the SC Secretariat shall so inform the SC NBs, and shall make plans for the handling of ballot results through the formation of a ballot resolution group, as follows. The SC Secretariat shall:

- schedule a ballot resolution group meeting to consider any comments on the DIS (or DAM);
- appoint a Convener for the ballot resolution group ;
- appoint a Project Editor for the DIS (see 13.1, third paragraph). The Project Editor shall be responsible for producing the final DIS text in case of acceptance;
- notify the SC NBs of the ballot resolution group meeting date(s), location, Convener, and Project Editor.

In some cases the establishment of a ballot resolution group is unnecessary and the SC Secretariat can assign the task directly to the Project Editor.

**13.6** Upon receipt of the ballot results, and any comments, the SC Secretariat shall distribute this material to the SC NBs. The NBs shall be requested to consider the comments and to form opinions on their acceptability. The SC Secretariat shall also send notification of the ballot resolution group meeting to any NBs having voted to disapprove the DIS (or DAM) that are not NBs of the SC.

Comments received after the normal voting period will not be taken into account, except that they will be submitted to the appropriate SC Secretariat for consideration at the time of the next review of the IS in question.

**13.7** NBs of the relevant SC shall appoint to the ballot resolution group one or more representatives who are well aware of the NB's position. NBs having voted negatively, whether or not an NB of the relevant SC, have a duty to delegate a representative to the ballot resolution group meeting.

**13.8** At the ballot resolution group meeting, decisions should be reached preferably by consensus. If a vote is unavoidable the vote of the NBs will be taken according to normal JTC 1 procedures.

**13.9** If, after the deliberations of this ballot resolution group, the requirements of 9.6 are met, the Project Editor shall prepare the amended DIS (or DAM) and send it to the SC Secretariat who shall forward it to the ITTF for publication as an IS. For its initial publication, the document is not required to be in ISO/IEC format, but can be published in the format of the submitting organization.

**13.10** If it is impossible to agree to a text meeting the above requirements, the proposal has failed and the procedure is terminated.

**13.11** In either case the Convener, in coordination with the Project Editor, shall prepare a full report which shall be distributed by the SC Secretariat to its NBs and to the ITTF.

**13.12** The time period for these different steps shall be:

- a total of two months for the ITTF to send the results of the vote to the JTC 1 Secretariat and to the SC Secretariat, and for the latter to distribute it to its NBs;

- not less than two and one-half months prior to the date of the ballot resolution group meeting for distribution of the voting results and any comments;

- not later than one month after the ballot resolution group meeting for distributions by the SC Secretariat of the final report and the final DIS text in case of acceptance.

**13.13** If the proposed standard is accepted and published, its maintenance will be handled by JTC 1.

**13.14** Subsequent revisions shall be in the format prescribed by the ISO/IEC Directives - Part 3. In this case, the ITTF editor shall check the text received to ensure that it is in conformance with the ISO/IEC Directives, Part 3. If modifications are considered necessary, the ITTF editor shall submit proposals for modification to the Project Editor for approval. No IS shall be published without such approval.

ITTF shall prepare a proof of the IS and send this to the Project Editor for endorsement. The only changes permissible at this stage are corrections of recognized errors in the revised text or of errors introduced by ITTF in preparing the proof.

Upon receipt of the endorsed proof from the Project Editor, ITTF shall make any final corrections required and proceed with publication of the IS (or amendment).

# Annex II

## Converting an ANSI standard to a JTC1 Draft, FCD or FDIS

The JTC1 style is very similar to the ANSI style with the following changes.

1. Remove all content up to but not including the Table of Contents.

2. Remove all content from the end of the Table of Contents to the Scope.

3. Replace the pre Table of Contents with the JTC1 title page shown in the following sample.

4. Replace the post Table of Contents with the JTC1 Foreward and Introduction page shown in the following sample.

5. Replace any ANSI header and footer with those shown in the following sample.

6. Review the Reference section so that the references are ISO/IEC if they exist.

7. Convert to A4 paper size

    a. Here is how to generate an A4 size pdf from a frame file. If the left and right margins are setup to be 0.9 inches or greater then there will be no change in the number for pages or the page layout.

    One time only
    1- Open Acrobat Distiller
    2- Select Settings/JobOptions/General
    3- In the Default Page Size box select units as centimeters
    4- In the Default Page Size box set width to 21
    5- In the Default Page Size box set height to 29.7
    6- Select Save As and then make a name up (e.g., A4 Format)
    7- Select OK

    After one time setup then do the following when you what to make an A4 pdf:
    1- Open Acrobat Distiller
    2- From the Job Options pull down select the option that contains your A4 settings (e.g., A4 Format)
    3- Open Frame
    4- Select Format/Page Layout/Page Size
    5- From the page size pull down select A4
    6- Select set
    7- Select File/Print Setup
    8- From the name pull down select Acrobat Distiller
    9- From paper size pull down select A4
    10 - Select OK
    11 - Select File/Save As
    12- From Save as type pull down select .pdf
    13- Name the file then select Save
    14- Fill in any of the PDF Setup information as usual
    15- Select Set
    16- After generating the A4 pdf
    17- Put the Acrobat Distiller Job Options back to what it was
    18- Put the Frame Page Size back to Letter
    19- Put the Frame Print Setup back to your normal printer with your normal page size.

# Information technology — Small Computer System Interface – Part 232 Serial Bus Protocol 2 (SBP- 2)

*Technologies de l'information — Interface small computer systems – Partie 232 (SBP-2)*

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Sample

Foreword

ISO (the International Organisation for Standardisation) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organisations, governmental and nongovernmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardisation.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

ISO (the International Organisation for Standardisation) and IEC (the International Electrotechnical Commission) form the specialised system for worldwide standardisation. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organisation to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organisations, governmental and nongovernmental, in liaison with ISO and IEC, also take part in the work.

Sample

## Introduction

This standard defines a transport protocol within the domain of Serial Bus, IEEE Std 1394-1995, that is designed to permit efficient, peer-to-peer operation of input output devices (disks, tapes, printers, *etc.*) by upper layer protocols such as operating systems or embedded applications. Vendors that wish to implement devices that connect to Serial Bus may follow the requirements of this and other normatively referenced standards to manufacture an SBP-2 compliant device.

**1 Scope and purpose**

# 1.1 Scope

This standard defines a protocol for the transport of commands and data over High Performance Serial Bus, as specified by IEEE Std 1394-1995. The transport protocol, Serial Bus Protocol 2 or SBP-2, requires implementations to conform to the requirements of the aforementioned standard as well as to ISO/IEC 13213:1994, Control and Status Register (CSR) Architecture for Microcomputer Buses, and permits the exchange of commands, data and status between initiators and targets connected to Serial Bus.

# 1.2 Purpose

Original development work for Serial Bus Protocol (SBP) was initiated out of a desire to adapt SCSI capabilities and facilities to a particular serial environment, IEEE Std 1394-1995. Serial interconnects offer a migration path for SCSI into the future because they may be better suited to cost reduction and speed increases than the parallel interconnects first utilized by SCSI.

As development of the standard progressed, the working group recognized the solutions provided by SBP-2 were of general applicability to large classes of Serial Bus peripheral devices. With this in mind, the development work was redirected to provide mechanisms for the delivery of commands, data and status independent of the command set or device class of the peripheral. SBP-2 provides a generic framework that may be referenced by other documents or standards that address the unique requirements of a particular class of devices. The enhanced goals set for the design of SBP-2 are ranked below:

- The protocol should permit the encapsulation of commands, data and status from a diversity of command sets, legacy as well as future, in order to preserve the investment in an existing application and operating system software base;
- The protocol should enable the initiator to form an arbitrarily large set of tasks without consideration of implementation limits in the target;
- The protocol should allow the initiator to dynamically add tasks to this set while the target is active in execution of earlier tasks. The addition of new tasks should not interfere with the target's processing of tasks currently active;
- Although the protocol should enable varying levels of features and performance in target implementations, strong focus should be kept on a minimal set deemed adequate for entry-level environments;
- Within the constraints posed by the preceding goal, the hardware and software design of the initiator should not be unduly affected by variations in target capabilities;
- In order to promote the scalability of aggregate system performance, the protocol should distribute the DMA context from the initiator adapter to the target devices.

Although SBP-2 has been designed for Serial Bus as currently specified by IEEE Std 1394-1995, the Technical Committee anticipates that it will be appropriate for use with future extensions to Serial Bus as they are standardized.

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**2 Normative references**

# 2.1 Normative References Overview

The following standards contain provisions that, through reference in the text, constitute provisions of this international standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this international standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

# 2.2 Approved references

The following approved international and regional standards (ISO, IEC, CEN/CENELEC and ITUT) may be obtained from the international and regional organizations that control them.

IEEE Std 1394-1995, Standard for a High Performance Serial Bus

ISO/IEC 9899:1990, Programming Languages—C

ISO/IEC 13213:1994, Control and Status Register (CSR) Architecture for Microcomputer Buses

# 2.3 References under development

At the time of publication, the following referenced standards were still under development.

IEEE P1394a, Draft Standard for a High Performance Serial Bus (Supplement)

ISO/IEC 14776-412, SCSI Architecture Model 2 (SAM-2)

ISO/IEC 14776-312, SCSI Primary Commands 2 (SPC-2)

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**3 Definitions and notation ……..**

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