: 7 September 2001

To: T10 and T11

From: Gary S. Robinson, IR

Subject: Report on ISO/IEC JTC1/SC25 and SC25/WG4

SC25 is comprised of 23 member countries as Principal members and 12 Observing (non-voting) countries. Many countries send more than one representative. The SC25 meeting is formal and is based upon procedural issues. Therefore most of this report is on the work on WG4 which is where T10 and T11 participate.

The Scope of SC25 covers: Home electronics (WG1), Premises wiring (WG3), and Device interfaces (WG4). The first two groups, WG1 and WG3 were merged into SC25 from IEC and are different than the work of WG4, Device interfaces. To further complicate things, SC26, Microprocessor System was just merged into WG4. SC26 derived most of its projects from IEEE Computer Society Microprocessor Standards Committee. At this meeting WG4 went over past, current and possible future works as well as changing the name and Scope of WG4 and SC25 to reflect this merge in projects.

Jurgen Märgner of IBM took over WG4 as official Convenor at this meeting. He is excellent and a real asset to this group.

This SC25/WG4 report includes three documents: Attached below are the Resolutions and Action Points of WG4 (all were approved), the draft minutes, and, from the T10/11 web site, the chart T10/01-275r0 and T11/01-395v2. I have made some remarks (beginning with a ~ and using a red font).

The Minutes are interesting but the Resolutions are the only official results of the meeting.

I spent some time after the close of the meeting to review editing procedures with the SC25 Secretary, Walter von Pattey, and the IEC Editor, Gabriel Barta. IEC needs PDF but they also want editable versions of our documents. They will accept WORD, WP and RTF. Therefore if we can convert Framemaker into RTF it would be useful. They said they usually do not make any changes to our documents but forming the printable version from the source produces a higher quality print than PDF. They agreed that IF they made any changes to the document they shall convey those changes to us.

Attachments:

ISO/IEC JTC 1/SC 25 INTERCONNECTION OF INFORMATION TECHNOLOGY EQUIPMENT

Draft / Approved SC 25/WG 4 Feldafing Resolutions and Action Points

Resolutions

Resolution SC 25: 12/XX (1.25.13.11.03)

Resolution WG 4/01

SC 25 has reviewed the JTC 1 Central Secretariat's list of projects which have not moved for 3 years or longer and concurs with the cancellation of project 1.25.13.11.03 (SCSI-3 SPC) and the withdrawal of CD 14776-311 as proposed by ITTF. SC 25 instructs its Secretariat to withdraw the related London Resolution SC25 06/50 (=WG4/20) and Tokyo Resolution SC25 09/35 (=WG4/03).

Resolution SC 25: 12/XX (1.25.26.01.03)

Resolution WG 4/02

SC 25 instructs its Secretariat, upon receipt from the US Member Body, to submit to ITTF the latest revision of IEEE 1212 as a DIS for fast-track letter ballot as a revision of 13213:1994.

Resolution SC 25: 12/XX (1.25.13.13.21)

Resolution WG 4/03

Upon successful completion of the FCD, SC 25 authorizes the project editor of FC-100-TP to submit FDIS 14165-114 to the SC 25 Secretariat, along with the disposition of comments report (if any), for registration as a FDIS letter ballot.

~ This resolution received No votes from Ireland, and a few others because SC25 should not be requesting documents, it should let things happen per the normal process. SC25 seems to put these items in a Resolution as an audit trail.

Resolution SC 25: 12/XX (1.25.13.13.21)

Resolution WG 4/04

Upon successful completion of the FDIS, SC 25 authorizes the project editor of FC-100-TP to provide the final IS text, along with the disposition of comments report (if any), to the SC 25 Secretariat. SC 25 instructs its Secretariat to circulate the resolution of comments (if any) and to forward the IS document, upon receipt from the project editor, to the ITTF for publication as IS.

~ This resolution received No votes from Ireland, and a few others

Resolution SC 25: 12/XX (1.25.13.15.02)

Resolution WG 4/05

SC 25 instructs its Secretariat, upon receipt from the US Member Body, <u>either</u> to issue a proposed NWIP for HPSB Bridges for NP letter ballot <u>or</u> to submit US National Standard IEEE 1394.1 (HPSB Bridges) for fast-track. The NWI should be assigned to SC 25. In any case, the standards work should be recorded under new project number 1.25.13.15.02 using standards number yyyyy-11.

~ This resolution was to prepare the way for 1394 when the US releases it. The delay comes from the fact that the IEEE is not a paying member of the club.

Resolution SC 25: 12/XX (1.25.13.15.02)

Resolution WG 4/06

In case the US NB decides to submit an NWIP for HPSB Bridges, SC 25 instructs its Secretariat, upon receipt from the US Member Body, to circulate CD/FCD yyyyy-11 (HPSB Bridges) for CD/FCD letter ballot(s). It further instructs its Secretariat that if the result of the NP ballot is negative to disregard the results of the CD/FCD letter ballot.

Resolution SC 25: 12/XX (1.25.13.15.03)

Resolution WG 4/07

SC 25 instructs its Secretariat, upon receipt from the US Member Body, <u>either</u> to issue a proposed NWIP for Peer-to-Peer Data Transport Protocol (PPDT) for NP letter ballot <u>or</u> to submit US National Standard IEEE 1394.3 (PPDT) for fast-track. The NWI should be assigned to SC 25. In any case, the standards work should be recorded under new project number 1.25.13.15.03 using standards number yyyyy-31.

Resolution SC 25: 12/XX (1.25.13.15.03)

Resolution WG 4/08

In case the US NB decides to submit an NWIP for Peer-to-Peer Data Transport Protocol (PPDT), SC 25 instructs its Secretariat, upon receipt from the US Member Body, to circulate CD/FCD yyyyy-31 (PPDT)

for CD/FCD letter ballot(s). It further instructs its Secretariat that if the result of the NP ballot is negative to disregard the results of the CD/FCD letter ballot.

Resolution SC 25: 12/XX (1.25.XX.XX.XX)

Resolution WG 4/09

SC 25 approves SC 25/WG 4's intent to establish liaison from SC 25/WG 4 to IEC TC 100 (Audio, Video, and Multimedia Systems).

Resolution SC 25: 12/XX (1.25.XX.XX.XX)

Resolution WG 4/10

SC 25 approves SC 25/WG 4's intent to establish liaison from SC 25/WG 4 to IEEE 802 regarding LAN standards.

Resolution SC 25: 12/XX (1.25.26.XX.XX)

Resolution WG 4/11

SC 25 approves SC 25/WG 4's intent to establish liaison from SC 25/WG 4 to the IEEE Computer Society Microprocessor Standards Committee (MSC).

Resolution SC 25: 12/XX (1.25.26.XX.XX)

Resolution WG 4/12

SC 25 approves SC 25/WG 4's intent to establish liaison from SC 25/WG 4 to the 1394 Trade Association regarding IEEE 1394 related standards.

Resolution SC 25: 12/XX (1.25.XX.XX.XX)

Resolution WG 4/13

SC 25 endorses SC 25/WG4's request to change its title and scope in order to reflect the integration of projects of former SC 26, Microprocessor Systems, into SC 25/WG 4's Program of Work.

SC 25/WG 4 Title:

Change it from "Interconnection of Computer Systems and Attached Equipment" to "<u>Microprocessor Systems and Interconnection of Computer Systems and Attached Equipment</u>".

SC 25/WG 4 Task/Scope:

Change it from "Standardization of interfaces and protocols for the interconnection of computer systems and computer peripheral equipment "to "Standardization of microprocessor systems; interfaces and protocols for the interconnection of computer systems and computer peripheral equipment".

~ This resolution indicates that it is microprocessor systems that are included and not just microprocessor interconnects. It also implies excluding microprocessors (like 1754).

Action points

- ~ I will try to answer these Action items during the next meeting.
 - (1.25.13.11.08) The SC 25/WG 4 Secretary is requested to obtain and preserve the ITTF proof copy authorized for publication as IS by the SC 25 Secretary (which obviously had not been used for publication) as base for a planned revision of the standard during the next periodic/systematic review expected in 2004.
 - 2. (1.25.13.11.13) Mr. Robinson is requested to verify the status of SCSI-3 SMC; disposition of CD comments and an FCD contribution from the US NB are pending since July 1999.
 - 3. (1.25.13.11.22) Mr. Robinson is requested to verify the status of SCSI-3 SES; disposition of CD comments and an FCD contribution from the US NB are pending since December 1998.

- 4. (1.25.13.11.26) Mr. Robinson is requested to check whether the updated PDF version of FDIS 14776-113 (SCSI SPI-3) was sent to the SC 25 Secretary.
- 5. (1.25.13.11.34) The SC 25/WG 4 Secretary is requested to ask the SC 25 Secretary to change the project name from SCSI VI Protocol (SVP) to SCSI RDMA Protocol (SRP).
- 6. (1.25.13.12.11/12) Mr. Robinson is requested to verify the status of HIPPI-6400-SC/-OPT; DIS contributions from the US NB for fast-track are pending for both projects since June 2000.
- 7. (1.25.13.13.02) Mr. Robinson is requested to verify the status of SCSI-3 FCP; disposition of CD comments and an FCD contribution from the US NB are pending since December 1998.
- 8. (1.25.13.13.15) Mr. Robinson is requested to verify the status of FC-GS-2; disposition of CD comments and an FCD contribution from the US NB are pending since January 2000.
- 9. (1.25.13.13.18) Mr. Robinson is requested to verify the status of FC-AV; NWIP and an (F)CD contribution from the US NB are pending since June 1997.
- 10. (1.25.13.13.20) The SC 25/WG 4 Secretary is requested to discuss this matter with the SC 25 Secretary and ask him to withdraw Buzios Resolution SC 25 07/64 (=WG4/28) if appropriate.
- 11. (1.25.13.14.01/02) Mr. Robinson is requested to verify the status of ST / ST-API; DIS contributions from the US NB for fast-track are pending for both projects since June 2000.
- 12. (1.25.13.01.05) Mr. Robinson is requested to verify the status of FDDI PMD; a DIS contributions from the US NB as revision of the existing standard is pending since July 1999.
- 13. (1.25.13.01.10) Mr. Robinson is requested to verify the status of FDDI TP-PMD; disposition of FCD comments, if any, and an FDIS contribution from the US NB are pending since June 2000.
- 14. (1.25.26.01.01) Mr. Robinson is requested to contact Dr. Pritchard to identify what changes are required for a revision of the existing standard IEC 60559:1898 and to find a project editor, if necessary.
- 15. (1.25.26.02.06) Mr. Johansson is requested to verify the status of VMSbus (VMEbus serial) with the IEEE Computer Society Microprocessor standards committee (MSC).
- 16. (1.25.26.02.12) Mr. Johansson is requested to verify the status of Futurebus+ / Profile M with the IEEE Computer Society Microprocessor standards committee (MSC).
- 17. The SC 25/WG 4 Secretary is requested to clarify the to/from liaison status between SC 25/WG4 and SC 17/WG 9 together with Mr. Nohara, Mr. Hosoya, and Mr. Sato.
- 18. Mr. Johansson is requested to seek appointment as liaison from IEC TC 100 to SC 25/WG 4.
- 19. Mr. Robinson is requested to seek appointment as liaison from IEEE Computer Society LAN/MAN Standards Committee (802) to SC 25/WG 4.
- 20. Mr. Johansson is requested to seek appointment as liaison from IEEE Computer Society Microprocessor Standards Committee (MSC) to SC 25/WG 4.
- 21. Mr. Johansson is requested to seek appointment as liaison from 1394 Trade Association to SC 25/WG 4.
- 22. The SC 25/WG 4 Secretary is requested to check prior to next year's SC 25/WG 4 meeting the opportunities to use either wired LAN or wireless LAN as the communication vehicle during the meeting.

- 23. (1.25.13.15.01) The SC 25/WG 4 Secretary is requested to ask the SC 25 Secretary to change the proposed standards number from yyyyy-111 to yyyyy-01.
- ~ Below are the details of the meeting for those interested in details of their projects.

Draft minutes of the 12th meeting of JTC 1/SC 25/WG 4 at Feldafing, Germany, 2001-08-27/30

1 Opening of the meeting (Monday, 2001-08-27, 09:00 am)

Mr. Märgner opened the 12th meeting of Working Group 4 of SC 25. He welcomed the delegates to Feldafing.

2 Roll call of experts

The following experts answered the roll call:

Germany delegation:

Dr. Elmar Kallas (DKE)

Email: dke.ft77@vde.com

Mr. Jürgen Märgner (IBM Germany) Head of Delegation, SC 25/WG 4 Convenor,

SC 25/WG 4 Convenor, SC 25/WG 4 Secretary,

Email: jmaergner@de.ibm.com

Prof. Dr. Dobrovoje Popovic (University of Bremen), part time

Email: popovic@iat.uni-bremen.de

Hermann Strass (Techonolgy Consulting), part time Email: techcon.hstrass@t-online.de

Japan delegation:

Mr. Kazuhiro Sato (Nippon Telegraph & Telephone East Corporation)

Email: kazuhiro.sato@rdc.east.ntt.co.jp

Poland delegation:

Mr. Jacek Charuba (Institute for Nuclear Studies)

Head of Delegation Email: p03jch@ipj.gov.pl

US delegation:

Mr. Gary Robinson (EMC)

Head of Delegation,

Email: robinson_gary@emc.com

Mr. Peter Johansson (Congruent Software, Inc.)

Email: PJohansson@ACM.org

3 Approval of the draft agenda

The draft agenda (SC 25 N 699) distributed as document WG4/Feldafing01 was reviewed and approved as reflected by the items below. The update was re-distributed as document WG4/Feldafing06. The approved agenda will be posted on the IEC server as SC 25 N 699A.

- Project numbers were amended by a '1.' prefix to reflect that they are JTC 1 projects.
- New agenda items 11 (11.1, 11.2, and 11.3) were added to reflect the new projects ST, STI-API, and HPSB. All subsequent agenda items were renumbered.
- 15.8 Co-operation with IEEE for High Performance Serial Bus activities
- 16.1 Review WG 4 scope with respect to projects adopted from SC 26

<u>Note:</u> The agenda items below contain all WG 4 projects which are either active or have published standards associated with them -- although they might not require any actions in 2001 (indicated as "<u>no action required</u>" below). This might create "holes" in the numbering scheme, however.

4 Minutes of meeting

4.1 Approval of the minutes of the previous meeting

The draft minutes of the 11th meeting (SC 25 N 644) were approved with following changes:

- 4.1 The approved minutes will be posted on the IEC server as SC 25 N 584A.
- 12.9 Questions marks in the column 'remarks' have been replaced by appropriate values.

The approved minutes will be posted on the IEC server as SC 25 N 644A.

4.2 Appointment of the drafting committee

The following delegates were appointed to the drafting committee:

Germany: Mr. Märgner
Japan: Mr. Sato
Poland: Mr. Charuba
USA: Mr. Johansson

5 Report of the Secretariat

5.1 SC 25/WG 4 membership & observations

WG4/Feldafing05

Mr. Märgner reviewed document WG4/Feldafing05 and expressed sorrow over Mr. Milligan's death in November last year; the group keanly misses Gene's presence and his contributions. In February 2001 Mr. Robinson was nominated as the US International Representative regarding SC 25/WG 4 matters replacing Mr. Milligan.

Furthermore, the report lists the major WG 4 related events in terms of (submitted, approved, canceled) NPs and published standards since the last meeting in Tromsø in June 2000.

5.2 Status of JTC 1/SC 25/WG 4 projects

WG4/Feldafing03 WG4/Feldafing04

Mr. Märgner tabled two documents which reflect the status of all SC 25/WG 4 projects. These two documents were used as the base for further discussions while going through the individual projects (agenda items 6 to 13). WG4/Feldafing03 is a short report (3 pages) indicating the next required action (1 line per project). WG4/Feldafing04 is a very detailed report (Hardcopy distributed during the meeting: 67 pages, Softcopy (PDF version): 74 pages) showing all the details per project incuding the status of all open resolutions and action points since Montral (1995).

List of Documents of 12th Meeting of SC 25/WG 4 (JTC 1/SC 25/WG 4/Feldafingxx)

<u>xx</u>	<u>Title</u>	<u>Source</u>		
00 01 02 03	SC 25/WG 4 Meeting Document List SC 25/WG 4 Draft Feldafing Agenda (SC 25 N 699) SC 25/WG 4 Draft Tromsø Minutes (SC 25 N 644)	WG 4 Secretariat WG 4 Secretariat WG 4 Secretariat		
JTC	1 documents relevant for SC 25/WG 4	WG4/Feldafing05		
Mr. Märgner reviewed document WG4/Feldafing05. There was only one substantial event relevant for WG				
4 as of 10/2000: NPs are no longer circulated for voting by JTC1 rather than circulated by SCs (e.g. SC25) for voting by SC P-members, and, in parallel, by JTC1 for commenting by JTC1 members.				
Project 25.13.01.XX - Channel Interface Specifications: Fibre Distributed Data Interface (FDDI)				
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- 7 Project 25.13.10.XX Device Level Interface: Interfaces between Host Computers and Devices
- 7.7 Project 25.13.10.07 Intelligent Peripheral Interface (IPI) Part 2: Device Specific Command Set for Magnetic Disk Drives (IPI-2 Disk) [ISO/IEC 9318-2:1990]

 According to the SC 25/WG 4 meeting in Berlin (1999) -- and the modified SC 25 Program of Work as approved by JTC 1 N 6025 in January 2000 -- the project should be canceled and the standard withdrawn. Delete this item from future WG 4 agendas.
- 7.8 Project 25.13.10.08 Intelligent Peripheral Interface (IPI) Part 3: Device Generic Command Set for Magnetic Disk Drives (IPI-3 Disk) [ISO/IEC 9318-3:1990] According to the SC 25/WG 4 meeting in Berlin (1999) -- and the modified SC 25 Program of Work as approved by JTC 1 N 6025 in January 2000 -- the project should be canceled and the standard withdrawn. Delete this item from future WG 4 agendas.
- 7.9 Project 25.13.10.09 Intelligent Peripheral Interface (IPI) Part 4: Device Generic Command Set for Magnetic Tape Drives (IPI-3 Tape) [ISO/IEC 9318-4:1990]
 The final IS text as a revision of ISO/IEC 9318-4:1990 was sent to ITTF in June 2001, awaiting publication.
- 7.13 Project 25.13.10.13 Small Computer System Interface-2 (SCSI-2) [ISO/IEC 9316:1995] -- <u>no action required</u> (see project 25.13.11.01) Delete from future WG 4 agendas.
- 7.18 Project 25.13.10.18 Responsive Link
 Mr. Sato indicated that a NWIP will be submitted by Japan soon.
- **Project 25.13.11.XX** Small Computer System Interface (**SCSI**) : SCSI, SCSI-2, and SCSI-3
- 8.1 Project 25.13.11.01 Small Computer System Interface(-2) (SCSI(-2)) [ISO/IEC 9316:1995]

The standard published in 1995 was subject to periodic/systematic review by ITTF in 2000. The result (confirm standard) has been published by SC 25 N 727 in July 2001.

- 8.2 Project 25.13.11.02 SCSI-2 Common Access Method (SCSI-2 CAM) [ISO/IEC 9316-2:2000]
 The standard was published in June 2000.
- 8.3 Project 25.13.11.03 SCSI-3 Primary Commands (SPC) [CD 14776-311]

This project is under withdrawal procedure by JTC 1 because the project has not moved for 3 years or longer. WG 4 concurs with the automatic withdrawal proposed by ITTF. Feldafing Resolution WG4/01 applies.

- 8.8 Project 25.13.11.08 SCSI-3 Architecture Model (SAM) [ISO/IEC 14776-411:1999]
 The standard was published in September 1999 with headings misnumbered. WG 4 believes this does not merit correction until next periodic/systematic review expected in 2004. Feldafing Action Point 1 was assigned to the WG 4 Secretary.
- 8.10 Project 25.13.11.10 SCSI-3 Block Commands (SBC) [FCD 14776-321]

FDIS text sent to ITTF in July 2001, awaiting FDIS letter ballot.

8.11 Project 25.13.11.11 - SCSI-3 Stream Commands (SSC) [CD 14776-331]

FCD published as SC 25 N 717 in June 2001; the FCD letter ballot closes October 2001.

8.13 Project 25.13.11.13 - SCSI-3 Medium Changer Commands (SMC) [CD 14776-351]

FCD text is expected from the US NB since July 1999. Feldafing Action Item 2 was assigned to Mr. Robinson.

- 8.15 Project 25.13.11.15 SCSI-3 Controller Commands (SCC) [ISO/IEC 14776-341:2000]
 - The standard was published in June 2000.

 Project 25.13.11.16 SCSI Optical Memory Card Device Commands (OMC)

8.16

[ISO/IEC 14776-381:2000]
The standard was published in June 2000. As already reported in the WG 4 minutes from Tromsø,

the late US comments have not been incorporated into the published standard. Mr. Robinson will ckeck with T10 how important they are (i.e. should they go into the next review cycle).

8.17 Project 25.13.11.17 - SCSI Multi-Media Command Set-2 (MMC-2)

[FCD 14776-362]

FDIS text sent to ITTF in July 2001, awaiting FDIS letter ballot.

8.18 Project 25.13.11.18 - SCSI Fibre Channel Protocol-2 (FCP-2)

[14776-222]

This project completed the NCITS public review in the US. All review comments have been resolved. WG 4 is expecting a NWIP/(F)CD or Fast-Track submission from the US soon.

8.19 Project 25.13.11.19 - SCSI Architecture Model-2 (SAM-2)

[14776-412]

This project is still in development within NCITS T10. It will go to public review in NCITS in November 2001. WG 4 is expecting a NWIP/(F)CD submission from the US thereafter.

8.20 Project 25.13.11.20 - SCSI Serial Bus Protocol-2 (SBP-2)

[DIS 14776-232]

The final IS text sent to ITTF in June 2001, awaiting publication.

8.21 Project 25.13.11.21 - SCSI Parallel Interface-2 (SPI-2)

[FDIS 14776-112]

The final IS text sent to ITTF in June 2001, awaiting publication. Resolution of patent letter from Compaq to be sent to Mr. Gabriel Barta, IEC Central Secretariat, in progress.

8.22 Project 25.13.11.22 - SCSI-3 SCSI Enclosure Services (SES)

[CD 14776-371]

FCD text is expected from the US NB since December 1998. Feldafing Action Item 3 was assigned to Mr. Robinson.

8.23 Project 25.13.11.23 - SCSI Controller Commands-2 (SCC-2)

[ISO/IEC 14776-342:2000]

The standard was published in June 2000.

8.25 Project 25.13.11.25 - SCSI Reduced Block Commands (RBC)

[CD 14776-326]

FCD was published in June 2001; the FCD letter ballot closes October 2001.

8.26 Project 25.13.11.26 - SCSI Parallel Interface-3 (SPI-3)

[FCD 14776-113]

According to the US NB the FCD resolution of comments and the FDIS text were sent to the SC 25 Secretary for registration as an FDIS letter.ballot. Mr. Robinson will make sure that the updated PDF version has been sent. Feldafing Action Item 4 was assigned to Mr. Robinson.

8.27 Project 25.13.11.27 - SCSI Primary Commands-2 (SPC-2)

[14776-312]

This project has finished the NCITS public review recently. WG 4 is expecting a NWIP/(F)CD or Fast-Track submission from the US soon.

8.28 Project 25.13.11.28 - SCSI Parallel Interface-4 (SPI-4)

[14776-114]

This project is still in development within NCITS T10 (project 1365D).

8.29 Project 25.13.11.29 - SCSI Multi-Media Command Set-3 (MMC-3)

[14776-363]

This project is still in development within NCITS T10 (project 1363).

8.30 Project 25.13.11.30 - SCSI Reduced Multi-Media Command Set (RMC)

[14776-364]

This project is expected to be canceled within NCITS T10. WG 4 will wait for final T10 position until its next meeting.

8.31 Project 25.13.11.31 - SCSI Block Commands-2 (SBC-2)

[14776-322]

This project is still in development within NCITS T10 (project 1417).

8.32 Project 25.13.11.32 - SCSI Scheduled Transfer (SST)

[14776-241]

This project is still in development within NCITS T10 (project 1380).

8.33 Project 25.13.11.33 - SCSI Primary Commands-3 (SPC-3)

[14776-313 **]**

This project is still in early development within NCITS T10 (project 1416).

8.34 Project 25.13.11.34 - SCSI VI Protocol (SVP)

[14776-251]

This project is still in development within NCITS T10 (project 1415). Feldafing Action Item 5 was assigned to the WG 4 Secretary to ask the SC 25 Secretary to change the project name from SCSI VI Protocol (SVP) to SCSI RDMA Protocol (SRP).

- 9 Project 25.13.12.XX High Performance Parallel Interface (HIPPI)
- 9.1 Project 25.13.12.01 HIPPI Part 1: Physical Layer (HIPPI-PH) [ISO/IEC 11518-1:1995]

The standard published in 1995 was subject to periodic/systematic review by ITTF in 2000. The result (confirm standard) has been published by SC 25 N 727 in July 2001.

9.2 Project 25.13.12.02 - HIPPI - Part 2: Framing Protocol (HIPPI-FP) [ISO/IEC 11518-2:2000]

ISO/IEC 11518-2:2000 was published as a revision of ISO/IEC 11518-2:1996 in October 2000.

9.3 Project 25.13.12.03 - HIPPI - Part 3: Link Encapsulation (HIPPI-LE) [ISO/IEC 11518-3:1996]

This standard should be subject to periodic/systematic review by ITTF in 2001. As WG 4 confirmed the standard on his last meeting in Tromsø which was mentioned in the modified SC 25 Program of Work as approved by JTC 1 N 6373 in January 2001, WG 4 is not sure whether the periodic/systematic review for this project will still take place.

9.6 Project 25.13.12.06 - HIPPI - Part 6: Physical Switch Control (HIPPI-SC) [ISO/IEC 11518-6:2000]

ISO/IEC 11518-6:2000 was published as a revision of ISO/IEC 11518-6:1996 in October 2000.

9.8 Project 25.13.12.08 - HIPPI - Part 8: Mapping to ATM (HIPPI-ATM)

[ISO/IEC 11518-8:1999] -- no action required

- 9.9 Project 25.13.12.09 HIPPI Part 9: Serial Extension (HIPPI-Serial) [ISO/IEC 11518-9:1999] -- no action required
- 9.10 Project 25.13.12.10 HIPPI Part 10: HIPPI-6400 Physical Layer (HIPPI-6400-PH) [ISO/IEC 11518-10:2001]

The standard was published in March 2001.

9.11 Project 25.13.12.11 - HIPPI - Part 11: HIPPI-6400 Switch Control (HIPPI-6400-SC) [11518-11]

DIS text for fast-track procedure is expected from the US NB since June 2000. Feldafing Action Item 6 was assigned to Mr. Robinson.

9.12 Project 25.13.12.12 - HIPPI - Part 12: HIPPI-6400 Optical (HIPPI-6400-OPT) [11518-12]

DIS text for fast-track procedure is expected from the US NB since June 2000. Feldafing Action Item 6 was assigned to Mr. Robinson.

- 10 Project 25.13.13.XX Fibre Channel (FC)
- 10.1 Project 25.13.13.01 Fibre Channel (FC) Physical and Signaling Interface (FC-PH) [DIS 14165-111]

This project is still awaiting the DIS disposition of comments and the final IS text from the US NB. The DIS had been approved in November 1998. The US NB indicated, however, that this particular project (as well as projects FC-PH-2 and FC-PH-3) may be replaced by FC-PI and FC-FS which are currently in development in the US.

10.2 Project 25.13.13.02 - SCSI-3 Fibre Channel Protocol (FCP) [CD 14776-221]

Disposition of CD comments and FCD text is expected from the US NB since December 1998. Feldafing Action Item 7 was assigned to Mr. Robinson.

- 10.4 Project 25.13.13.04 Fibre Channel (FC) Framing Protocol (FC-FP) [ISO/IEC 14165-211:1999] -- no action required
- 10.5 Project 25.13.13.05 Fibre Channel (FC) Generic Fabric Requirements (FC-FG) [FDIS 14165-141]

The standard was published in June 2001.

10.6 Project 25.13.13.06 - Fibre Channel (FC) Arbitrated Loop-2 (FC-AL-2) [FCD 14165-122]

The ISO/IEC version of the associated document is in WordPerfect which causes editing/conversion problems currently. Nevertheless, the US NB expects FCD resolution of comments and FDIS text soon.

- 10.11 Project 25.13.13.11 Fibre Channel (FC) Mapping of Single-Byte Command Code Sets-2 (FC-SB-2) [14165-222]
 - This project is in public review at NCITS ending August 2001. The US NB expects to send an FCD contribution incorporating the required ISO/IEC editorial changes soon.
- 10.12 Project 25.13.13.12 Fibre Channel (FC) Switch Fabric Requirements (FC-SW) [ISO/IEC 14165-131:2000]
- This standard was published in May 2000.
- 10.14 Project 25.13.13.14 Fibre Channel (FC) Physical-2 (FC-PH-2) [CD 14165-112]
 - This project is still awaiting the Disposition of CD comments and the FCD text from the US NB. The CD had been approved in April 1997. The US NB indicated, however, that this particular project (as well as projects FC-PH and FC-PH-3) may be replaced by FC-PI and FC-FS which are currently in development in the US.
- 10.15 Project 25.13.13.15 Fibre Channel (FC) Generic Services-2 (FC-GS-2)
 [14165-412]
 Disposition of CD comments and FCD text is expected from the US NB since January 2000.
 Feldafing Action Item 8 was assigned to Mr. Robinson.
- 10.16 Project 25.13.13.16 Fibre Channel (FC) Physical-3 (FC-PH-3) [CD 14165-113]
 - This project is still awaiting the Disposition of CD comments and the FCD text from the US NB. The CD had been approved in April 1997. The US NB indicated, however, that this particular project (as well as projects FC-PH and FC-PH-2) may be replaced by FC-PI and FC-FS which are currently in development in the US.
- 10.18 Project 25.13.13.18 Fibre Channel (FC) Audio-Visual Transport (FC-AV)
 [14165-321]
 NWIP and (F)CD text is expected from the US NB since June1997. Feldafing Action Item 9 was assigned to Mr. Robinson.
- 10.20 Project 25.13.13.20 Fibre Channel (FC) Back Bone (FC-BB) [14165-241]
 - The US had submitted a NWIP which was distributed as SC 25 N724 in July 2001 but subsequently withdrawn (distributed as SC 25 N 724A in August 2001) "as they did not go thru the correct procedures for a NP in the US" (citation). Another attempt to submit the NP was made by the US NB just prior to the WG 4 meeting which has not been distributed yet by the SC 25 Secretary. It contains a request to issue the NP by SC 25 itself and not on behalf of the US NB. Feldafing Action Item 10 was assigned to the WG 4 Secretary. -- The NWIP draft and the CD draft contribution were distributed by the US NB as WG4/Feldafing10 and -11.
- 10.21 Project 25.13.13.21 Fibre Channel (FC) 100MB/s Twisted Pair (FC-100-TP) [14165-114]
 - The NWIP had been approved as documented by JTC 1 N 5880 in September 1999. A CD submission from the Germany NB will be available until end of this year. Resolutions Feldafing WG4/03 and /04 were drafted to support the processing of the FDIS and IS, respectively.
- 10.22 Project 25.13.13.22 Fibre Channel (FC) Framing and Signaling Interface (FC-FS) [14165-251]
 - This project is in early development within NCITS T11. Along with FC-PI it is intended to replace FC-PH, FC-PH-2, and FC-PH-3.
- 10.23 Project 25.13.13.23 Fibre Channel (FC) Generic Services-3 (FC-GS-3) [14165-413]
 - This project is at NCITS for public review. WG 4 is awaiting NWIP from the US NB soon.
- 10.24 Project 25.13.13.24 Fibre Channel (FC) Physical Interface (FC-PI) [14165-115]
 - This project is in early development within NCITS T11. Along with FC-FS it is intended to replace FC-PH, FC-PH-2, and FC-PH-3.
- 10.25 Project 25.13.13.25 Fibre Channel (FC) Switch Fabric-2 (FC-SW-2) [14165-132]
 - This project is in development within NCITS T11. WG 4 is awaiting NWIP from the US NB.
- 10.26 Project 25.13.13.26 Fibre Channel (FC) Virtual Interface Architecture Mapping (FC-VI) [14165-331]
 - This project will be going to NCITS for public review these days. WG 4 is awaiting NWIP from the US NB soon.

- 11 Projects 1.25.13.14.XX and 1.25.13.15.XX Scheduled Transfer and HPSB
- 11.1 Project 1.25.14.01.01 Scheduled Transfer (ST) Protocol [xxxxx-211]

DIS text for fast-track procedure is expected from the US NB since June2000. Feldafing Action Item 11 was assigned to Mr. Robinson.

11.2 Project 1.25.14.01.02 - Scheduled Transfer (ST) Application Programming Interface (API) [xxxxx-311]

DIS text for fast-track procedure is expected from the US NB since June2000. Feldafing Action Item 11 was assigned to Mr. Robinson.

11.3 Project 1.25.15.01.01 - High Performance Serial Bus (HPSB) [yyyyy-111]

This project required intensive discussions during this meeting:

- a) The US had submitted a NWIP which was distributed as SC 25 N 723 in July 2001 but subsequently withdrawn (as distributed as SC 25 N 723A in August 2001) "as they did not go thru the correct procedures for a NP in the US" (citation).
- b) A NWIP draft was distributed by the US NB as WG4/Feldafing12 for information only.
- c) A letter from IEEE regarding a copyright (release) statement to be sent to Mr. Gabriel Barta, IEC Central Secretariat, is in progress.
- d) The US contribution for HPSB will be a merge of IEEE 1394-1995 and 1394a-2000 plus some minor editorial changes.
- e) The Japan NB believes that there is an already existing IEC standard regarding IEEE 1394. In order to resolve this issue, two actions are planned:
 - 1) The US WG 4 delegation will discuss this matter with the Japan SC 25 delegation on Friday.
 - 2) Mr. Johansson will contact Mr. Jack Sheldon, Technical Officer of IEC TC 100, to obtain information on the status of IEC standards that pertain to IEEE 1394.
- f) The NCITS T10 approval to submit this as a NWIP to SC 25 is expected for September 2001. The submission will be done via the US JTC 1 TAG.

Based on the two new 1394 projects introduced by the US NB under agenda item 16.1 the structure of this anticipated standards family have been revised. As a consequence, this particular project should be renamed from yyyyy-111 to yyyyy-01. Feldafing Action Point 23 was assigned to the SC 25/WG 4 Secretary.

- 12 Project 25.26.01.XX (former SC 26) Microprocessor Architecture Standards
- Project 25.26.01.01 Binary floating-point arithmetic for microprocessor systems [IEC 60559:1989]

SC 26 had recommended to retain the project and revise the standard. However, the periodic/systematic review initiated by ITTF in 2000 (as published by SC 25 N 736 in August 2001) confirmed the existing standard. WG 4 discussed the background in respect to IEEE 754 and 854 and the work done by SC 22/WG 11 and assigned Feldafing Action Item 14 to Mr. Robinson.

- 12.2 Project 25.26.01.02 Microprocessor universal format for object modules (MUFOM) [IEC 60975:1989]
 - The standard has been withdrawn in 2000 as requested by Tromsø Resolution SC25 11/58 (=WG4/30).
- 12.3 Project 25.26.01.03 Control and Status Register (CSR) Architecture for microprocessor buses [ISO/IEC 13213:1994]

A revision of the related IEEE 1212 standard has been processed recently. Resolution WG4/02 was drafted to ask the US NB to contribute this document as a DIS for fast-track letter ballot in order to revise the existing standard.

- 13 Project 25.26.02.XX (former SC 26) Bus Architecture Standards
- 13.1 Project 25.26.02.01 8-bit and 16-bit data (MULTIBUS I) Part 1: Functional description with electrical and timing specifications [IEC 60796-1:1990]

 SC 26 had recommended to hold the project. However, the periodic/systematic review initiated by ITTF in 2000 (as published by SC 25 N 736 in August 2001) confirmed the existing standard. The US NB has no problems in having this standard confirmed. WG 4 supports this position.
- 13.2 Project 25.26.02.02 8-bit and 16-bit data (MULTIBUS I) Part 2: Mechanical and pin descriptions for the system bus configuration with edge connectors (direct)

	[IEC 60796-2:1990]
	see agenda item 13.1
13.3	Project 25.26.02.03 - 8-bit and 16-bit data (MULTIBUS I) - Part 3: Mechanical and pin descriptions
	for the Eurocard configuration with pin and socket connectors (indirect)
	[IEC 60796-3:1990]
	see agenda item 13.1
13.4	Project 25.26.02.04 - VMEbus - Microprocessor system bus for 1 to 4 byte data
	[IEC 60821:1991] <u>no action required</u>
13.5	Project 25.26.02.05 - VSB - Parallel sub-system bus of the IEC 60821 VMEbus
	[IEC 60822:1988] <u>no action required</u>
13.6	Project 25.26.02.06 - Microprocessor system bus (VMSbus) - Serial sub-system bus of the IEC 821
	Bus (VMEbus) [IEC 60823:1990]
	SC 26 had recommended in Tromsø to cancel the project and withdraw the standard. WG 4
	missed, however, to draft a related Tromsø resolution. Feldafing Action Item 15 was assigned to
	Mr. Johansson.
13.7	Project 25.26.02.07 - Futurebus+ - Logical protocol specification
10.7	[ISO/IEC 10857:1994]
	The standard has been withdrawn in 2000 as requested by Tromsø Resolution SC25 11/61
	· · · ·
13.8	(=WG4/33). Project 25.26.02.08 - 8-bit backplane interface: STEbus and mechanical core specifications for
13.0	
42.0	microcomputers [ISO/IEC 10859:1997] no action required
13.9	Project 25.26.02.09 - High-performance synchronous 32-bit bus: MULTIBUS II
40.40	[ISO/IEC 10861:1994] no action required
13.10	Project 25.26.02.10 - VICbus - Inter-crate cable bus
	[ISO/IEC 11458:1993, ISO/IEC 11458-am1:2000]
	The amendment was published in July 2000.
13.11	Project 25.26.02.11 - Scalable Coherent Interface (SCI)
	[ISO/IEC 13961:2000]
	The standard was published in July 2000.
13.12	Project 25.26.02.12 - Futurebus+ (TM) - Profile M (militarix)
	[ISO/IEC 14536:1995]
	SC 26 had recommended in Tromsø to cancel the project and withdraw the standard. WG 4
	missed, however, to draft a related Tromsø resolution. Feldafing Action Item 16 was assigned to
	Mr. Johansson.
13.13	Project 25.26.02.13 - Heterogeneous InterConnect (HIC)
	[ISO/IEC 14575:2000]
	The standard was published in July 2000.
13.14	Project 25.26.02.14 - Synchronous Split Transfer Type System BUS (STbus) - Logical Layer
	[ISO/IEC 14576:1999] no action required
13.15	Project 25.26.02.15 - Sbus: Chip and module interconnect bus
	[ISO/IEC 15205:2000]
	The standard was published in June 2000.
13.16	Project 25.26.02.16 - VME64
	[ISO/IEC 15776:200X expected soon]
	The final IS text is at ITTF awaiting publication (RDIS stage).
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14	Standardization Activities in ISO/IEC JTC 1/SC 25/WG 4
14.1	Update of (SC 25/) WG 4 Program of Work: SC 25 N XXX
	SC25(Feldafing/Sec)05
	The WG 4 part of the draft of SC25(Feldafing/Sec)05 had been reviewed by the WG 4 Secretary
	prior to the WG 4 meeting and changes were reported back to the SC 25 Secretary.
14.2	Review of draft SC 25 Business Plan SC25(Feldafing/Sec)12
	The WG 4 part of the SC 25 Business Plan was reviewed by the WG 4 Secretary during the WG 4
	meeting and changes were reported back to the SC 25 Secretary. \$\$\$
14.3	Ongoing work within NCITS T10 WG4/Feldafing14
	Mr. Robinson gave a very short report on NCITS T10. There are more than 60 member companies

participating in the meetings which take place every 2 months for 5 days. This committee is very active with many simultaneous projects running in parallel. Mr. Robinson will provide a list of T10 projects after the meeting which will be distributed as document WG4/Feldafing14 together with

the WG 4 Feldafing draft minutes. In more detail, he reported on iSCSI (SCSI over TCP/IP) which is being developed at IETF in close co-operation with T10. Key issues are latency and security. He referred to the T10 web-site www.t10.org for further information.

- 14.4 Ongoing work within NCITS T11 WG4/Feldafing13

 Mr. Robinson gave a short report on NCITS T11. 2 Gb/s is done. 4 Gb/s is in development. 10 Gb/s will be Ethernet based due to mass market components. InfiniBand (IB) and the Telcoms will use it too, Fibre Channel (FC) probably with variations. He reported on security issues with FC. A list of T11 projects were distributed as document WG4/Feldafing13. He referred to the T11 web-site www.t11.org for further information.
- 14.5 Ongoing work within NCITS T12 WG4/FeldafingXX NCITS T12 is not doing any new international work currently. Therefore, no report was given.
- 14.6 Ongoing work within NCITS T13 WG4/FeldafingXX NCITS T13 is not doing any new international work currently. Therefore, no report was given.
- 14.7 Execution of Montreal (95), London (96), Buzios (97), Tokyo (98),

Berlin (99), and Tromsø (00) Resolutions WG 4 Secretariat

WG4/Feldafing04

SC 25 Secretariat: SC 25 N XXX

SC25(Feldafing/Sec)04

Document WG4/Feldafing04 listing the (execution of) resolutions from previous WG 4 meetings was used used while going thru the individual projects. There are still open reolutions from all these meetings. The draft of document SC25(Feldafing/Sec)04 had been reviewed by the WG 4 Secretary prior to the WG 4 meeting and changes were reported back to the SC 25 Secretary.

14.8 Need for future ISO/IEC standards within the scope of SC 25/WG 4

The US delegation reported on two areas were new international standards in the scope of SC 25/WG 4 will be processed in the next future:

- 1) The RapidIO Trade Association (TA) has completed its first specification on RapidIO (RIO) which is a parallel interface right now. A serial version is being worked on. So far, RapidIO features an on-board design with no mechanical connectors which is intended to be used by networking and storage companies. The RapidIO TA plans to submit the approved specification to ECMA for standardization. Afterwards, ECMA will submit its RIO standard to JTC 1/SC 25 for fast-track processing. ECMA is a liaison-A member of JTC 1. There is no need for a WG 4 resolution in this context.
- 2) IEEE is working on two 1394 related projects:

P1394.1 HPSB Bridges: approved

P1394.3 Peer-to-Peer Data Transport Protocol (PPDT): will be approved within next 12 months. Feldafing Resolutions WG4/05, /06, /07, and /08 were drafted to support the expected US NB's contributions for either NWIP/(F)CD or DIS(fast-track) for IEEE P1394.1 or P1394.3.

14.9 Periodical review of international Standards:

Projects 25.13.XX.XX and 25.26.XX.XX — none this year

- 15 Liaison with other organizations
- 15.1 Report on the activities of ISO/IEC JTC 1 SC 6(/WG 3) regarding LAN standards (to liaison member: Mr. G.Milligan): <u>liaison vacant</u>

Liaison no longer relevant; liaison dropped ... details tba

15.2 Report on the development within ISO/IEC JTC 1 SC 17/WG 9 (Optical Memory Cards and Devices) (to/from liaison member: Mr. H.Hosoya):

In October 2000, SC 17/WG 9 requested the liaison to be dropped which was granted by the SC 25/WG 4 Secretary on behalf of WG 4. During the meeting Mr. Sato indicated that the Japan NB would like to maintain the laison. WG4 requests clarification and assigned Feldafing Action Item 17 to the SC 25/WG 4 Secretary.

15.3 Report on the activities of IEC TC 46 (Cables, Wires, R.F.Connectors, etc.) -- (to/from liaison member(s): experts from SC 25/WG 3)

These items were not discussed.

15.4 Report of the development of interface standards within IEC SC 65C/WG 6 -- (from liaison member: none)

- Liaison no longer relevant; liaison dropped; agenda item to be removed from future agendas.
- 15.5 Report on the development within IEC TC 86 (Fiber Optics) -- (to/from liaison member(s): experts from SC 25/WG 3)

SC 25/WG 4 invited Mr. Ton Bolhaar and Mr. Steve Swanson from SC 25/WG 3 to report on ongoing activities in IEC TC 86A/B/C regarding Fiber Optics (e.g. recent developments in DWDM, performance standards, reliability, etc for active and passive components).

15.6 Report on the development within IEC TC 100 (Audio, Video, and Multimedia Systems) -- (to/from liaison member: Mr. G.Milligan): <u>liaison vacant</u>

Mr. Johansson to accept "to" liaison status and to request "from" liaison status from TC 100. Feldafing Action Item 18 was assigned to Mr. Johansson. Feldafing Resolution WG4/9 applies, too.

15.7 Report on the activities of IEEE 802 regarding LAN standards -- (to/from liaison member(s): none)

Mr. Robinson to accept "to" liaison status and to request "from" liaison status from IEEE 802. Feldafing Action Item 19 was assigned to Mr. Robinson. Feldafing Resolution WG4/10 applies, too.

15.8 Other liaisons (e.g. co-operation with ISO/IEC JTC 1 SC 25/WG 3, liaison to/from IEEE regarding IEEE 1394)

Mr. Johansson to accept "to" liaison status and to request "from" liaison status from IEEE Computer Society Microprocessor Standards Committee (MSC). Feldafing Action Item 20 was assigned to Mr. Johansson. Feldafing Resolution WG4/11 applies, too

Similar disposition for Mr. Johansson with respect to 1394 Trade Association. Feldafing Action Item 21 was assigned to Mr. Johansson. Feldafing Resolution WG4/12 applies, too

15.9 Review of Liaisons SC25(Feldafing/Sec)11 \$\$\$

- 16 Any other business
- 16.1 Review scope of SC 25/WG 4 (reflecting projects of former SC 26, Microprocessor Systems)

SC 25/WG 4 discussed the **proposed change of the scope of SC 25** (see document SC 25 N 725) and recommends to change it from

"Standardization of interfaces, protocols and associated interconnecting media for information technology equipment, generally for commercial and residential environments <u>and microprocessor systems</u>." to

"Standardization of microprocessor systems; interfaces, protocols and associated interconnecting media for information technology equipment, generally for commercial and residential environments." The SC 25/WG 4 Secetary is requested to communicate this to the SC 25 Secretary prior to the SC 25 Plenary on Friday.

SC 25/WG 4 discussed the requirement of **changing of the scope of SC 25/WG 4.** As a result of this discussion, WG 4 drafted Feldafing Resolution WG4/13.

16.2 Future meeting(s)

Tentatively plan is to meet three instead of four days prior to next year's SC 25 Plenary. The exact date will be determined by the SC 25 Plenary on Friday this week (see document SC 25 N 7XX for further information).

17 Approval of resolutions and action points

17.1 Resolutions WG4/Feldafing09

17.2 Action points

17.2.1 New action points WG4/Feldafing09

17.2.2	Action points pending from Tokyo 1998	WG4/Feldafing04
17.2.3	Action points pending from Berlin 1999	WG4/Feldafing04
17.2.4	Action points pending from Tromsø 2000	WG4/Feldafing04

18 Closure of Meeting

Mr. Märgner thanked all the delegates for their contributions, Mr. Johansson for assisting in capturing the minutes, and closed the meeting.