Minutes
1394PWG, Austin, Texas
March 2-3, 1998

Meeting started at 8:40 AM.

Administrivia:

The next meeting will be in Portland. Randy Turner is setting this up.

1.0 Introductions

Don Wright	Lexmark
Jerry Thrasher	Lexmark
Yoshinori Murakami	Epson
Fumio Nagasaka	Epson
Fumio Samitsu	Epson
Greg LeClair	Epson
Brian Batchelder	HP
Greg Shue	HP
Stephen Holmstead	HP
Alan Berkema	HP
Lauie Lasslo	HP
Randy Turner	Sharp
Larry Stein	Warp Nine Engineering
Lee Farrell	Canon
Takashi Isoda	Canon
Akihiro Shimura	Canon
Osamu Hirata	Canon
Henrik Holst	i-data
Yuji Sasaki	JCI

2.0 Comments on Minutes
2.1 Maui
Larry needs to forward the presentations from the Maui meeting to Greg LeClair.

2.2 Telecon
No Comments

3.0 Email Poll Results
9 respondents
　　　SBP-2 was the highest comment

4.0 Microsoft SBP-2 Plans
Hitoshi (Microsoft).
Device Type – There is a specific set of device types for this field (pg 12).
This is from the SCSI device types list.
Current specified devices:
RBC-
　　　Direct Access Device type　　　0x00
　　　Printer Device Type　　　0x02
　　　CDVD Device type　　　0x05

Scanner Device type	0x06
RBC Device Type	0x0e

SCSI.h-

DASD (disk)	0x00
Sequential Access Device (tape)	0x01
Printer	0x02
Processor	0x03
Write once (WORM)	0x04
Read Only (CD)	0x05
Scanner	0x06
Optical	0x07
Changer	0x08
Comm Device	0x09
Logical Unit not present	0x7f
Device Qualifier not supported	0x03

MFP devices would have separate unit directories with separate devices (printer, scanner).
There was some discussion that a MFP device should be identified as a MFP device with some sub-functions.

One potential conflict with the current "Imaging Device Specification" is that there is a difference between the definitions of functions and services. A function in FDS points to a Unit Directory. Multiple services provided by the function are logical units under the unit directory.

In the Microsoft proposal, each logical unit is identified by a single Unit Directory. Microsoft SBP-2 will only enumerate one Logical Unit per Unit Directory.

Open issue: Does the Microsoft implementation impose any restrictions or limitations on our requirements? This will need to be addressed as we proceed with specification.

5.0 Imaging Profile
In order to proceed we need to determine which protocol path we will pursue. The results from the email poll and reflector discussions revolve around the following protocols:

1- 1284.4 over SBP-2
    Implement IEEE P1284.4 (MLC) protocol on top of the native SBP-2 command set.
2- 1284.4 over DFA
    Implement the IEEE P1284.4 protocol on top of the Dual FIFO Architecture as described
    By Alan Berkema.
3- DPP 0.71 (PWG-C)
    Direct Print Protocol as defined by the PWG-C, sub-working group 1
4- Native SBP-2 (single login)
    Data going both directions in one task list
5- SBP-2 Non-mirroring (dual login)
    Task list for each data direction – 2 logins from one side
6- SBP-2 mirroring (cross login)
    A task list for each side – one login per side. Target/Initiator functionality on each side.
7- IP1394
    IP datagrams over the 1394 bus.
8- HPT
    Prefetching ORBs, queing on device. SBP-2 with an unordered execution model.
9- AV/C
    PWG-C working sub-group 2. Uses FCP. Has extensions for asynchronous data delivery.

10- Anything on FCP
       FCP
11- 1284 Parallel Port Registers on 1394
       Mapping of Microsoft ECP register model (with EPP extensions) onto the 1394 CSR.

By unanimous acclimation the list of proposals is closed.
This list is closed to any other proposals. The 1394PWG will not entertain any other proposal unless there is a compelling reason.

Proposals to eliminate or need further investigation:

Finalist:
2- 1284.4 over DFA

4- SBP-2 – Native

6- SBP-2 Cross Login

8- HPT

Eliminations:
10- FCP does not support concurrent existence with other protocol stacks. AV/C and "something" else cannot exist at the same time. – eliminated

11- 1284 Parallel Port Registers mapped to 1394
Why would we want to do this? Stupid idea. Does not provide for multiple logical channels. – eliminated

1- 1284.4 over SBP-2
There is a lot of redundancy or duplication of services provided by both of these standards. Little support for this proposal. – eliminated. (note: there may still be a need for multiple logical units and/or crediting but it is not to be provided via this mechanism)

5- SBP-2 with dual login
Require login to two logical units per transaction. Very similar to 4 and 6. -- eliminated

Further Investigations:
9- AV/C
No multiple logical channels. No guaranteed delivery. – This needs to be investigated further to see if there is a valid reason to eliminate this.
Eliminated on Day 2 – Nobody interested in pursuing this option.
Un-eliminated – Stephen signed up to look into these.

7- IP1394
Needs further discussion. Randy Turner

3- DPP
Does it support transient link interruptions? Is it suitable for this group?
Email to PWG-C to see if there is support. A previous email from PWG-C chair implied that this is beyond the scope of the current efforts for DPP.

Comparison of protocols versus the Requirement list.
(This is posted on the web site as update to PWG requirements document. – GL)

5.1 Issues
Symmetry – There seems to be the necessity to provide a better understanding of what is meant by "Symmetry". The service can be connected from any host and has no knowledge of the potential client space. While a server is waiting for a connection it uses minimal resources on it's host. If a target is a service then there is no problem. This is going to require more discussion. This topic will be sent to the reflector.

5.2 Scenarios
(Day 2)
Greg Shue (HP) provided a presentation on how data is transferred using the current profile.
This presentation will be posted on the web site. Greg has proposed that the Extended_timeout be considered for the SBP-2 extensions to the SBP-2 working group.

Brian would like to see "Invalid_Login_ID" not be overloaded and used for the Target Controlled End of Session (Target Logout).

(Greg LeClair may have some additional issues to add here)
(There were some minor errors on the slides which Greg Shue was going to correct. These corrections were noted during the presentation and are reflected in the copy posted to the web site – GL)

There is some concern that the reverse channel (target to initiator) is inefficient when unsolicited data is to be sent. This needs to be reviewed. The Request/Response operation is fine. This could be tied to the policy of having only one ORB available for unsolicited data. A policy change may improve this.

Profile issue-- Latency in handling unsolicited data.
(A point raised was how frequently we expect 'urgent' unsolicited data or is this an exception case and to not compromise the performance of the general case. – GL)

6.0 New Business
(Following minutes were extracted from notes provided by Lee Farrell in order to provide a complete record of the meeting. – GL)
Greg LeClair commented that we have recently increased the number of proposals. He said he is concerned that we are not focusing our efforts, but risking further delay as each meeting will take additional time to review options for old or non-existant proposals.

Alan Berkama made the following motion: "That we adopt Rev. 0.1D and it's variants as our primary Transport focus for this working group." Seconded by Don Wright

Larry Stein made a motion to table Alan's motion until the "Further Investigations" protocols have been dealt with. Seconded by Greg Shue.

Vote: For: 11   Against: 7
Greg's motion is tabled until the "Further Investigations" protocols have been dealt with.
(Note: It was Alan's motion – not Greg's. – GL)

Fill out the protocol table with regards to the "Further Investigations"
(This is posted on the web site as PWG protocol comparisons document. – GL)

Because no one at the meeting had any expertise in AV/C, this column of the comparison chart was not filled out. Further, it was voted to be eliminated from consideration altogether. Stephen Holmstead stated a concern that the group was eliminating this proposal for consideration without enough information. He offered to follow-up with other parties working on AV/C proposals and that he could be listed as the proposal owner for AV/C within PWG.

After discussion on the proposed protocols and dispensation of the "Further Investigations" protocols, a motion was made by Don Wright to un-table Alan's motion. This was seconded and opened for discussion.

 (Larry Stein left at this point)

Lee Farrell suggested that Alan modify his motion to include some of the HPT design concepts as "possible variants"-in addition to single, cross, and dual logins. Alan accepted the modifications to his motion. The vote on Alan's modified motion was 15 yes, 1 no, 1 abstain.

Lee Farrell asked for a definition of the responsibilities of a "proposal owner" as referenced in the comparison charts. The responsibilities include (but might not be limited to):
• Validate entries in protocol comparison table
• Revising proposal to address issues

Action Items
The following action items were identified:
• Minutes will be posted - Larry Stein
• The Comparison Chart(s) will be posted - Brian Batchelder
• Application discussion presentation for next meeting - Randy
• Review/present next revision of Imaging Profile - Alan, Greg Shue
• Scenarios for print/scan/fax presentation for next meeting - Laurie, Greg Shue
• Determine if the group desires to become an IEEE Working Group and write PAR - Greg LeClair

All proposals, revisions, and presentations updates should be posted for group review by March 23.

Voting Rules
The rules and procedures for voting:
• An individual must be present at a meeting or participate via teleconference to vote.
• Votes are counted on an individual basis - not as companies.
• Eligibility to vote is determined by physically attending two of the previous four meetings. Teleconference participation does not qualify as "attendance" for voting purposes.
• Meeting attendance requires attendance for all days of a scheduled meeting.
• With a simple majority vote, the group may confer voting rights to an individual that is not otherwise eligible to vote.
• Simple majority votes are sufficient for approving procedural and other minor issues.
• Two-thirds majority votes are required for "major technical issues"-as determined by the chairman prior to the discussion on the vote.
• A quorum is defined by having at least 50% of the eligible voters or 10 eligible voters present-whichever is less.
• The chairman will declare when quorum conditions have been met during a meeting. The quorum remains in effect for the duration of the meeting.
• It is the responsibility of the Secretary to maintain the list of eligible voters.

Don Wright made a motion to adopt the above voting rules for the group.
The motion passed unanimously.

- Best Practices Document
(Generally agreed to during 2/23 telecon and at this meeting that this could either be a part of the profile or a separate document.– GL)

- Applications
(This issues is on the agenda for Portland meeting. No presentations were made at this meeting. – GL)

Meeting adjourned.