

1394 PWG Meeting

October 25-26, 1999

1. Meeting Attendees

The list of attendees included:

Takashi Isoda	Canon
Osamu Hirata	Canon Business Machines
Lee Farrell	Canon Information Systems
Peter Johansson	Congruent Software
Kazuo Nomura	Epson
Fumio Nagasaka	Seiko Epson
Chuck Rice	Hewlett Packard
Brian Batchelder	Hewlett Packard
Alan Berkema (co-Chair)	Hewlett Packard
Stephen Procopio	Kodak
Vinnie Finn	Kodak
Brian Nagy	Kodak
Don Wright	Lexmark
Jerry Thrasher	Lexmark
Mike Fenelon	Microsoft
Ying Nancy Chen	Okidata
Mitsuhisa Kanaya	Ricoh

2. Administrivia

Don Wright provided details for the next PWG meeting:

- Manhattan Beach Marriott Hotel
- Dec 13-17
- 1400 Parkview Ave
- Manhattan Beach, CA 90266
- ph: (310) 546-7511
- fax: (310) 796-0322
- contact: Jennifer Swallow, 310 546-7511
- rate: \$109
- reservation deadline: November 30, 1999

He also referenced the 2000 schedule for future PWG meetings:

- Feb 7-11 New Orleans/Miami
- Apr 3-7 Japan
- May 15-19 New York
- Jul 10-14 San Francisco/Vancouver BC
- Sep 11-15 Chicago
- Oct 23-27 Hawaii
- Dec 11-15 San Diego/Phoenix/Tucson

3. Agenda

Alan Berkema opened the meeting and provided the agenda topics:

- Agenda Review
- Old Business
 - * Previous meeting minutes
 - * PAR status
 - * Action items
 - * PPDT Review
- New Business
 - * Discovery and enumeration protocol
 - * Issues
 - * Login request
 - * Reverse Logout
 - * Sockets API
 - * Interoperability testing
- Schedule Review
- New Action Items

4. Previous Minutes

The September Meeting Minutes were accepted as written.

5. PAR Status

The PAR has been submitted to the MSC. (This document is available at <ftp://ftp.pwg.org/pub/pwg/p1394/mtg102599/991024PAR.pdf>.) Don believes that the next IEEE standards board meeting is in January. It is hoped that the PAR will receive a positive review at that time.

6. PPDT Review

Peter Johansson led a review of the r07 draft of the PPDT specification. (This document is available at ftp://ftp.pwg.org/pub/pwg/p1394/mtg102599/PPDT_r07.pdf.) The review spanned both days of the meeting.

The group examined each of the updates in the draft. Most of the modifications were accepted as written, with various exceptions and/or additions identified during the review.

Peter captured the agreed changes—and other minor text clarifications—during the review. He will include them in the next revision and distribute the updated document to the group.

Section 4.1 – There was a discussion about Figures 4 and 5. It was suggested that the diagram or the text should be clearer about exactly which layers (or interfaces) have knowledge about targets and initiators. However, given that there is currently no discussion of interfaces in the document, the group agreed that no change is necessary. This decision might be reconsidered after any section on interface(s) is included.

Section 6.2 – Isoda-san suggested that there should be additional text to specify restrictions on using autonomous responses for Service Directory—perhaps to allow “turning on and/or off” of the response. The group did not agree that this was a necessary addition.

Section 6.3 – Brian voiced concern that the service discovery mechanism is still not adequate. He suggested that the optional support for PPDT SERVICES could (should?) be mandatory, and that the other mechanism could be eliminated. However, even though the group agreed that the solution needs more attention, the topic was deferred until a proposal was provided.

Section 8.3 – The topic was raised about whether Feature directories should be included in the document or not. This decision will likely affect other sections in document. The topic was deferred.

Section 8.6 – Additional details on CLASS information are desired.

ACTION: Mike Fenelon will post a proposed text description on CLASS information for inclusion in the Device ID section.

Section E.6 – The group decided that unless someone is assigned an Action Item to address the section’s contents (Multifunction device with uniform unit architectures) by next meeting, this section will be deleted.

The group then reviewed Peter’s document submission on completion status. It contains a proposed table that summarizes the legitimate combinations of *resp*, *sbp_status*, *status* and *residual* within an SBP-2 status block that corresponds to a PPDT transport flow or control ORB. The table was accepted as written, with the following exceptions:

- The second entry (*sbp_status* = 1-6, etc.) should be modified to have *residual* be “Unspecified”.
- Another row should be added for *sbp_status* = 1 or 2.

The group agreed that Peter will incorporate the modified table into the next revision of the draft document. It will be reviewed at the next meeting for final approval.

7. Reverse Logout

It was suggested that a “reverse logout” operation should be considered. Isoda-san was “volunteered” to write a strawman proposal, but later he indicated that he did not think reverse logout was necessary.

8. Character Set Id

The issue was raised (again) about the fact that the use of the minimal ASCII subset that is defined in P1212r does not adequately cover the Device ID’s character set. At the last P1212 meeting, it was decided that the P1212 specification will not be modified to address this issue. The group created an Action Item for Mike, and he accepted the assignment.

ACTION: Mike Fenelon will investigate and report on the behavior of Windows when it encounters a charset with a non-zero value.

9. SDU

Based on the earlier discussion of needing a definition of Service Data Unit, Isoda-san proposed using the definition he found in an ITU-T x200 document.

As a slightly modified alternative, Peter proposed the following definition:

A set of data whose semantics are preserved when transferred between peers at the application layer (client and services); it is not interpreted by the supporting transport layer (PPDT.)

The group agreed to use Peter's proposal as the definition for SDU.

10. Review Action Items

The group reviewed each of the Action Items from the previous meeting and assigned a closed/still open status to each of them:

1. Greg LeClair will propose a mapping from the API entries to transport operation and the API itself. OPEN
2. Alan Berkema will add details to the schedule and publish it. CLOSED as an Action Item
3. Greg LeClair will confirm with O/S implementers if the SBP-2 implementation will differentiate between an Abort Task and an Abort Task Set. OPEN
4. The PWG members shall re-affirm the allocation and use of the PWG OUI numbers— and respond to the OUI Usage Proposal for voting at the September meeting. DONE
5. Alan Berkema will find out about the process of registering PPDT Services with IANA. DONE
6. The 1394 PWG members will review the PPDT draft and SBP-2 to identify points of divergence. This review is necessary before the draft goes to ballot. (ONGOING)
7. Alan Berkema – Need to revisit specifying a rich Feature Directory for PPDT devices. OPEN
8. Mike Fenelon – Pass the error recovery section by the base group. Make sure the MS host software will always have the data around to resume data transfer. DONE

ACTION: Mike Fenelon will issue a statement to 1394PWG, 1394TA and 1394 standards reflector at IEEE explaining the details of MS host software “always having the data around to resume data transfer for error recovery.”

9. Peter Johansson/Akihiro Shimura – Come up with stand-alone proposal on how to cleanup the section in PPDT doc talking about Error Recovery. DONE
10. Peter Johansson – Research correct reference to refer to character set for ASCII for DeviceID key. DONE
11. Mike Fenelon – Find Plug&Play doc that defines CLASS for 1284 DeviceID. Also revisit decision to hang Device ID off the 0x14 key. OPEN
12. Greg LeClair – Update OUI usage document with editorial changes from meeting discussion. Re-post it to the PWG1394 web site for comment and discussion in Durham. OPEN
13. Greg LeClair/Don Wright – Update the PAR and see that it is submitted to MSC at October Meeting. DONE
14. Peter Johansson – Come up with a table of error codes/status values for when we can have a non-zero residual value. DONE

15. Peter Johansson – Check into why SBP-2 requires writing unsolicited status to all initiators logged into the current Logical Unit. OPEN

11. Schedule Review

Alan acknowledged that we are still not “functionally complete” in the specification. As a result, it is critical that additional authoring work be completed soon so that we will be able to decide Go/No Go for balloting at the December meeting.

Peter suggested that all document submissions should be written before the December meeting, and that no “new technical additions” will be accepted after that point.

Alan listed the outstanding document topics that still need to be authored and/or completed. A status and “owner” was identified, resulting in the following table:

<u>Topic</u>	<u>Importance</u>	<u>Status</u>	<u>Owner</u>
Service ID directory – discovery	mandatory	open	Brian
Feature directory	mandatory	open	Alan
Service registry	mandatory	agreed	Brian
		(see next section)	
MFP ROM example	optional	open	Peter
API	optional	open	Isoda-san
Reverse logout – when?	mandatory	open	???
Reverse logout –how?	mandatory	open	Brian
Initiator configuration ROM	mandatory	agreed (see below)	Isoda-san
Completion status	mandatory	agreed	Peter
Class key – in device ID string	mandatory	agreed	Mike

Four possible values for topic status were identified: open, agreed, in draft, and reviewed (closed).

ACTION: Alan Berkema will generate and maintain the SCAT list on the website.

For each of the SCAT topics, each “owner” should write up the proposed text in a form ready to include in the final specification. These proposals should be submitted for review as soon as possible—but no later than November 23.

The updated schedule was identified:

August	Design is complete; decide on proposals; close all Issues [No more proposals after this date!]
September	Functionally complete draft First review
October	Submit PAR to MSC on Oct 11 Second review Discuss prototype plans for Interoperability testing Test Plan/Spec
December	Further review Go/No Go for Ballot?

February Specification is done
 Final edit review
 Request formation of Ballot Pool to IEEE
 Submit to “IEEE Balloting Bureaucracy”

12. Service Names Registry

Brian gave a “sneak preview” of his working draft of an Annex that discusses Service Registry. He proposed that the group should take advantage of the existing IANA service registry. However, he also suggested that our registry should include some kind of reference to a document that can provide a more detailed explanation of the particular service.

Brian reviewed the document contents explaining a proposed registration process and registry syntax.

ACTION: Brian Batchelder will pass his “Service Names Registry” proposal to IANA and request feedback.

13. Initiator Configuration ROM

Isoda-san presented several slides produced by Shimura-san about configuration ROM information on the PPDT Initiator for Login Request support. A Unit directory was proposed for configuration ROM that would implicitly indicate (by its existence) that Login Request is supported. Brian suggested that an Instance directory would be more appropriate.

A few people recalled that this topic was recently discussed on the e-mail reflector. Peter and others had commented that it should be sufficient for the target to just make an attempt to write to MESSAGE_REQUEST—and fail if it is not supported. Others also feel that it not necessary for initiators to advertise—they think it is unlikely that a target will attempt to “go out and find” an initiator that can support Login Request.

MOTION: Mike Fenelon moved that nothing should be put in the specification for PPDT initiator configuration ROM information that would indicate support of the Login Request. The motion was seconded by Nagasaka-san.

VOTE: Four votes for the motion, three against, one abstention. The motion passed.

14. Discovery and Enumeration Protocol

Alan suggested that people get involved and participate in the 1394TA activity on device discovery and enumeration. Currently, John Fuller is working on a proposal that addresses discovery over bridges.

15. Feature Directory

Do we want services listed in configuration ROM? If not, then Brian thinks we do not need a Features directory for PPDT. He still believes that there is a need for Feature directories for individual functions (printing, faxing, etc.)—but he does not think this is within the scope of PPDT.

16. Interoperability Testing

The presentation on interoperability testing that Nagasaka-san gave at the previous meeting was referenced again. There seemed to be general agreement that the term “plugfest,” rather than “interoperability event” would be more appropriate, primarily because the devices do not strictly interoperate, but operate through the host operating system(s).

17. Sockets API

What is the API issue? Brian suggests that the group should include an Annex in the specification that will:

- describe an API to communicate what kind of services to implement PPDT
- verify that we have specified sufficient information in the PPDT specification to adequately support printing applications

Isoda-san presented slides on distinguishing an abortive release from an orderly release on the T2I queue. He is concerned that because there is no difference on the wire, the transport at the initiator cannot report to its clients how the T2I queue was disconnected. To resolve this concern, he proposes that we should define an “abortive” status value for the status block.

It was suggested that Isoda-san write up some text to address this proposal—preferably in a form that would be ready to insert into the specification document. However, further discussion should occur on the e-mail reflector first.

Meeting adjourned.

18. Open Action Item Summary

===== Previous Action Items =====

1. Greg LeClair will propose a mapping from the API entries to transport operation and the API itself.
2. Greg LeClair will confirm with O/S implementers if the SBP-2 implementation will differentiate between an Abort Task and an Abort Task Set.
3. The 1394 PWG members will review the PPDT draft and SBP-2 to identify points of divergence. This review is necessary before the draft goes to ballot. (ONGOING)
4. Alan Berkema – Need to revisit specifying a rich Feature Directory for PPDT devices.
5. Mike Fenelon – Find Plug&Play doc that defines CLASS for 1284 DeviceID. Also revisit decision to hang Device ID off the 0x14 key.
6. Greg LeClair – Update OUI usage document with editorial changes from meeting discussion. Re-post it to the PWG1394 web site for comment and discussion in Durham.
7. Peter Johansson – Check into why SBP-2 requires writing unsolicited status to all initiators logged into the current Logical Unit.

===== New Action Items =====

8. Mike Fenelon will post a proposed text description on CLASS information for inclusion in the Device ID section.
9. Mike Fenelon will issue a statement to 1394PWG, 1394TA and 1394 standards reflector at IEEE explaining the details of MS host software “always having the data around to resume data transfer for error recovery.”

10. Alan Berkema will generate and maintain a SCAT list on the website.
11. Brian Batchelder will pass his “Service Names Registry” proposal to IANA and request feedback.