FINDAS-IDIS CWG

FINDAS-IDIS Commonality WG Mtg5 (CWG6_5) - Minutes of Meeting

held at ESTEC, Noordwijk, 21 Sep 1999 10.00-17.00 hours

1. Welcome and presentation of members

The following members have participated in the meeting :

Göran Pilbratt (GP), ESA(SSD)(FIRST PS)
Peter Claes (PC), ESA(SSD)(FIRST-FSC)
Kevin Bennett (KB), ESA(SSD)(Planck/SA)
Peter Roelfsema (PR), SRON(HIFI)
Rik Huygen (RH), K.U.L.(PACS)
Adam Hazell (AH), ESA(SSD)(Planck)
Erich Wiezorrek (EW), MPE(PACS)
Jean-Jacques Mathieu (JJM), ESA(TOS-EMS)(FIRST and Planck)
Trevor Dimbylow (TD), RAL(SPIRE)
Johannes Riedinger (JR) (ESTEC/SA)

Excused were :
Otto Bauer (OB), MPE(PACS)
Fabio Pasian (FP), OAT(LFI)
Andrew Harwood (AHa), Imperial College (SPIRE)
Neal Todd (NT), Imperial College(SPIRE)
Pierre Estaria (PE), ESA(SPD)
Ekkie Wieprecht (EKW), MPE(PACS)
Albrecht de Jonghe (AdJ), (SRON/HIFI)
Rodney Warren-Smith (RWS), Imperial College (SPIRE)
William O'Mullane (WOM), ESA(SSD)(Planck)
Jan Tauber (JT), ESA(SSD)(Planck PS)

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2. Agenda and objectives of the meeting

2.1 Agenda

PART A : FINDAS-PROTOTYPE ACTIVITIES, TEST PLAN and TEST REPORT

10.00 - 10.15 1. Introduction (15 min) (PC)

10.15 - 11.45 2. Presentation/discussion of current activities (ICCs/DPCs/PC) (status, problems, lessons learnt, development phase, readiness statements for Test Report, etc.)

PART B: ACTION CWG6_4-A5 : FINDAS PROTOTYPE SYSTEM TESTING

11.45 - 12.30   3. Common Object Model and Database architecture (ALL)

12.30 - 13.45   LUNCH

13.45 - 14.00   4. FSC Deliverables for System Testing (PC) (15 min)

14.00 - 15.00   5. System Test Scenarios (ICCs) + discussion (60 min)

15.00 - 16.10   6. Interoperability Test Cases (ICCs) + discussion (70 min)

PART C: ACTION-PROCESSING

16.10 - 16.40   7. Actions and next meeting-date (30 min)

16.40 - 16.45   8. AOB (5 min)

2.2 Objectives of the meeting

- Action processing.
- Presentation by the different test-groups of schedule and status of client-development
- Show-stoppers, problems encountered and lessons learnt.
- Discussion of the Test Plan : input for system testing

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- Discussion of the schedule+structure of the Test Report
- Common data/object-oriented model for system testing and database organisation
- Discussion of Schedule, Test scenarios and Test Cases for system testing.

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3. Review of Actions of CWG6_4

CWG6_4-A1: PE to distribute the allowed range of telemetry packet-sizes before the end of August.

Actionee: **PE**

Deadline/Status: postponed till the middle of February of 2000, answer to be provided by OBDH specialist (S. Thuerey) ; the answer will be contained in Packet Structure ICD (PS-ICD)

CWG6_4-A2: PC to cross-check the requirements in the Test Plan with those in the Statement of work and the revised requirements by Vega and to make the necessary modifications, additions.

Actionee: **PC**

Deadline/Status: next issue

CWG6_4-A3: PC to complete the test tracibility matrix and change the requirements according to the comments made in CWG6_4.

Actionee: **PC**

Deadline/Status: next issue

CWG6_4-A4: PC to distribute the updated issue of the Test Plan before the end of August.

Actionee: **PC**

Deadline/Status: replaced by CWG6_5-A2

CWG6_4-A5: ICCs to provide use cases and test scenarios to PC for testing the interoperability of clients before the end of August.

Actionee: **ICCs**.

Deadline/Status: done in this meeting

CWG6_4-A6: PC to send a template and information about the structure of the Test Report before the end of the month.

Actionee: **PC**

Deadline/Status: done, email of the 30th of July 1999

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CWG6_4-A7: All to contribute to the Test-report before the 20th of September.

Actionee: All

Deadline/Status: postponed, new deadline 1st of December

CWG6_4-A8: All contributors to the common data model should send possible modifications/missing information before the middle of August to PC.

Actionee: All

Deadline/Status: new deadline : 1 October

CWG6_4-A9: PC to set-up a common (data)-base segment, (in which the common classes will be imported later), before the end of July.

Actionee: PC

Deadline/Status: done, PC email of 4 Aug 1999

CWG6_4-A10: PC to generate a collection of Proposer- and Proposal objects in the database before the end of August.

Actionee: PC

Deadline/Status: replaced by CWG6_5-A5

CWG6_4-A11: PC to complete the set-up of the WWW-page before the end of the week.

Actionee: PC

Deadline/Status: low priority

CWG6_4-A12: JJM and PC to check the Vega-docs for completeness before the 5th of August.

Actionee: JJM, PC

CWG6_4-A12: JJM and PC to check the Vega-docs for completeness before the 5th of August.

Deadline/Status: done, email of JJM on 23 Sep to JR

CWG6_4-A13: EW to set-up a mailing-list for problems encountered and lessons learnt.

Actionee: EW

Deadline/Status: done, email of the 23rd of July 1999

CWG6_4-A14: All developers to send their problems encountered and lessons learnt to this mailing list.

Actionee: All

Deadline/Status: action deleted

CWG6_4-A15: Kevin Bennett to make/prepare a presentation of the status of IDIS at the next meeting (CWG6_5).

Actionee: KB

Deadline/Status: due for CWG6_6

CWG6_4-A16: Göran Pilbratt to make/prepare a presentation of the status of FIN-DAS at the next meeting (CWG6_5).

Actionee: GP

Deadline/Status: due for CWG6_6

CWG6_4-A17: ICCs to send to Pierre Estaria their answers to the fundamental FINDAS-questions.

Actionee: ICCs

Deadline/Status: action remains open

CWG6_4-A18: PR to draft a new chapter 2 "General Description" and to send this chapter before the end of July to PC for inclusion in the next draft of the FINDAS URD.
Actionee: PR
Deadline/Status: done, PR emails dd.23 July 1999 & 19 Aug 1999

CWG6_4-A19: PC to rephrase the present requirements in pure User Requirements, before the 20th of August.
Actionee: PC
Deadline/Status: done, email of 25 Aug 1999

CWG6_4-A20: PC to include the comments of all URD-contributors in the next draft 0.4, before the 20th of August.
Actionee: PC
Deadline/Status: done, email of 25 Aug 1999

CWG6_4-A21: PC to remove the present chapter 2 in the FINDAS-URD.
Actionee: PC
Deadline/Status: done, email of 25 Aug 1999

4. PART A : FINDAS-PROTOTYPE ACTIVITIES, TEST REPORT

4.1 Status and schedule for client-development

The different test-groups presented the updated status and schedule for their client-development.

The information presented in the viewgraphs is not repeated here but can be consulted in the appendix to the minutes of this meeting in which the viewgraphs are bun-

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dled. PACS (KUL) did not present viewgraphs but gave a detailed overview of their experience so far. This is included in these minutes.

4.1.1 Planck/SA

KB commented that the network speed from/to the FINDAS-machine in ESTEC to/from client-machines has improved.

This was confirmed by PACS and HIFI.

KB also mentioned that a decision has to be made for the TOS FINDAS station (SAD-NIF) and for the ORBIX license, which will expire at the end of the year.

JJM mentioned the add-ons of the new ORBIX-version : version 3.0. A new utility exist (maker), which allows to put a stamp on an object when you create it.

ORBIX 3.0 has a Portable Object Adapter, objects can be transferred by value as well, not only by reference.

4.1.2 HIFI

See viewgraphs.

4.1.3 PACS

Status report of PACS RT Client (source Rik Huygen)

Main players: Erich Wiezorrek and Ekkehard Wieprecht

Client/Server in C++ using CORBA :

- very steep learning curve + plus additional learning each time after period of inactivity
- tmtool as TM generator; doesn't fulfil all requirements in the test plan, we need to write a wrapper around it to do the testing and update our testplan. We also need to think about the timing itself, if we actually measure what we want to know.
- server/client fetch packets from the O2 database and prints timing and packet info
- configuration problems: ORBIX 2.7/CORBA 2.0 @ ESTEC <-> ORBIX 3.0/CORBA 2.1 @ MPE

--> 64bit problem with timing information
--> solved with milisec instead of microsec.
--> and add/subtract an offset

Client/Server in Java using RMI :

- not so steep learning curve

- has the same functionality as the C++ version
- almost ready

<u>General Comments</u>

For the development of FINDAS (Client) Applications we need a scenario to work on the same application with several developers at a distribute location.

A new requirement to FINDAS could be that we need an application interface (API) to hide the database implementation from the 'middleware' s/w. RH will formulate this requirement and check in the FINDAS URD where to put it.

Action 1: Rik Huygen to submit a new Requirement for the FINDAS URD addressing the need of a public API as an interface to the database and to implement for FINDAS (the term Middleware should be avoided in the Requirement).

4.1.4 SPIRE

See viewgraphs.

4.1.5 FSC

See viewgraphs.
PC showed results/lessons learnt and presented a new schedule for the FSC client development taking into account time-constraints and system testing.

4.1.6 Discussion

The purpose of the listserver : "Problems encountered and lessons learnt" was discussed. PACS (RH) took note (with disappointment) of the fact that OO-methods could not be stored in the database.
PC noted that this was already explained by VEGA in one of the FINDAS progress-meetings one year ago. PC asked whether any of the groups used the FINDAS Infra-structure libraries of VEGA for their development, this was not the case.
PC also mentioned that methods can be stored in the database when working in a JAVA environment.

4.2 Test Report

A new schedule (see section 5.4) for the Test Report was proposed in order to include the results of system testing. Everybody agreed that the Test Report should be a short document, summarizing the results.

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5. PART B : ACTION CWG6_4-A5 : FINDAS PROTOTYPE SYSTEM TESTING : Scenarios and schedule

5.1 Test Scenarios

Test Scenarios were proposed by PC and PR. It was agreed to execute PR's test scenarios with the addition of an end-to-end test scenario (sequential, information flowing from uplink systems to downlink systems; this was both advocated by PC and PR).
The meeting agreed that Test Scenarios have to be included in the Test Plan as an appendix.

Action 2: Peter Roelfsema to submit the agreed detailed test scenarios (test cases) to PC for inclusion in the Test Plan.

Action 3: PC to distribute the updated issue of the Test Plan before the end of September.

5.2 Test Approach

The Test Approach was discussed. It was agreed to perform the tests as realisticly as possible in order to simulate a realistic operational scenario with all the clients in a sort of end-to-end test. GP asked what the objective was of system testing.
The participants argued that the objective was mainly a communication exercise, a system integration exercise and an interoperability test, between systems developed by different groups in geographically different locations. This in order to test the validity of the FINDAS-concept in a quasi-operational state.
GP proposed a template for a time-line plan for system testing (see section 5.4)
Test scenarios and test cases shall form the basis of the Common Object Model for system testing.

5.3 Common Object Model

The Common Object Model, as it was defined on the meeting-date, was distributed to the meeting-participants and discussed.
The FSC part of the Common Object Model needs to be stable first and imported consequently in the database. PC said that the FSC-classes were stable and ready for importation by the end of the week (the 24th). It was agreed that the deadline for importation of the classes in their final state is the middle of October, the time when the classes have to be in the database for system testing. ICCs promised to deliver the final state of their classes of the common UML-model to FSC (PC) by the end of September. The importance of communication between the different groups was stressed.

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Action 4: PC to generate a collection of Proposer- and Proposal objects with updated structure for system testing in the database before the middle of October.

Action 5: ICCs and FSC to submit modifications/additions/missing information to the common Object Model before the end of September.

5.4 Test Schedule

The following test schedule was agreed :

Activity	Deadline
define system tests	21 September 1999
update the required common object model	1 October 1999
update clients to use for system testing	3rd week of October 1999
"integrate" clients	29th October 1999
perform system tests	15 November 1999
produce Test Report	1 December 1999

5.5 FINDAS URD schedule

GP and JR mentioned that the next draft of the FINDAS URD should have change bars. The document is now suffficiently stable.

The following schedule is proposed (visible on the FINDAS prototype support WWW-page) :

Activity	Deadline
draft 0.5 distributed	17 September 1999
deadline for comments and new requirements	30 October 1999
draft 0.6 distributed (draft 0.6 will include useful/reusable requirements of the ISO PMA URD)	10 November 1999
CWG6_6	17 Nov 1999
review FINDAS URD	4th week of November 1999
first issue	5 December 1999

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6. Next meeting

The date of the 17th of November 1999 was accepted as next meeting date.

7. AOB

None

List of Actions:

A. New Actions

CWG6_5-A1: Rik Huygen to submit a new Requirement for the FINDAS URD addressing the need of a public API as an interface to the database and to implement for FINDAS (the term Middleware should be avoided in the Requirement). **Actionee: RH**, **Deadline: 30th of October**

CWG6_5-A2: PC to distribute the updated issue of the Test Plan before the end of September. **Actionee: PC**, **Deadline: 30th of September** (replaces action CWG6_4-A4).

CWG6_5-A3: Peter Roelfsema to submit the agreed detailed test scenarios (test cases) to PC for inclusion in the Test Plan. **Actionee: PR**, **Deadline: 24th of September**

CWG6_5-A4: ICCs and FSC to submit modifications/additions/missing information to the common Object Model before the end of September. **Actionee: ICCs, FSC**, **Deadline: 1st of October**

CWG6_5-A5: PC to generate a collection of Proposer- and Proposal objects with updated structure for system testing in the database before the middle of October. **Actionee: PC, Deadline: 11th of October**

B. Still outstanding actions of the previous meeting(s)

CWG6_4-A1: PE to distribute the allowed range of telemetry packet-sizes before the end of August.
Actionee: PE

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CWG6_4-A1: PE to distribute the allowed range of telemetry packet-sizes before the end of August.

Deadline/Status: postponed till the middle of February of 2000, answer to be provided by OBDH specialist (S. Thuerey) ; the answer will be contained in Packet Structure ICD (PS-ICD)

CWG6_4-A2: PC to cross-check the requirements in the Test Plan with those in the Statement of work and the revised requirements by Vega and to make the necessary modifications, additions.

Actionee: PC

Deadline/Status: next issue

CWG6_4-A3: PC to complete the test tracibility matrix and change the requirements according to the comments made in CWG6_4.

Actionee: PC

Deadline/Status: next issue

CWG6_4-A7: All to contribute to the Test-report before the 20th of September.

Actionee: All

Deadline/Status: postponed, new deadline 1st of December

CWG6_4-A8: All contributors to the common data model should send possible modifications/missing information before the middle of August to PC.

Actionee: All

Deadline/Status: new deadline : 1 October

CWG6_4-A11: PC to complete the set-up of the WWW-page before the end of the week.

Actionee: PC

Deadline/Status: low priority

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CWG6_4-A15: Kevin Bennett to make/prepare a presentation of the status of IDIS at the next meeting (CWG6_5).

Actionee: KB

Deadline/Status: due for CWG6_6

CWG6_4-A16: Göran Pilbratt to make/prepare a presentation of the status of FINDAS at the next meeting (CWG6_5).

Actionee: GP

Deadline/Status: due for CWG6_6

CWG6_4-A17: ICCs to send to Pierre Estaria their answers to the fundamental FINDAS-questions.

Actionee: ICCs

Deadline/Status: action remains open