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SPIRE-ESA-MDM-00017610


SUBJECT: Commonality Working Group #4: 1st Meeting**PLACE:** ESTEC, room Bf227


Participants	Organ.	Distribution
C. Butler R. Cerulli F. Couchot P. Estaria H. Feuchtgruber D. Pike P. Roelfsema	ASI/Roma IFSI LAL-IN2P3 ESTEC/SCI-PT MPE/Garching RAL/Oxfordshire SRON/Groningen	Participants + J. Charra (IAS/Orsay) F. Vandenbussche (SCI-PT) J.H. Herreros (IAC) J. Dodsworth (TOS/OFC) FIRST/Planck Project File

AGREEMENTS STATEMENTS	ACTION
<p>The 1st meeting of CWG # 4 (Instrument Operations and On-Board Software) took place on the 10.02.1999 in ESTEC. In the absence of the Chairman (F. Vandenbussche) the meeting was chaired by the secretary (P. Estaria)</p> <p>1. Introduction</p> <p>The agenda (p. 3-4) -Appendix 1- was accepted. Point. 3 was moved after point. 6 and the following AOB items were added:</p> <ul style="list-style-type: none"> • Mission Operations Scenario • Operations Interface Requirement Document (OIRD) • (Instrument) Manual Commanding • (Instrument) Command Verification Scheme • HiFi "peak-up" (not discussed) <p>It was agreed that essential basic documentation (e.g. ESA packet TM and TC standards, PA standards, Software Engineering Standards, OBDH standards, OIRD, etc.) will be moved to the Project Domain in the ESTEC/SA-DMS.</p> <p>These minutes will become CWG#4 report to the CWG Steering Committee (report requested one month prior to each Committee meeting).</p> <p>2. Report on main outcome of CWG#6 and CWG#3</p> <p>It became apparent during the meetings of CWG#6 (FINDAS-IDIS), CWG#3 (RTA/QLA) and CWG#4 (this group) that in order to</p>	CWG4-AI:1/1


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<p>improve efficiency and reduce overheads some re-ordering of the tasks of the various working groups is necessary. This will be brought to the attention of the CWG Steering Committee and discussed at its next meeting (16.03.99). It was suggested that:</p> <ul style="list-style-type: none"> • A specific FINDAS WG be set up. • Command Verification (in RTA) be moved to CWG#4 • A specific AIV CWG be set up • CWG#5 (Operations and Test Language) tasks be re-organised or that it be merged with CWG#4 or that start of its activities (currently mid-2000) be brought forward. (see updated page 8 in Appendix 1) <p>Similarly the overall WG membership table has been updated to reflect the fact that several members (Orfei, Cerulli, Herreros, di. Giorgio, Andreani, Estaria) act as cross-instrument support rather than members of a specific instrument team. Updated table: p. 2 of Appendix 1.</p> <p>2.1 CWG#6 (FINDAS-IDIS)</p> <p>The FINDAS prototype final Presentation/Demo will take place at ESTEC on the 20-21 April 1999. To be structured in three parts:</p> <ul style="list-style-type: none"> - Formal presentation (to an extended audience) - Demo-hands-on: presentation of 3 scenarios - Proposal for operational system architecture. <p>FINDAS "clients" will be implemented by ESTEC-WMS, FSC, ICCs and IDIS-team within the framework of prototype evaluation. A FINDAS-prototype Evaluation Report is to be produced by end-September 1999.</p> <p>Activities of the FINDAS and IDIS groups are complementary and of an "exploratory" nature till the end of 1999.</p> <p>2.2 CWG#3 (RTA/QLA)</p> <ul style="list-style-type: none"> - The WG will concentrate on RTA only, QLA is considered too instrument-specific. - It should be possible for RTA to carry out its tasks processing HK packets only. This implies that some of the Science data (e.g. detector data) might have to be duplicated in the instrument HK. - It is desirable to define a "common" Instrument Station configuration for all instruments. - It is desirable to agree on a "common" operating system (UNIX?, NT?). - It was agreed that SCOS-2000 will be evaluated as a possible infrastructure for the implementation of RTA. The evaluation should be completed by end- September 1999. 		<p>CWG4-AI:1/2</p>

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3. Current status of DPU and SPU developments		
The responsibilities within the instrument consortia for implementation of DPU and SPU H/W and S/W were clarified. See updated table p. 5 in Appendix 1.		CWG4-AI:1/3
C. Butler (LFI), F. Couchot (HFI) and R. Cerulli (IFSI) presented the current status for LFI, HFI and FIRST respectively (see Appendices 2, 3 and 4). The following points emerged from the presentations:		CWG4-AI:1/4
<ul style="list-style-type: none"> • The issue of RAD-tolerant versus RAD-hardened components should be discussed by CWG#1/2. More generally ESA should make available relevant background information on micro-processors, communication components, required qualification level of components, procurement, etc. (CWG#1/2) • The issue of available TM rate for FIRST and Planck should be discussed by CWG#1/2. • All groups are currently evaluating the "Virtuoso" Operating System for the Instrument On-Board S/W (OBSW). These efforts must be coordinated. • The issues of "mono-tasking" versus "multi-tasking" and "cyclic" (the current standard) versus "interrupt-driven" OBSW scheduling should be discussed by CWG#1/2. • The DPUs/SPUs processors are currently based on the TSC21020E. Suitability of this choice should be discussed by CWG#1/2. • The TSC21020E features a 48-bit Prog Bus and a 32-bit Data Bus. CWG#1/2 should discuss the most appropriate matching OBDH configuration. 		
4. Overall Testing Philosophy		
LFI and HFI presentations are contained in Appendices 5 and 6 respectively. They address the overall Test Philosophy (extensively for LFI, much less so for HFI). It was agreed that there is a need for a specific CWG addressing this topic (see CWG4-AI:1/2). No input was provided by HIFI and SPIRE. PACS presentation is contained in Appendix 7. It outlines PACS overall approach of "seamless" transitions between the various programme phases and builds upon the ISO approach where it was successful. It was also stated that recommendations, support and guidance was expected from CWG#1/2 w.r.t. S/C Simulator issues. (see CWG4-AI-1/4)		
5. CWG # 4 Terms of Reference		
It was agreed to cover points 3, 6 and 7 of the original agenda		

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<p>(Appendix 1) under this heading. The tasks of CWG# 4 were simplified and reduced. It was also agreed that the group's membership should be expanded (see updated pages 6-8 of Appendix 1). It was further agreed that dedicated technical meeting(s) on "commanding" should be organised by FIRST and Planck. The instrument groups should generate and compare their preliminary "requirements" on commanding. When the requirements have reach a certain level of maturity they should be discussed in CWG#4. Input required 2 weeks prior to the next meeting of CWG#4 (i.e. on 06-05-99). See also Appendix 1 pages 14-15.</p>		CWG4-AI:1/5
6. CWG # 4 Plan of activity		
The following major milestones were noted:		
- 16-03-99: Commonality Working Group Steering Committee meeting.		
- 17-03-99: FIRST Ground Segment meeting: The main purpose of the meeting will be to discuss the high level operations scenario for FIRST (one day in the "life" of FIRST). HFI and LFI will be invited. Input (one day in the "life" of Planck) is welcome but is not required for this preliminary meeting.		
- March/April 99: (TBD). Meeting with ESOC to review all inputs received from the instrument groups on the OIRD. Update OIRD.		CWG4-AI:1/6
- Feb.-March (internal) meetings on "commanding"		
- All Instrument Groups (LFI: Herreros, HFI: Couchot, FIRST: Cerulli) will define a list of major OBSW-related milestones and activities up to end-99. Due date: 2 weeks prior to the next GWG#4 meeting (i.e. on 06-05-99)		CWG4-AI:1/7
7. Date and place of next meeting		
The next meeting of CWG#4 is planned for the 20-05-99 at ESTEC. P. Roelfsema (HIFI) who cannot attend should nominate a substitute.		
8. AOB		
It was agreed that the Instrument groups will provide comments to the various topics covered in Appendix 1.		CWG4-AI-1/8
- Mission Operations Scenario: (see Appendix 1). The scenario was discussed. It was noted that the sharing of Perth between FIRST, Planck and Rosetta might give problems in particular with a Daily		

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<p>Telecommunication Period (DTCP) of 2 hours/day.</p> <p>- OIRD: See Appendix 1 pages 9-13. It was noted that</p> <ul style="list-style-type: none">• The present document should be split into a FIRST OIRD and a Planck OIRD.• There is a general need for clarification (many comments addressing this issue).• Some requirements are considered too heavy and likely to lead to unnecessary complexity. (in particular "periodic reporting")• Some requirements are too detailed or too specific at this early stage. <p>- Instrument Command Verification Scheme: The "current" scheme was discussed. (see Appendix 1 p. 15). It was agreed to re-evaluate the scheme based on SCOS-2000 investigations.</p>	

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Ordinal Action Number		Title and Description		Due Date		Originator		Actionee		Completion	
				Firm	Person	Firm	Person	Firm	Person	Date	By Document No.
AI:1/1		Store Project-related basic documentation (e.g. standards) into the Project Domain in SSD/SA DMS		16-03-99		CWG#4	Estaria	ESA	Estaria		
AI:1/2		Discuss re-organisation of the various CWGs in the CWG Steering Committee		16-03-99		CWG#4		ESA	Steering Committee		
AI:1/3		SPIRE to confirm allocation of responsibilities for SPU HW and SW implementation		20-05-99	ESA	Estaria	Pike	SPIRE			
AI:1/4		Bring CWG#4-related issues to the attention of CWG#1/2		03-03-99		CWG#4		ESA	Estaria		
AI:1/5		Generate and coordinate "requirements" on instrument commanding		06-05-99	ESA	Estaria		All			
AI:1/6		Review and update OIRD		TBD		CWG#4		ESA	Project-ESOC		
AI:1/7		Define OBSW-related milestones and activities till end-'99		06-05-99	ESA	Estaria		All			
AI:1/8		Provide comments to Appendix 1		06-05-99	ESA	Estaria		All			



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Ref. : PT-06402

Date : 16 February, 1999

From : P. Estaria (SCI-PT)

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Copy : F. Vandenbussche (SCI-PT), ESTEC

Subject : Minutes of first meeting Commonality WG#4

Please find attached the minutes (without appendices) of the first meeting of Commonality Working Group #4 held at ESTEC on 10 February 1999.

Appendix 1 (the viewgraphs presented by Estaria during the meeting) have been updated (pages 5 to 8) to reflect our discussions.

These minutes including all the viewgraphs presented at the meeting (appendices 1 to 7) are also available in the SA-DMS (FIRST-Planck domain).

Regards,

A handwritten signature in black ink that reads 'P. Estaria'.

P. Estaria

ESTEC

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