esa FIRST/Planck Project	**MINUTES OF MEETING**	Date : 02/07/1999 Ref : PT-MM-06893 Page : 1 of 4

SUBJECT: CWG meeting on S/C interfaces

PLACE: ESTEC room Einstein on 02-07-1999, starting at 09:00 hrs.

Participants	*Organ.*	*Distribution*
R. Orfei	CNR-IFSI	Instrument Teams via SA-DMS ESTEC: FF; TP; FV; MA; PE; MvH; GP; JT; S.Thuerey; A. Elfving; V. Riviere; J. Minnee; ESOC: J. Dodsworth.
D. Beintema	SRON	
H. Chulani	IAC	
J. Herreros	IAC	
C. Chacornac	CESR	
R. Pons	CESR	
R. C. Butler	ASI	
F. Couchot	LAL	
F. Vandenbussche	ESTEC	
P. Estaria	ESTEC	
S. Thuerey	ESTEC	
T. Passvogel	ESTEC	
M. van Hoegen	ESTEC	
V. Riviere (part time)	ESTEC	
J. Minnee (part time)	ESTEC	
A. Elfving (part time)	ESTEC	
H. Schaap	ESTEC	

AGREEMENTS STATEMENTS	***ACTION***
To a large extent the meeting followed the agenda as per attachment A. **Introduction.** - F. Vandenbussche welcomed the participants. The agenda was corrected for typo's as follows in **bold** and agreed: - 11h15 FIRST-**DPU** commonality (Instrument Teams) - 11h45 Special signal definitions: **Planck** AOCS reference star event - The parts list status was advanced to 13h45. **AI status and next meeting date.** - H. Schaap presented the status of Action Items from the previous meeting (attachment B). With the exception of AI-CWG-1, all action items are closed. Although not all teams had responded to AI-CWG-1, the AI was closed at the meeting and a new one defined for all teams. See **Parts lists status.** - As a date for the next CWG meeting on S/C interfaces 19-11-1999 TBC has been proposed.	

AGREEMENTS STATEMENTS	ACTION
Spacecraft and Data Handling interface definitions. - S. Thuerey presented the Spacecraft and Data Handling interface definitions (attachment C) - For FIRST/Planck the Packet Structure Definitions, i.e. a subset of the Packet Utilisation Standard ESA PSS-07-101 (PUS) will be presented in a to-be-written document in the very near future. In addition there will be a separate document which will specify the guaranteed throughput for each user in the Time Division Multiple Access protocol. - The selected 1553 interface will be defined in the next issue of the IID-A (interface details) and will be specified in the ITT for FIRST/Planck. ESA will further define the interface in two steps i.e. from the point of hardware and software. **FIRST/Planck telemetry rates.** - F. Vandenbussche presented the contents of fax PT-06885 sent to all PI's and PM's on 25 June on the increased instrument data rates. (attachment D) As a consequence of the above LFI will restudy their internal coding strategy. - As also the TC rate has gone up from originally 2 to 4 kbps. ESA was requested to provide further details, particularly on the effective command rate i.e. the number of commands/second that can be uplinked. **Standard discrete signal interfaces.** - Presented by S. Thuerey (attachment E) **FIRST-DPU commonality.** - R. Orfei presented the status. There will be 3 specifications for the DPU's. Much will be identical, however there are instrument specific items, such as the interface to other instrument units, which are specific. For HIFI and PACS these interfaces are defined to the subsystem level, for SPIRE this is under review because of a recent possible change to a SPARC based processor board for the DRCU. The DRCU now combines the functionality of the original DRCU and the former SPU.	**AI-CW-06893-00** **AI-CW-06893-01**

AGREEMENTS STATEMENTS	ACTION
Special Signal Definitions. - H. Schaap presented an overview of the signals known to date. HFI requested signals such as Frame/Word pulse originate from the time of fixed TM formats and are not compatible with Packet TM (attachment F). Instrument Teams are requested to define any need of special timing signals, and in particular the required accuracy of these signals.	**AI-CW-06893-02**
Operational Requirements. - This topic was presented by P. Estaria. (attachment G)	
Redundancy and Grounding philosophy. - This was presented by H. Schaap already in the Special Signal Definitions part of the meeting.	
Spacecraft simulator. - It is the intention of the various Instrument Teams to consolidate definition, which from the point of the OBDH hardware interface might be easier in view of available plug-in modules for "standard" PC's.	
Parts lists status. - J. Minnee presented his comments to parts lists received in response to AI-CWG-1 from the meeting held on 03-03-1999. (ref: PT-MM-06545) In addition he presented general procurement recommendations. See attachment H for details. It was agreed that Instrument Teams shall continue with their efforts in the area of parts. They are requested to update their lists in line with ESA comments received at the meeting and for those teams that had not yet responded to send their parts lists to ESA for comments.	**AI-CW-06893-03**

esa FIRST/Planck Project	Action Item Initiation Sheet		Date : 02/07/1999 Ref : PT-MM-06893 Page : 4 of 4
	Title: CWG meeting on S/C interfaces	Place: ESTEC room Einstein on 02-07-1999, starting at 09:00 hrs.	

Ordinal Action Number	Title and Description	Due Date	Originator		Actionee		Completion	
			Firm	Person	Firm	Person	Date	By Doc No.
AI-CW-06893-00	ESA to define S/C interfaces with the instruments. Hardware: Software:	 31-07-'99 01-11-'99	All teams		ESA	Vandenbussche /Thuerey		
AI-CW-06893-01	ESA to define the effective rate of commands/second in relation to the defined 4 kbps uplink rate.	01-11-'99	All teams		ESA	Vandenbussche /Thuerey		
AI-CW-06893-02	Instrument Teams to define any need of special timing signals, in particular their accuracy, from the OBDH.	01-11-'99	ESA	Vandenbussche/ Thuerey	All teams			
AI-CW-06893-03	Instrument Teams to update their parts lists and those that have not yet answered AI-CW-1 to do so in response to this Action Item.	15-09-'99	ESA	Von Hoegen/ Minnee	All teams			