

**SUBJECT:** FCSS EGSE Coordination Meeting

**PLACE:** ESTEC room Af205 starting 13:30

Participants	Organ.	Distribution
O.H. Bauer	MPE	Participants + FIRST/Planck Project +K. King (RAL) +J. Payne (RAL)
T. Dimbylow	RAL	
L. Dubbeldam	SRON	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
P. Roelfsema	SRON	
G. Pilbratt	ESTEC	
J. Dodsworth	ESOC	
P. Estaria	ESTEC	
A Heske	ESTEC	
B. Melton	ESTEC	
J. Riedinger	ESTEC	
F. Wechsler	ESTEC	

AGREEMENTS STATEMENTS	ACTION						
<p>Agenda attached (Annex 1, p. 2) PT-08279</p> <p>① <u>Introduction</u> Project presented objectives of meeting (Annex 1, pp. 3-7).</p> <p>② <u>FGSSE-EGSE wdg. summary</u> FSCDT presented FGSSE-EGSE Meeting (9-10/10/00) report. (Annex 2)</p> <p>Agreed delivery dates (by all parties) for <u>FCSS v0.1</u></p> <table> <tr> <td>01/10/01</td> <td>1<sup>st</sup> release</td> </tr> <tr> <td>01/12/01</td> <td>intermediate release</td> </tr> <tr> <td>01/04/02</td> <td>full system (1<sup>st</sup> release of ~)</td> </tr> </table>	01/10/01	1 <sup>st</sup> release	01/12/01	intermediate release	01/04/02	full system (1 <sup>st</sup> release of ~)	
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01/12/01	intermediate release						
01/04/02	full system (1 <sup>st</sup> release of ~)						

AGREEMENTS STATEMENTS	ACTION
<p>③ <u>FCSS S/W Project Management Plan</u>                      (Annex 3) presented by FSCDT.</p> <p>Main points:</p> <ul style="list-style-type: none"> <li>• Staggered release of FCSS versions, with one system release per year, and user releases several times per year.</li> <li>• Budget for FSCDT not agreed yet.</li> <li>• First end-to-end system (test of data flow) expected for mid 2001.</li> <li>• One formal review per year of system envisaged.</li> <li>• Work Breakdown Structure (incl. work Packages @ ICCs) and schedule analysis, for v0.1.                             <ul style="list-style-type: none"> <li>- estimates for ICC manpower may increase (training re. obj. oriented)</li> <li>- PACS asked for set-up of environment for distributed common system development, (comprising meetings, and other means of info exchange)</li> </ul> </li> </ul>	

AGREEMENTS STATEMENTS	ACTION
<ul style="list-style-type: none"> <li>Schedules (see Annex 4) need to be analysed and discussed by ICC managers            FSCDT will distribute schedule</li> </ul>	<p>AI #01 FSCDT            31/10/00</p>
<ul style="list-style-type: none"> <li>ICD need dates (A3 p17)            Instrument Teams to fill in TBDs and "?", and update table.            FSCDT will distribute Interface table.</li> </ul>	<p>AI #02 HIFI            PACS            SPIRE            03/11/00</p> <p>AI #03 FSCDT            31/10/00</p>
<ul style="list-style-type: none"> <li>ESOC raised question of including hardware, FSCDT stated that it is planned for, as of 2005.</li> </ul>	

AGREEMENTS STATEMENTS	ACTION
<p>④ <u>EGSE SPPP(s)</u> (Annex 5)</p> <p>EGSE WG chair presented status.</p> <ul style="list-style-type: none"> <li>• Evaluation of PROBA router started. Assistance from ESTEC would be needed (i.e. from TOS - EGSE support).</li> <li>• Next steps regarding 1553 B &amp; Transfer Layer Protocol proposed. EGSE WG chair will follow up.</li> <li>• milestones and distribution of (top-level) WPs presented. (pp 5 &amp; 6)</li> <li>• One SPPP per ICC (i.e. instrument) is planned to be available. (to be discussed later during the meeting).</li> <li>• EGSE WG will monitor integration (of ICC WPs) into system.                         <ul style="list-style-type: none"> <li>- Day-to-day activities are monitored by local manager in instrument team.</li> </ul> </li> </ul>	



AGREEMENTS STATEMENTS	ACTION
<ul style="list-style-type: none"> <li>• Responsibility for PROBA router maintenance needs to be re-discussed and clarified. EGSE chair to initiate.</li> </ul> <p>⑥ <u>Top level schedule</u>        (see milestones in Annexes)        not discussed.</p> <p>⑦ <u>Conclusions</u>        none further discussed</p> <p>⑧ <u>AOB</u>        —        —        —        —</p>	<p>AI#06 EGSE chair        06/11/00</p>

## Actions from FCSS EGSE Coordination Meeting 30/10/2000 @ ESTEC

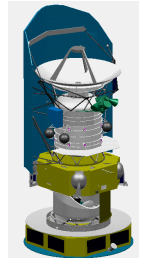
Ordinal Action Number	Title and Description	Due Date	Originator		Actionee		Completion	
			Firm	Person	Firm	Person	Date	By Document No.
01	Distribute FCSS schedule to participants	31/10/00	ICCs		FCSDT		30/10/00	e-mail from JRR
02	Complete table of ICD deliveries and responsibilities	03/11/00	FCSDT		HIFI, PACS, SPIRE			
03	Distribute table of ICD deliveries and responsibilities	31/10/00	ICCs		FCSDT			
04	Confirm WP descriptions, schedule and milestones	28/11/00	FCSDT		HIFI, SPIRE			
05	Provide ESA with document describing IA modules and QLA responsibilities	06/11/00	ESA Project		EGSE Chair			
06	Initiate discussion on and clarification of responsibilities for PROBA router maintenance	06/11/00	ESA Project		EGSE Chair			

## **Annex 1**

### **Agenda and Objectives of Meeting**

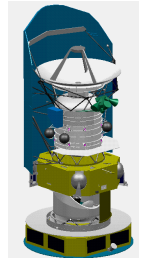
#### **P.Estaria/ESA Project**





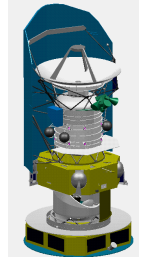
# FCSS - EGSE Coordination Meeting ESTEC

P. Estaria, A. Heske, F. Wechsler



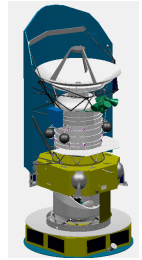
## Agenda

1. Introduction (PE) - 10 min
2. Summary of major results from the FGSSE-EGSE meeting of 9 -10 October (JRR) - 15 min
3. FCSS SPMP - presentation - discussion - agreement - (JRR) - 60 min
4. EGSE SPMP - presentation - discussion - agreement - (OHB) - 60 min
5. Agreement on responsibilities (allocation of WPs to implementers) - 30 min
6. Top level schedule - 30 min
7. Conclusions - 15 min
8. AOB - 15 min



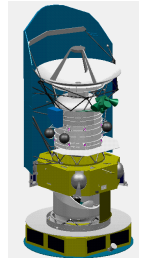
## Introduction

- This coordination meeting is a follow-up to the technical FGSSE-EGSE joint meeting held in ESTEC on 9-10 October 2000
  - ⇒ To arrive at:
    - ensure all requirements are covered (technical & programmatic)
    - commit to a work plan leading up to ILTs



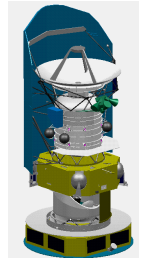
## Objectives (Summary)

- **Ensure that all pre-requisites are met:**
  - !! all tasks to support ILTs are defined
  - ! all derived tasks are included
  - !! responsibilities are defined and agreed
  - !! due dates, milestones and contents of deliveries are defined
  - !! team organisation and resource allocations are adequate
  - ! risk analysis is carried out and risks are minimised
- **Ensure that final objectives are met:**
  - !! Work Packages are properly scoped, prioritised and allocated
  - !! ILT system schedule is compatible with Instrument schedule
- => arrive at consolidated top-level schedule



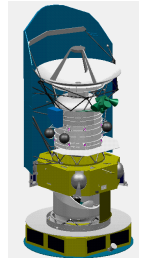
## Objectives

- Ensure that all tasks necessary to define, design, implement, deliver, integrate and test the “system” required to support the ILTs at the various sites are properly identified.
- Ensure that all derived tasks (e.g. delivery from producer to user, customisation, documentation, training, configuration control, maintenance , etc.) are taken into account.
- Ensure that the responsibility of the various contributors are clearly defined and accepted.
- Ensure that the due dates and contents of each “delivery” of the ILT system are clearly defined.
- Ensure that the “management” structure required to carry out these tasks is adequate and is (or will be) properly reflected in the corresponding S/W Project Management Plans (FCSS SPMP and EGSE SPMP)



## Objectives (continued)

- Ensure that a risk analysis assessment has been (or will be) carried out and that the corresponding risk reduction measures have been (or will be) taken ( ➔ minimum system).
- Ensure that the corresponding WPs are identified and allocated to the various contributors.
  - ⇒ Ensure that the tasks to be carried out are properly scoped and the resources available are in line with the work.
  - ⇒ Ensure that the tasks to be carried out have been properly **prioritised**
  - ⇒ Ensure that the “instrument-specific” tasks (as opposed to the “common tasks”) are properly identified and the boundaries between the two sets of tasks are clear



## Objectives (continued)

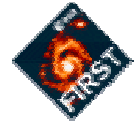
- ⇒ Ensure that for each delivery the functionality, interface requirements, performance requirements, etc. of each “component” have been properly identified.
- Ensure that all milestones necessary to allow proper monitoring of the development have been identified.
- Ensure that the implementation schedule of the ILT system is compatible with the instrument development schedule
- Establish a consolidated overall top level schedule.
- Identify problems and sticky issues (if any)
  - ⇒ agree on a plan for resolution

## **Annex 2**

**Summary from FGSSE-EGSE Meeting 09-10/10/2000**

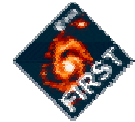
**S.Veillat - J.R.Riedinger/FSCDT - ESA**



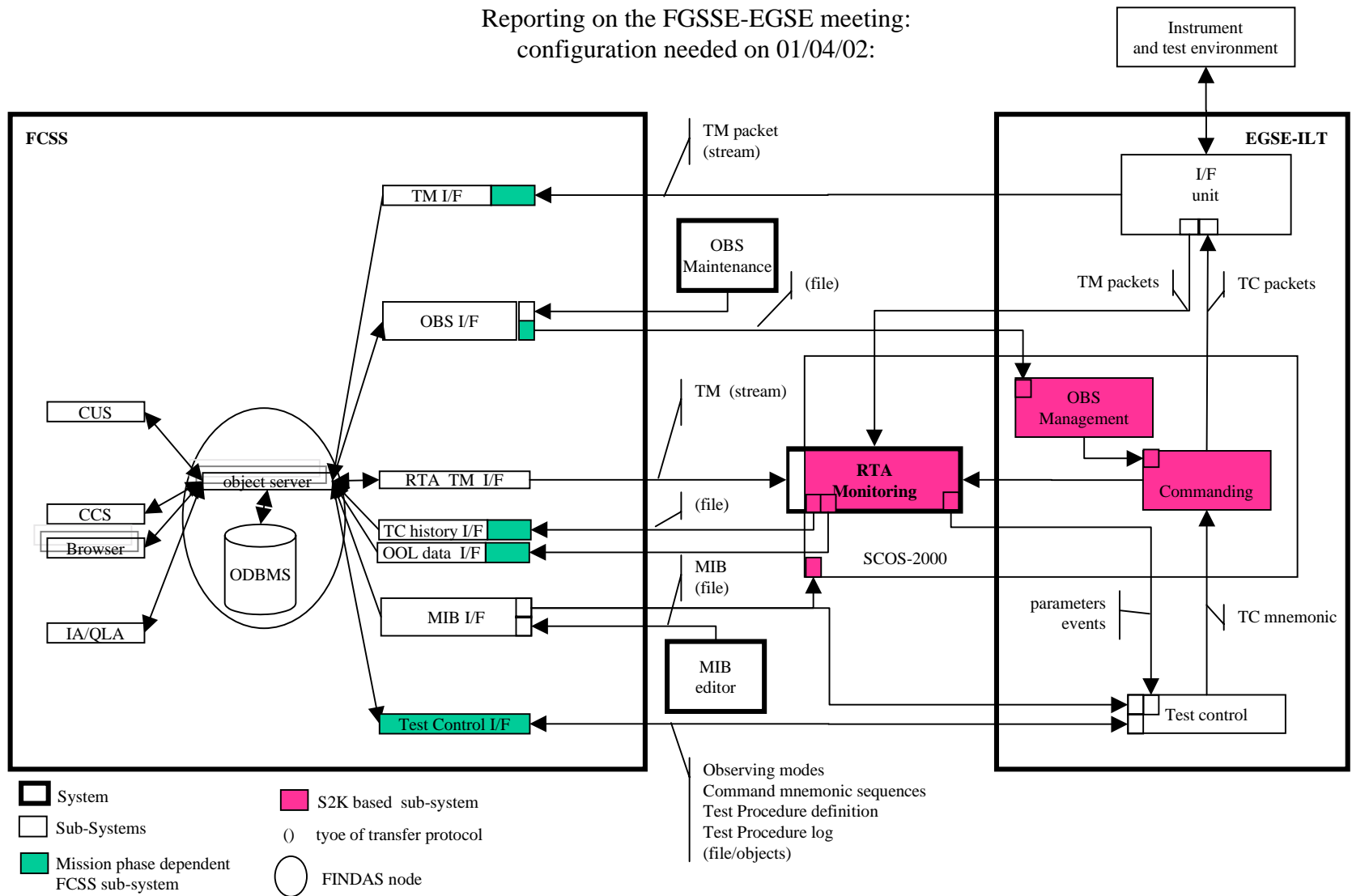


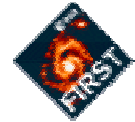
Reporting on the FGSSE-EGSE meeting (09/10 October) :  
main conclusions:

- The ILT system design (systems, components, interfaces)—as defined in the FGSDD draft 2, section 3.2 and presented at the meeting—was agreed by all parties as being suitable to support ILT (see next slide). *However, the test control I/F requires further investigation to fully assess its feasibility. A meeting to address this issue is scheduled for 15/11/00 (but will likely have to be postponed to mid-December).*
- The principle of a staggered delivery for ILT has been accepted and the different stages have been defined based on the ILT system design. *Following the FGSSE-EGSE meeting, the exact content on these different stages as well as their corresponding need dates were confirmed in a meeting at Edinburgh on 18/10/00 (see next 3 slides).*
- The documents describing and defining the ILT system design (FGSDD, FGS IRD and system URDs) have been commented and will be re-issued as a follow-up of this meeting. *The re-issued documents will be available as inputs to the formal FCSS SRR and FCSS v0.1 PDR reviews later this year.*

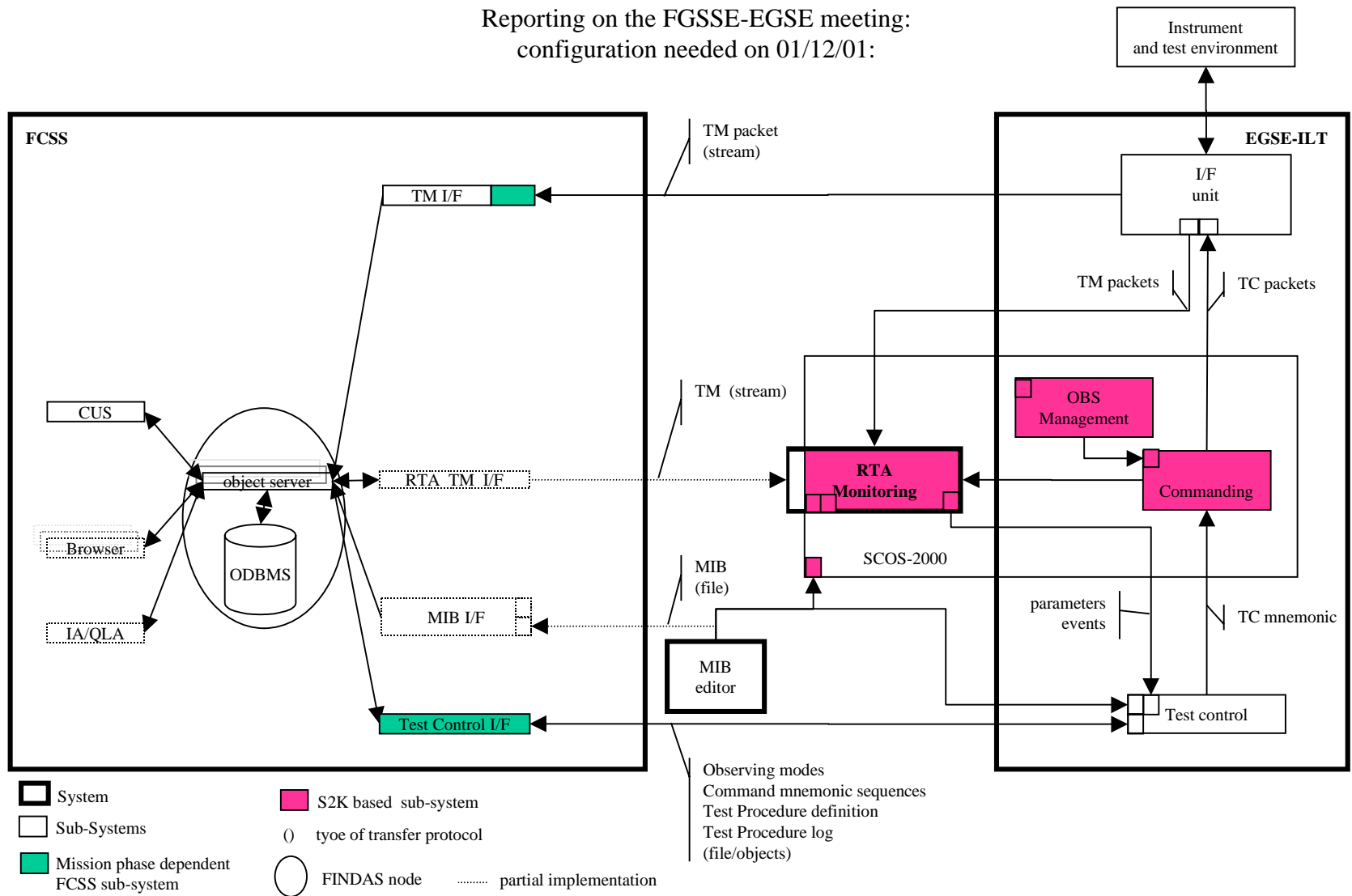


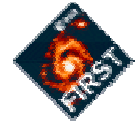
Reporting on the FGSSE-EGSE meeting:  
configuration needed on 01/04/02:



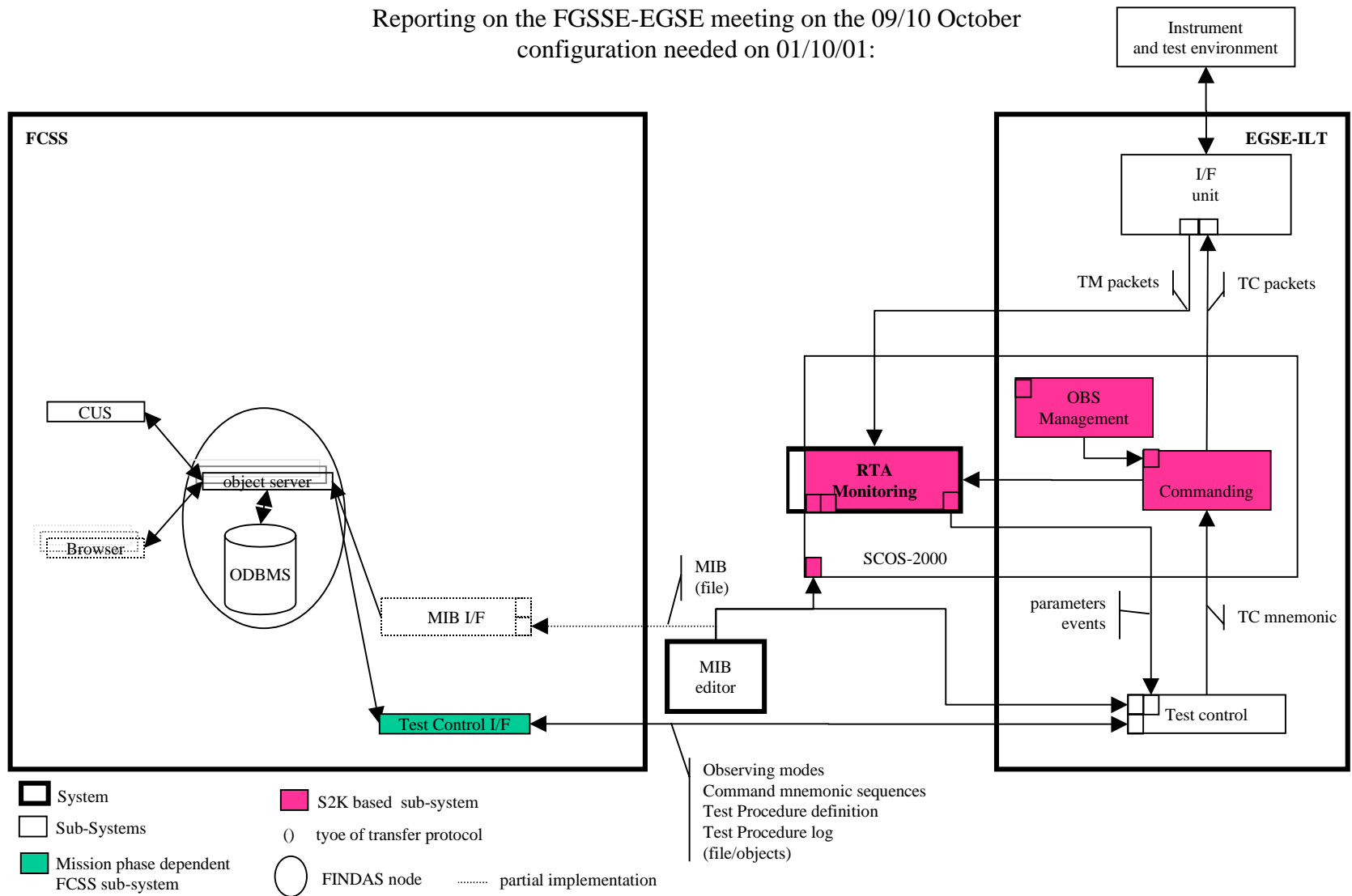


## Reporting on the FGSSE-EGSE meeting: configuration needed on 01/12/01:





Reporting on the FGSSE-EGSE meeting on the 09/10 October  
 configuration needed on 01/10/01:



## **Annex 3**

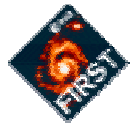
### **FCSS Software Project Management Plan**

**J.R.Riedinger/FCSDT-ESA**



ASTROPHYSICS

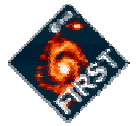
*FCSS Development*



# FCSS SPMP Issue 2 Presentation to FCSS-EGSE Coordination Meeting

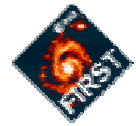
ESTEC, 30-Oct-2000

J.R. Riedinger



## FCSS SPMP Issue 2: Introduction - 1

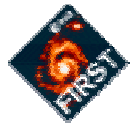
- SPMP (Software Project Management Plan) required according to the applicable standards (ECSS-E-40A & ECSS-Q-80A).
- Describes managerial framework and schedule for a SW - intensive development:
  - Development objectives
  - Resources & management structure
  - Critical areas
  - Reporting & review process
  - System versions and their functionality
  - Work packages
  - Development milestones
  - Detailed development schedule



## FCSS SPMP Issue 2: Introduction - 2

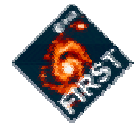
- A SPMP describing a Science Ground Segment development lasting for 7 years from start to finish is either too general to be meaningful for tracking progress or out-of-date most of the time
  - plan up-front to re-issue the SPMP per development phase.
    - Maintain overall development milestones
    - Summarise status of previous phase against original plan
    - Only provide schedule details and work allocation for next phase
- SPMP Issue 1.0: Feb 2000 - mid-October 2000
- SPMP Issue 1.1: mid-October 2000 - end 2000 (interim phase)
- SPMP Issue 2: Jan 2001 - end-September 2001 (TBC)
- At this meeting: Review essentials of SPMP Issue 2 and establish consistency with Instrument Teams' ILT plans





## FCSS SPMP Issue 2: Structure - 1

1. Introduction
  - 1.1 Objective and Scope of the FCSS
  - 1.2 Boundary Conditions for Development of the FCSS
  - 1.3 *Objective and Scope of this Document***
    - ◆ Object-oriented, joint but distributed development
    - ◆ JAVA + JPython (TBC)
    - ◆ Incremental development replaces single waterfall
    - ◆ Development approach described in Annex D
  - 1.4 Relationship of the SPMP to Other Documents
  - 1.5 *Evolution of the SPMP***
    - ◆ Re-issued per development phase
  - 1.6 Acronyms and Definition of Terms
  - 1.7 Applicable and Reference Documents



## FCSS SPMP Issue 2: Structure - 2

### 2. Project Organisation

#### 2.1 Process Model and Development Guidelines

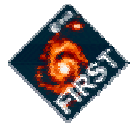
#### **2.2 Organisational Structure**

- ◆ Four teams in different organisations involved

#### 2.3 Development Team Interfaces

#### **2.4 Responsibilities of the FCSS Development Team**

- ◆ Support ILTs
- ◆ Support ISTs
- ◆ Support entering of Guaranteed Time Programme
- ◆ Support AO-1 entry and processing
- ◆ Support end-to-end tests
- ◆ Support FSC & ICC operator training
- ◆ Apply development standards
- ◆ Support development itself (sandboxes, CCS, SCR system)
- ◆ Provide pre-launch maintenance for system releases



## FCSS SPMP Issue 2: Structure - 3

- 2.5 FSC Development Team
- 2.6 HIFI ICC Development Team
- 2.7 PACS ICC Development Team
- 2.8 SPIRE ICC Development Team

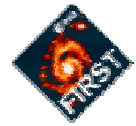
### 3. Managerial Process

#### **3.1 *Management Objectives, Priorities, and Prerequisites***

- ◆ Change is unavoidable but must be controlled

#### **3.2 *Risk Management***

- ◆ This development involves not insignificant risk
- ◆ Openly and pro-actively address these risks
- ◆ Actively involve the “customer” in the development
- ◆ Appears manageable for FCSS v0.1 with “staggered delivery”
- ◆ Most critical now : OO experience determines effort per WP



## FCSS SPMP Issue 2: Structure - 4

### 3.3 *Monitoring and Control Mechanism*

- ◆ Monthly Reporting
- ◆ Formal review ~once/year with appropriate documentation & board

### 3.4 Staffing Plan

## 4. Deliverables/Milestones

### 4.1 *End of Elaboration Phase Part 1: Status Summary*

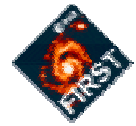
- ◆ Achieved all major objectives with a 4-6 week delay in some areas
- ◆ Led to extension of the FSC System to the FCSS
- ◆ Major remaining concern: Consolidation of Core Class Model

### 4.2 Interim Phase 1

### 4.3 Elaboration Phase Part 2

### 4.4 Further FCSS Development Phases

## 5. Work Packages, Schedules and Budgets



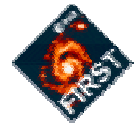
## FCSS v0.1 - Work Breakdown Structure - 1

### 21000 Management

- 21100 FSCDT Management
- 21200 HIFI FCSS Management
- 21300 PACS FCSS Management
- 21400 SPIRE FCSS Management

### 22000 FGS Engineering

- 22100 FSCDT FGS Engineering
  - 22110 Maintenance of System design for ILT
  - 22120 ILT integration and system test preparation
  - 22130 Definition of System design for IST
  - 22140 FGSSE Meetings
- 22200 HIFI FGS Engineering
- 22300 PACS FGS Engineering
- 22400 SPIRE FGS Engineering



## FCSS v0.1 - Work Breakdown Structure - 2

### 23000 Software Infrastructure

23100 Architectural Investigation

23200 Skeleton Prototype

23300 Development Iterations

23310 Object versioning

23400 Development Environment

### 24000 Subsystems

24100 Common Uplink System

24110 Architectural design & prototyping

24120 Development Iterations

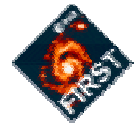
24130 Population of database (external WPs per instrument)

24200 TM Interface

24210 Architectural Analysis and Prototyping

24220 TM Interface: UCF-758 expansion and implementation (ILT)

242x0 Instrument Telemetry (external WPs per instrument & TM type)



## FCSS v0.1 - Work Breakdown Structure - 3

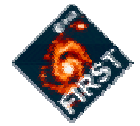
### 24000 Subsystems (cont'd)

#### 24300 IA/QLA

- 24310 Architecture and Skeleton Implementation (UCF-747)
- 24320 Product and process framework
- 24330 Interactive Analysis
- 24340 Export of FCSS components to local system
- 24350 HIFI IA (incl. lower level WPs)
- 24360 PACS IA (incl. lower level WPs)
- 24370 SPIRE IA (incl. lower level WPs)

#### 24400 MIB Ingestion

- 24410 MIB ingestor: Architecture
- 24420 MIB ingestor: Implementation of core command mnemonic data ingestion
- 24430 MIB ingestor: Implementation of core TM data ingestion
- 24440 MIB ingestor: Complete implementation (not for FCSS v0.1 - TBC)
- 24450 MIB ingestor: System testing
- 24460 CUS: Validation of BB wrt MIB update



## FCSS v0.1 - Work Breakdown Structure - 4

### 24000 Subsystems (cont'd)

24500 RTA TM I/F

24510 RTA TM Interface: Architectural analysis and prototyping

24520 RTA Interface: UCF-601 expansion and implementation (ILT)

24600 TC History Ingestion

24610 TC history ingestion: Architectural analysis and prototyping

24620 TC Interface: UCF-759 expansion and implementation (ILT)

24700 Interface to Test Control

### 25000 Testing

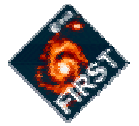
### 26000 Information Distribution

### 27000 Software Coordination

### 28000 Software Librarian

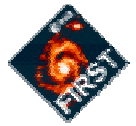
### 29000 Reviews





## **FCSS v0.1 - Work Breakdown Structure - 5**

- 2A000 Product Assurance**
- 2B000 Contingency, etc.**
- 2C000 Delivery & Transfer**
- 2D000 Browsers**
- 2E000 Configuration Control**
- 2F000 Storage/Retrieval I/Fs**



## FCSS v0.1: Schedule Analysis - 1

WPs not yet allocated/costed:

- 26000 Information Distribution
- 27000 Software Coordination
- 28000 Software Librarian
- Details of IA/QLA implementation (only “infrastructure” is costed)

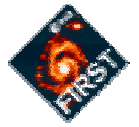
Between 1.1.2001 and 30.9.2001:

- 39 calendar weeks
- 31 effective working weeks (~80%)

Total estimated effort (pure development!):

- 182 effective man-weeks for FCSS v0.1 + 10% for unallocated/forgotten tasks.

⇒ Numerically, 6.5 developers could do the job by 1-Oct-2001



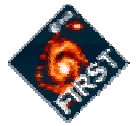
## FCSS v0.1: Schedule Analysis - 2

### Current allocation

- J. Brumfitt: 27 mw
- K. Galloway: 22 mw
- H. Siddiqui: 27 mw
- M. Thomas: 4 mw
- J-J. Mathieu: 22 mw
- Test. Engineer: 24 mw
- PACS 15 mw
- HIFI 14 mw
- SPIRE 27 mw (!!)

### Overhead (not shown in schedule)

- Management 1 fte
- System Engineering 1 fte
- Product Assurance .3 fte



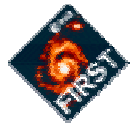
## FCSS v0.1: Schedule Analysis - 3

### Critical Paths

- CUS Architecture & Prototype ⇔ MIB ingestion
  - HIFI-Eng1 is only available 50% but 70% loaded from Jan to end-May 2001
  - Throw in M. Thomas to support this critical subsystem
- IA Architecture & Prototype

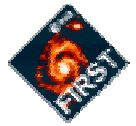
### Other Considerations

- OO development: Depending on who does a particular task there could easily be a factor 2-3 difference in development effort
- Training and frequent exchanges between developers are a **MUST**
- Schedule needs some slack and we should not attempt to over-optimize it in view of the existing uncertainties



## FCSS v0.1: Schedule Analysis - 4

Release	Need date	Predicted
FCSS v0.1 uplink	1-Oct-2001	28-Sep-2001
FCSS v0.1 uplink & downlink	1-Dec-2001	9-Nov-2001
FCSS v0.1 full	1-Apr-2002	25-Jan-2002



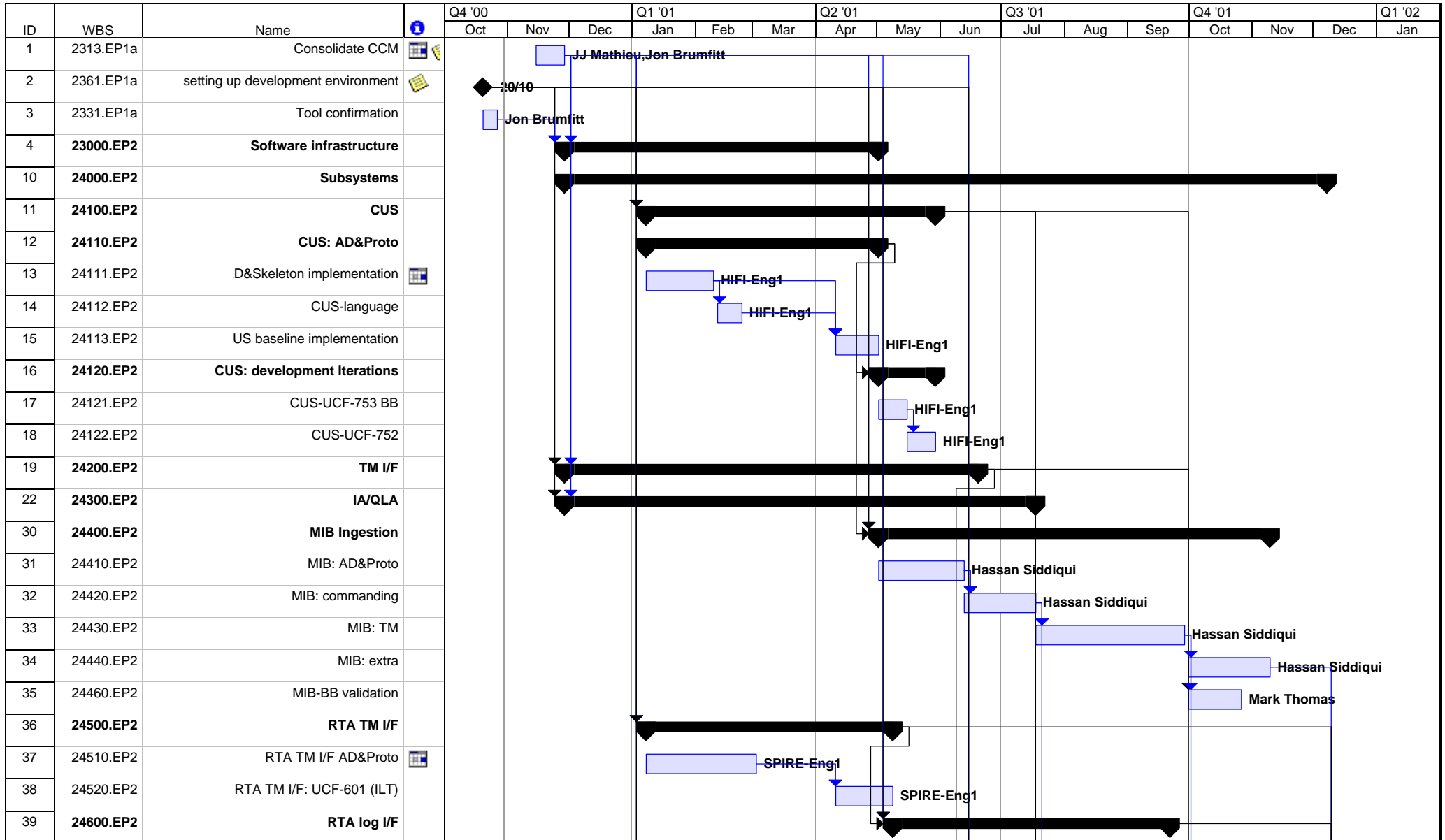
# FCSS v0.1: Interfaces

ICD	Custodian	Trigger	Date
MIB for ILT	PI/EGSE-WG	OHB, PRR, KJK	Feb 2001
Science TM data fields	PIs	OHB, PRR, TGD	Apr 2001
OOL data	SPIRE		TBD
NRT TM I/F	FSCDT		Mar 2001
TC History	SPIRE		TBD
FCSS-OBS I/F	???		???
FCSS-RTA TM I/F	SPIRE		TBD
RTA-FCSS data I/F	SPIRE		TBD
FCSS-MIB I/F	FSCDT		Apr 2001
Test Procedure I/F	PACS		TBD
RTA events/TM params	PACS		TBD

## **Annex 4**

### **FCSS Schedules**

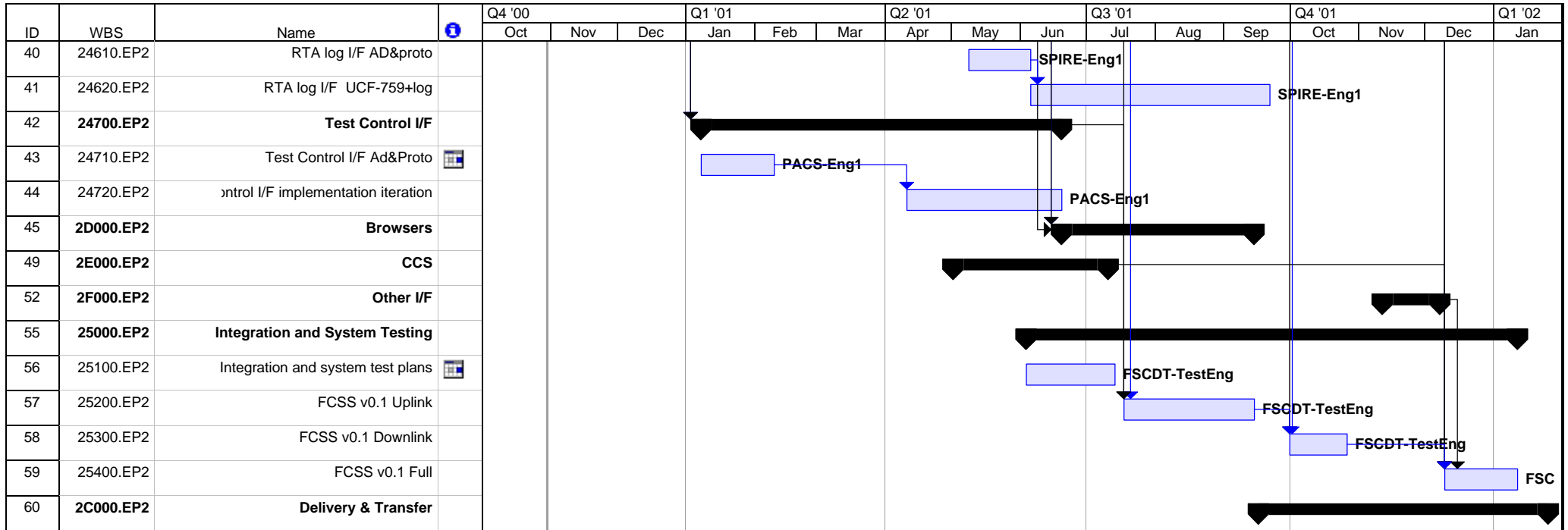
**J.R.Riedinger/FCSDT - ESA**



Project: 001025.FCSSV0.1  
Date: Mon 30/10/00

Task		Milestone		Rolled Up Split		External Tasks	
Split		Summary		Rolled Up Milestone		Project Summary	
Progress		Rolled Up Task		Rolled Up Progress			





Project: 001025.FCSSV0.1 Date: Mon 30/10/00	Task		Milestone		Rolled Up Split		External Tasks	
	Split		Summary		Rolled Up Milestone		Project Summary	
	Progress		Rolled Up Task		Rolled Up Progress			

## **Annex 5**

**EGSE Activities, Work Packages and Status**

**O.H.Bauer/MPE**



# FCSS-EGSE Co-ordination Meeting

## EGSE Working Group

Otto H. Bauer



- EGSE WG Terms of Reference
- Overall Status
- Staggered Development
- Distribution of Work Packages



- Terms of Reference

For all phases (ILT, IST, ICCatMOC) the EGSE WG members shall

- Agree on requirements and specifications for different EGSE configurations,
- Agree on overall design which ensures smooth transition,
- Agree on distribution of work packages for development, testing, integration and maintenance of different EGSE elements,
- Monitor progress,
- Witness acceptance tests,
- Monitor integration of overall system,
- Liaise closely with other development teams.



- Documentation Status

- EGSE-ILT URD, Draft 1, 04-Oct-2000
- RTA URD, Draft 2, 10-Oct-2000

- Agreements

- Use of SCOS 2000
- Evaluation of PROBA Router
- Evaluation of PROBA Test Control Environment
- Evaluation of MIB Editors
- 1553B + TLP development (RAL or industry ?)



- Staggered Development

- CDMS (1553B + TLP) 15-May-2001
- TEI 01-Mar-2001
- Router + TM/TC Interface 01-Mar-2001
- SCOS 2000 (without OBSM) 01-Mar-2001
- with OBSM 01-Oct-2001
- OBSM Facility -> SCOS 2000 01-Oct-2000
- > FCSS 01-Apr-2002
- MIB Editor -> SCOS 2000 01-Mar-2001
- > FCSS 01-Oct 2001
- Test Control -> SCOS 2000 01-Jun-2001
- > FCSS 01-Oct-2001
- TM I/F -> FCSS 01-Dec-2001
- OBS I/F, RTA I/F, TCH I/F 01-Apr-2002



- Distribution of Work Packages

- |                            |                                   |
|----------------------------|-----------------------------------|
| – CDMS (1553B + TLP)       | SPIRE? To be discussed in CDMS WG |
| – TEI                      | HIFI                              |
| – Router + TM/TC Interface | HIFI                              |
| – SCOS 2000                | all                               |
| – OBSM Facility            | IFSI                              |
| – MIB Editor evaluation    | all                               |
| – Test Control             | PACS                              |



## Proposal from O.H.Bauer re. next steps in 1553B and Transfer Layer Protocol

From: IN%"ohb@mpe.mpg.de" 19-OCT-2000 16:58:36.71  
To: IN%"tpassvog@estec.esa.nl", IN%"ohb@mpe.mpg.de"  
CC:  
Subj: 1553B + Transfer Layer Protocol

Dear Thomas,

During the last FIRST On-board S/W Meeting at IFSI, Oct 13, the three FIRST Instrument Teams agreed on a course of action concerning the implementation of the Transfer Layer Protocol.

The main assumption is that Project is willing to help us in preparing the specifications, preparing the ITT (if necessary), accompanying the development and to participate in the acceptance test and finally sign off the whole development.

In addition we would like to come back to Stephan's idea of a test bed provided by Project.

The course of actions could be:

- (1) Review and agree on the specifications (draft available from HIFI) during the next CDMS meeting in Orsay, Nov 3.
- (2) RAL as one of the potential bidders -in this case we would not need an ITT-should check the specifications and come back we a proposal on costs and schedule.
- (3) If RAL will no accept, we intend to have a meeting with the other bidders (CRISA, Gavazzi, Laben, Astrium, Satellite Services) mid November.
- (4) We then will issue an ITT (Statement of work + specifications) by end November, in agreement with Project!
- (5) By end of November we should agree on an Acceptance Test Plan.
- (6) The selection of the company could take place before Christmas. Selection criteria will also be schedule and costs.
- (7) Before mid April 2001 Project should provide a test bed.
- (8) The Acceptance test should take place mid May 2001.

We would like to ask you if Project could agree to such a procedure and if we could formulate all that in a Letter of Agreement, signed by the five instrument teams and Project.

We still don't want to exclude that Project provides the TLP which from our point of view would be the preferred solution.

Best regards, Otto

## **Annex 6**

**PACS ICC Status**

**O.H.Bauer/MPE**



## FCSS-EGSE Co-ordination Meeting

### PACS ICC

Otto H. Bauer



# FIRST-PACS ICC

- Documentation Status
- Personnel
- Work Packages
- Schedule



- Documentation Status

- ICC URD V1.0
- EGSE-ILT URD, Draft 1, 04-Oct-2000
- RTA URD, Draft 2, 10-Oct-2000

Available end November

- ICC SSD V0.1
- SIP V1.0
- SPMP V1.0



# FIRST-PACS ICC

- Personnel I

- Management

– O.H. Bauer	MPE	ICC Manager	0.4 fte
– D. Lutz	MPE	Science Co-ordinator	0.2
		ICC Deputy	
– R. Huygen	KUL	S/W System Engineer	0.8
		ICC Deputy	

- Support

– N. Heinecke	MPE	H/W System Support	0.8
– S. Osterhage	MPE	S/W System Support, Java	0.8
– H. Baumgartner	MPE	Netzwerk	0.2
– W. De Meester	KUL	WWW	0.3
– C. Becker	MPE	Clerical Support	0.4



- Personnel II

- Software Development

– M. Benedettini	IFSI	Instrument Modes	0.8
– H. Feuchtgruber	MPE	Operations	0.6
– U. Klaas	MPIA	Calibration from Mar 2001	0.5
– S. Pezzuto	IFSI	O/B Software Maintenance	0.3
– W. Schmidt	UJena	Test Software	0.8
– E. Sturm	MPE	Scientific Data Analysis	0.3
– B. Vandenbussche	KUL	(at present PhD) from Sep 2001	0.8
– E. Wieprecht	MPE	Instrument Data Analysis	0.6
– E. Wiezorrek	MPE	Data Model, SCOS 2000	0.8

- New ICC members (01-Jan-2001) : Training !!

- NN-1-MPE, NN-2-MPE, NN-1-KUL, NN-2-KUL, NN-3-KUL
    - R. Claudi (Padua, 0.3), S. Mazzanti (OAMP, 0.2)



# FIRST-PACS ICC

- Work Packages

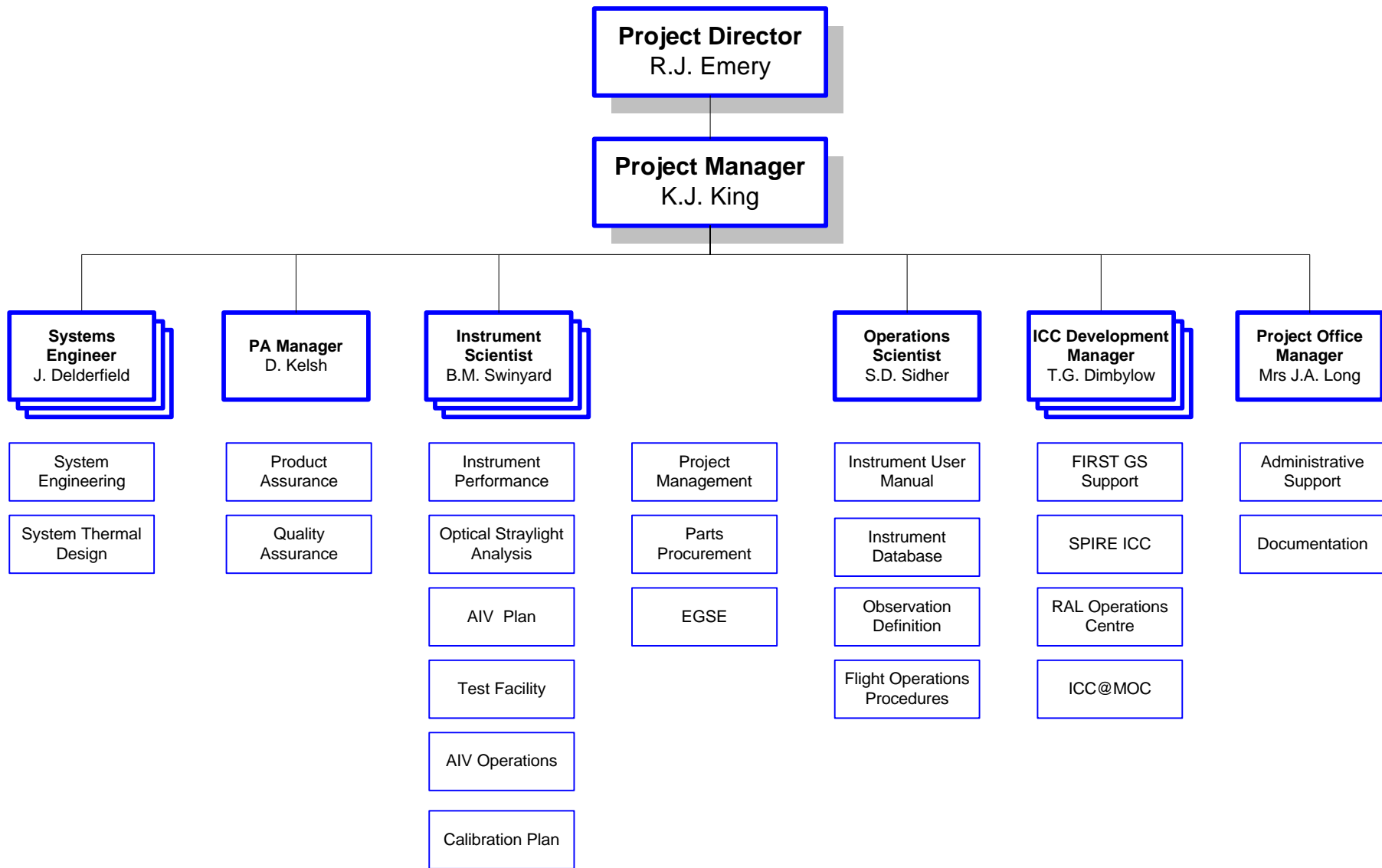
- Test Control, Test Control I/F (FCSS), ICDs (FCSS) ERW, EKW, RC
- MIB Editor MB
- SCOS 2000 ERW, MB
- OBSM Facility SP
- TEI, Router + TM/TC Interface, CDMS WS
- IA/QLA Development EKW,SO,MB,ES,RC
- Monitoring of IA interface to Core Model development RH, EKW
- Monitoring of CUS development RH, FGB
  
- ICC Development Environment NOH, SO, RH
  
- PACS MIB FGB
- CUS Building Blocks,... FGB, UK, SP
- Filling of MIB, CUS SM



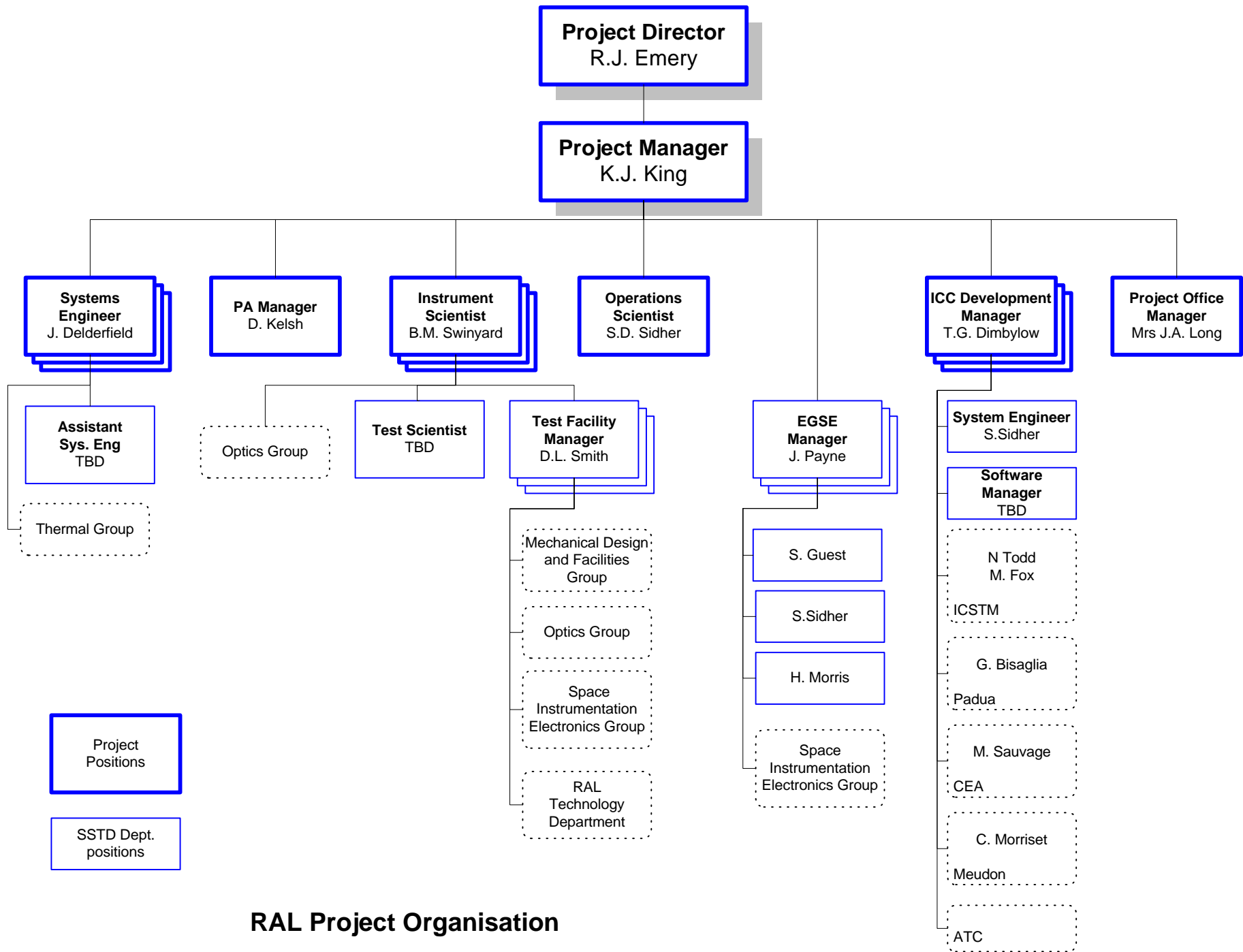
**Annex 7**

**SPIRE EGSE Development Plan**

**K.J.King/RAL**



**RAL Project Responsibilities**



**RAL Project Organisation**

## EGSE Related Work Packages

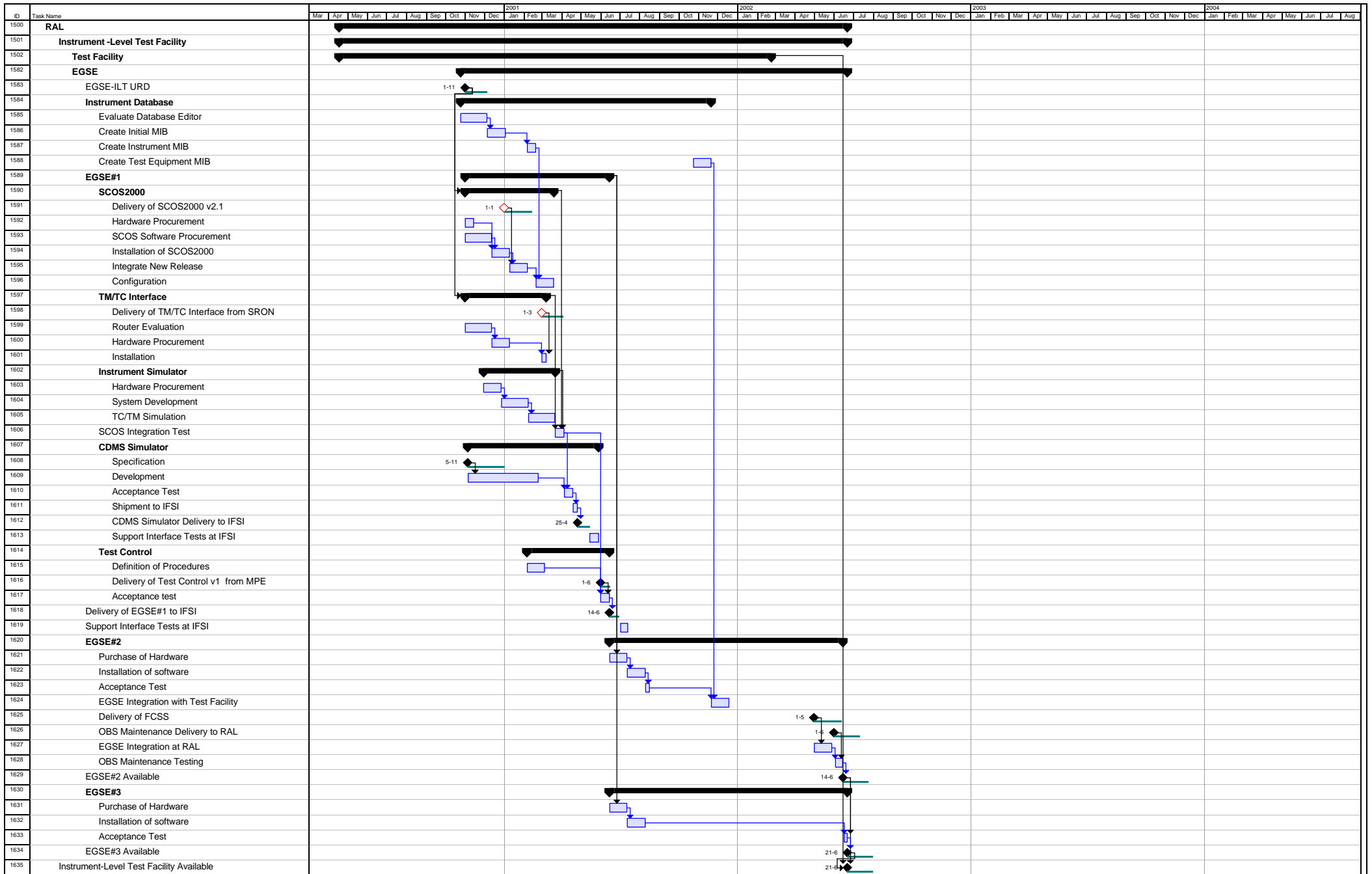
<b>FSZY0X1000</b>	<b>EGSE</b>
FSZY0x1100	SCOS2000
FSZY0x1200	TM/TC Interface
FSZY0x1300	CDMS Simulator
FSZY0x1400	Test Facility Control System/TEI
FSZY0x1500	Test Control
FSZY0x1600	MIB Editor
FSZY0x1700	Interim Archive/Retrieval System
FSZY0x1800	Telemetry Generator
FSZY0x1900	On Board Software Maintenance

<b>GFS12X2000</b>	<b>Instrument Databases</b>
GFS12X2100	Instrument MIB
GFS12X2200	Test Facility MIB

<b>FSZY0X2000</b>	<b>Quick Look Facility</b>
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	<b>FCSS Development</b>
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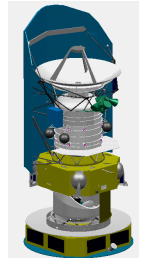
	<b>CDMS Simulator Acceptance</b>	<b>DPU Interface Tests</b>	<b>DPU Acceptance</b>	<b>WE Acceptance</b>	<b>CQM Testing</b>	<b>AVM Verification</b>
	<b>01 Apr 01</b>	<b>15 May 01</b>	<b>1 Jun 02</b>	<b>1 Aug 02</b>	<b>1 Oct 02</b>	<b>20 Feb 03</b>
<b>EGSE-ILT</b>						
SCOS2000	0	0	0	0	0	0
TM/TC Interface	0	0	0	0	0	0
CDMS Simulator	0	0	0	0	0	0
Test Facility Control System/TEI					0	
Test Control			0	0	0	0
MIB Editor	0	0	0	0	0	0
Interim Archive/Retrieval System	0	0	0	0		
Telemetry Generator	0					
On Board Software Maintenance			0	0	0	0
Instrument MIB	0	0	0	0	0	0
Test Facility MIB			0	0	0	0
<b>FCSS</b>						
ODBMS			0	0	0	0
CUS			0	0	0	0
IA/QLA					0	0
TM Interface			0	0	0	0
TC History Interface					0	0
MIB Interface			0	0	0	0
Test Control Interface			0	0	0	0
RTA Interface					0	0



## **Annex 8**

### **Overall Responsibilities – ILT System**

#### **A.Heske/ESA Project**

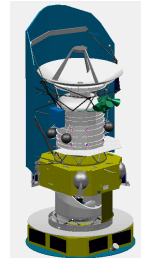


# FCSS - EGSE Coordination Meeting ESTEC

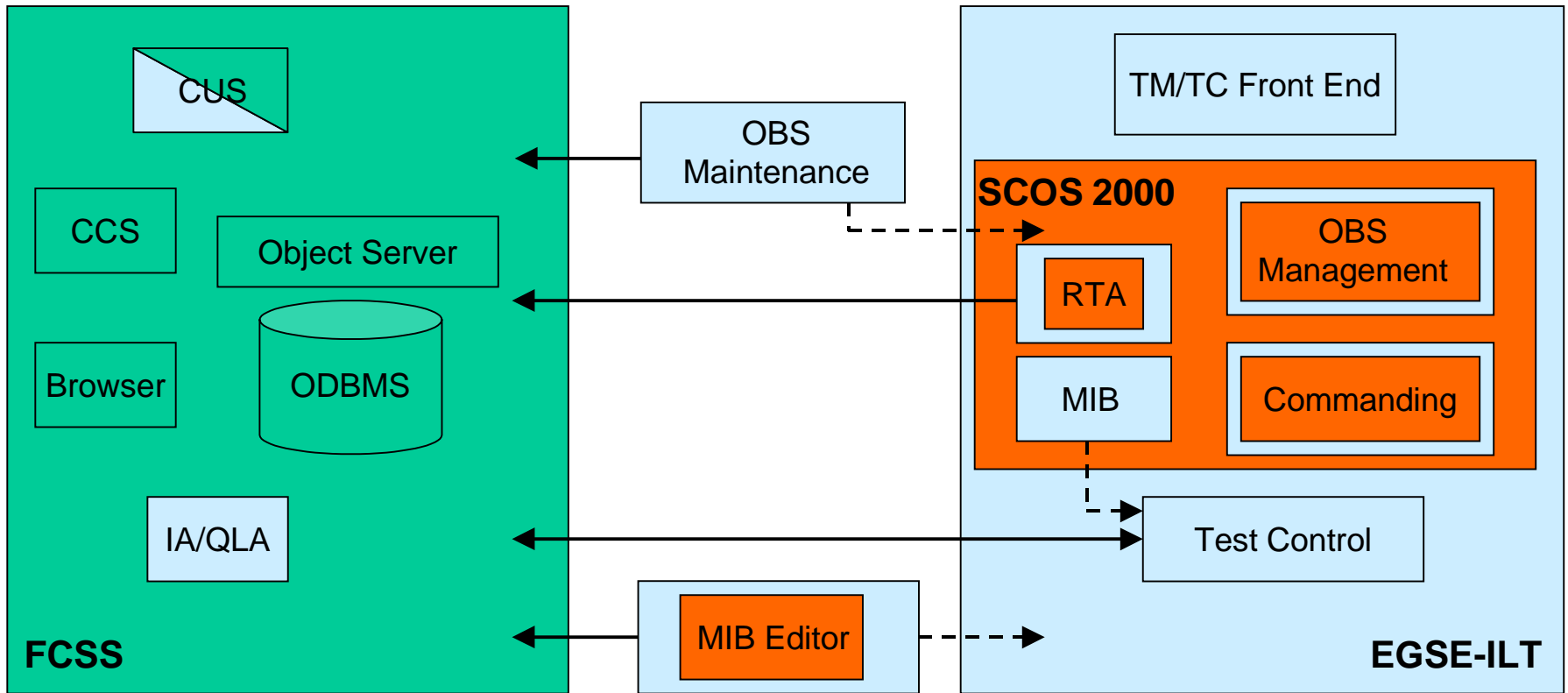
## Responsibilities ILT System

P. Estaria, A. Heske, F. Wechsler





## Overall Responsibilities - ILT System



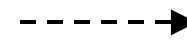
Responsibilities:

FSCDT

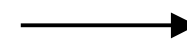
ESOC

Instrument  
Teams

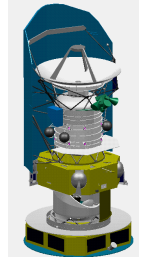
Interfaces:



Intermediate



final



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## Overall Responsibilities

- Although ESA delivers various components (e.g. SCOS 2000 and associated tools, FCSS components) to the ILT system implementers, the FIRST/Planck Project is not responsible for **any** of the integration and validation tasks associated with this system.