Technical Note

SPIRE ICC Workpackage Allocation
Ken King

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Issue:	Issue 1.0
Date:	24th November 2003
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At the Consortium meeting in October, inputs were requested from ICC contributors to identify ICC workpackages for which they felt they could make a significant contribution. From the inputs we have received Seb and I have assigned groups to lead each of the workpackages (see table below).

Most of them fit in with the wishes expressed in the inputs we received, but in some cases we have had to assign work to groups either to take advantage of the effort available at particular sites or to balance the work between sites.

Workpackage Title	Respon-sible	Comments
Overall ICC Management Activities	**RAL**	
Product / Quality Assurance	**RAL**	
ICC System Engineering	**RAL**	Continuation of current work
Herschel Ground Segment Development	**RAL**	Continuation of current work
ICC Operations during Development	**all**	RAL will provide a central ICC system containing data from instrument tests and allowing access from external ICC users. Other institutes are responsible for providing and maintaining their own hardware/software to access this facility.
Information dissemination	**ICSTM**	
ICC Design	**RAL**	Contributions will be made from all parties
Training	**RAL**	All institutes are responsible for general training of their staff as required. RAL and ICSTM will organise training on the use of ICC systems at relevant times.
Observations and Science Data Reduction Team	**ICSTM**	
Operations Team	**RAL**	ICSTM should participate in the testing, and analysis of data from tests associated with instrument operating modes
ICC Software Development Team	**RAL**	Contributions will be expected from all institutes
Calibration Team	**RAL**	RAL is the current de facto leader. Input swill be expected from all groups participating in data processing definition
Instrument Users Manual	**RAL**	
Instrument Observations	**ICSTM**	
Ground Testing of Instrument Observations	**ICSTM**	RAL will contribute by defining test procedures and executing them based on the test specifications from ICSTM. ICSTM will analyse the data
Simulation of Instrument Observations	**Sussex??**	Most of the simulation effort will be made by Cardiff outside the remit of the ICC. Stockhom could contribute by providing the layer to generate TM from the simulator timelines CEA, and Lethbridge have offered contributions
Time Estimator	**CEA**	
SPIRE Contribution to the HCSS	**RAL**	We would like to increase the contribution by Italy to this WP
Software Development Infrastructure	**RAL**	Completed already

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Quick-Look Analysis	**RAL**	Large contributions already made by ICSTM, CEA and Padua. ICSTM should continue to contribute the majority of the effort.
IA Development System	**RAL**	Continuing with the RAL/ICSTM work on this
IA Access Tools	**RAL**	
Engineering Data	**Padua**	
Detector Response	**IPAC**	IPAC are already working on aspects of this (detector load curves, noise, time constants)
BSM	**Padua**	
Averaging	**ICSTM**	
Deglitching	**Lethbridge**	There is some scope for real support in this area from Kent. CEA and ICSTM have also offered contributions.
Pointing	**ICSTM**	**Or IAC????**
Flat Fielding	CEA	ICSTM can make a contribution to this WP
Fourier Transformation	**Lethbridge**	LAM would like to contribute. They could especially help in the area of dealing with SMEC data and analysis of results.
SCAL	**IAC**	It is not clear who should lead this. Both LAM and Lethbridge have indicated interest as it directly relates to FTS data processing IAC may have an interest as a small standalone WP?
Telescope	**CEA**	
Spectral Response	**Lethbridge**	LAM would like to contribute in the area of FTS processing
User Products	**ICSTM**	CEA should share work on this (PSF determination)
Scan Mapping	**ICSTM**	CEA could make a contribution to this
Quality Control 'Pipeline'	**ICSTM**	
Photometric Data Analysis	**ICSTM**	ATC have offered to help with this IPAC could also make a contribution
Spectrometric Data Analysis	**CEA**	IPAC, LAM & Lethbridge could make contributions to this
Instrument Simulator		
Provision of Serendipity Mode Processing Software		
Key Programs		
Provision of ILT System(s) – includes integration of ILT systems	**RAL**	Mostly complete
Produce validation software to validate scripts and observation requests		
Produce Command Validator		
Populate Calibration Database (ILT data)		
Support to ILT Tests	**RAL**	
Provision of IST System(s)	**RAL**	
Populate Calibration Database (IST data)		
Support to IST Tests	**RAL**	
ICC Operations Centre	**RAL**	
DAPSAS (UK) Centre	**ICSTM**	

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DAPSAS (Fr) Centre	**CEA**	
OBS Maintenance Facility	**IFSI**	
ICC Integration	**RAL**	
Ground Segment Integration	**RAL**	
Ground Segment Testing	**RAL**	
Provision of Commissioning Phase System (ICC@MOC)	**RAL**	
Commissioning Phase Support	**RAL**	

Notes:

1. The group identified in the 'Responsible' column in the table will be responsible for all aspects of the implementation of the workpackage. This does not mean that they have to provide all the effort necessary for this, but that they are responsible for coordinating the effort available for this work in order to complete it. We have indicated in the table other groups who have shown interest in contributing to the workpackages even though they may not have any effort formally available.

2. Each of the responsible groups should nominate a Manager who will be responsible for the implementation of all of the workpackages allocated to the group (suggested names are given below). The Manager should have the authority to control the resources available to meet the required deliveries and milestones The functions of the Manager are:

   - to prepare an agreed plan, including schedule and resources allocation , for providing the required outputs and meeting the required milestones.
   - to monitor the progress of work and use of resources and take steps to maintain the delivery dates
   - to coordinate the use of external resources (usually staff) in the implementation of the workpackages
   - to report progress to the ICC Development Manager (and SPIRE project as necessary)
   - to present the status of the workpackages at ICC reviews.

Contacts

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The following table gives a summary of the allocated workpackages and a comparison of the estimated effort required against the available effort for each of the major ICC contributors.

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Workpackage Staff Estimates

WBS	Task Name	RAL	ICSTM	CEA	LAM	Italy	Canada	Sweden	Spain	USA	Others	SY
GHS1 - ICC Development Phase Workpackages												
GHS11	**ICC Continuous Tasks**	**7.06**	**2.98**	**1.08**	**0.00**	**0.23**	**1.70**	**0.00**	**0.05**	**0.00**	**0.18**	**13.26**
GHS11X1000	Overall ICC Management	2.00									0.18	2.18
GHS11X2000	ICC System Engineering	0.43										0.43
GHS11X3000	Product/Quality Assurance	0.75										0.75
GHS11X4000	Herschel Ground Segment Development	0.40										0.40
GHS11X5000	ICC Operations during Development	1.00	0.10	0.10								1.20
GHS11X6000	Information Dissemination		0.05									0.05
GHS13X2000	ICC Design	0.03	0.03	0.03		0.03						0.10
	Training	0.30	0.30	0.20		0.10	0.20		0.05			1.15
	Observations and Science Data Reduction Team		0.40			0.10						0.50
	Operations Team	1.00	2.00				1.50					4.50
	ICC Software Development Team	0.40	0.10									0.50
	Calibration Team	0.75		0.75								1.50
GHS12	**Generation of Instrument Information**	**1.85**	**1.80**	**0.60**	**0.00**	**0.20**	**0.70**	**0.30**	**0.05**	**0.05**	**0.30**	**5.85**
	Instrument Users' Manual	0.65										0.65
	Instrument Observations	0.20	0.30	0.10		0.20	0.20	0.05	0.05	0.05	0.05	1.20
	Ground Testing of Instrument Observations	1.00	1.50				0.50					3.00
	Simulation of Instrument Observations						0.00	0.25			0.25	0.50
	Time Estimator			0.50								0.50
GHS13	**Development Activities**	**1.55**	**6.10**	**3.30**	**0.75**	**3.05**	**3.75**	**0.00**	**1.50**	**2.00**	**0.25**	**22.25**
GHS13X1100	SPIRE Contributions to HCSS	1.00	1.00	0.60		1.40						4.00
GHS13X3000	Software Development Infrastructure											0.00
GHS13X5000	Quick-Look Analysis	0.20	1.00	0.30		0.40						1.90
	IA Development System	0.25	0.25									0.50
	IA Access Tools	0.10										0.10
	Engineering Data					0.50						0.50
	Detector Response									2.00		2.00
	BSM					0.75						0.75
	Averaging		0.25									0.25
	Deglitching						0.50				0.25	0.75
	Pointing		1.50									1.50
	Flat Fielding		0.10	0.65								0.75
	Fourier Transformation					0.50	1.50					2.00
	SCAL					0.00	0.00		1.50			1.50
	Telescope			0.75								0.75
	Spectral Response		0.25			0.00	1.75					2.00
	User Products		1.00	1.00								2.00
	Scan Mapping		0.25	0.00								0.25
	Quality Control Pipeline		0.25									0.25
	Photometric Data Analysis		0.25							0.00		0.25
	Spectrometric Data Analysis					0.25	0.00			0.00		0.25
	Instrument Simulator											0.00
	Provision of Serendipity Mode Processing Software											0.00
	Key Programs											0.00

WBS	Task Name	RAL	ICSTM	France	France	Italy	Canada	Sweden	Spain	USA	???	SY
GHS2 - Support to Instrument Team Activities												
GHS21	**ILT Support**	**1.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.50**	**0.00**	**0.00**	**0.00**	**0.00**	**1.70**
GHS21X1000	Provision of ILT System(s)	0.20										0.20
GHS21X2000	Provision of Validation Software											0.00
GHS21X3000	Provision of Command Validator											0.00
GHS21X4000	Populate Calibration Database (ILT data)											0.00
GHS21X5000	Support to ILT Tests	1.00					0.50					1.50
GHS22	**IST Support**	**0.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.60**
GHS22X1000	Provision of IST System(s)	0.20										0.20
GHS22X2000	Populate Calibration Database (IST data)											0.00
GHS22X3000	Support to IST Tests	0.20					0.20					0.40

WBS	Task Name	RAL	ICSTM	France	France	Italy	Canada	Sweden	Spain	USA	???	SY
GHS3 - Operations Preparation												
GHS31	**Facilities**	**0.20**	**0.20**	**0.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.40**
GHS31X1000	ICC Operations Centre	0.20										0.20
GHS31X2000	DAPSAS (UK) Centre		0.20									0.20
GHS31X3000	DAPSAS (Fr) Centre											0.00
GHS31X4000	On Board Software Maintenance Facility					1.00						1.00
GHS33	**Integration and Test**	**0.90**	**0.00**	**0.00**	**0.00**	**0.00**	**0.70**	**0.00**	**0.00**	**0.00**	**0.00**	**1.60**
GHS33X1000	ICC Integration	0.30					0.10					0.40
GHS33X2000	Ground Segment Integration	0.30					0.30					0.60
GHS33X3000	Ground Segment Testing	0.30					0.30					0.60
GHS34	**Commissioning Phase**	**0.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.50**
GHS34X1000	Provision of Commissioning Phase System (ICC@MOC)	0.25										0.25
GHS34X2000	Commissioning Phase Support	0.25										0.25

		RAL	ICSTM	France	France	Italy	Canada	Sweden	Spain	USA	???	SY
	Totals	13.66	11.08	4.98	0.75	4.48	7.55	0.30	1.60	2.05	0.73	47.16
	Available	7.70	10.30	8.80	4.00	5.20	6.75	1.30	2.20	4.50	0.70	51.45

Want to lead
Will contribute