



Flight Software Branch Code 582

**Technical Status Review to ISD
August 25, 2004**

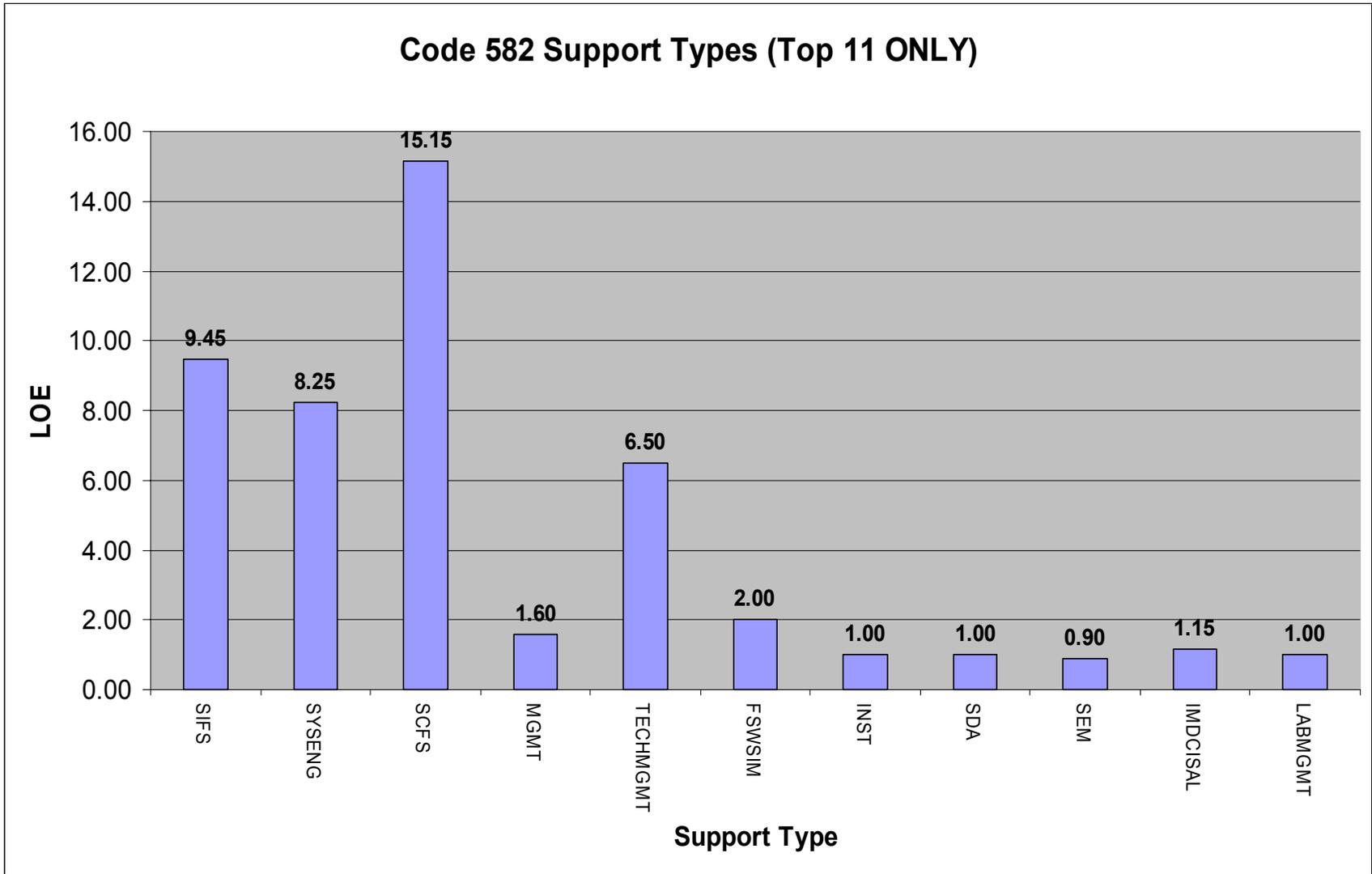
**Elaine Shell, Branch Head
Ray Whitley, Associate Branch Head
Kequan Luu, Associate Branch Head**



Staff Changes affecting the 580 Resource Model July '04 through August '04

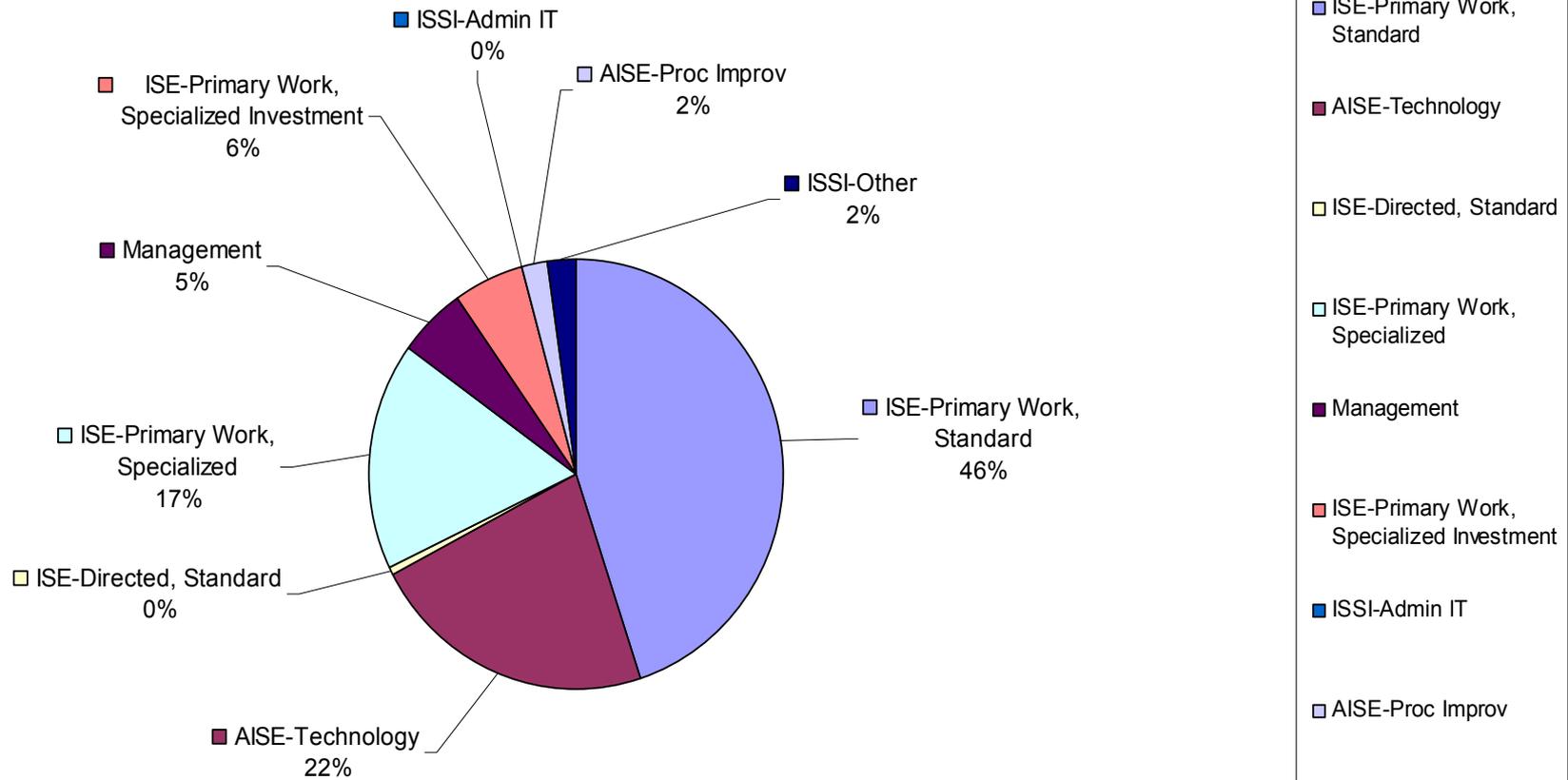
	'From' Project		'From' Category	'To' Project	'To' Category
Maureen Bartholomew	0.50	GPM	ISE Primary Std.	cFE	AISE Tech.
Tom Clement	0.70	EOS/GPM	ISE Primary Std.	cFE	AISE Tech.
Tina Fredo	0.10	SEM	AISE Proc. Improv.	-	resigned
Clara Hollenhorst	1.00	JWST	ISE Primary Std.	-	moved to 561
Lynn Miles	1.00	-	-	ST-5	ISE Primary Std.
Rick Sabatino	1.00	-	-	JWST SSM	ISE Primary Std.
Eva Stattel	0.5	582	ISSI-Admin IT	cFE	AISE Tech.

582 Staffing Overview



582 Staffing Overview

Code 582 Business Types



- ISE-Primary Work, Standard
- AISE-Technology
- ISE-Directed, Standard
- ISE-Primary Work, Specialized
- Management
- ISE-Primary Work, Specialized Investment
- ISSI-Admin IT
- AISE-Proc Improv
- ISSI-Other

FSW DEVELOPMENTS

	Jun	Jul	Aug	ISD Review	CS	CS Chg	SSC	Status
JWST ISIM FSW Development	G	G	G	Sep-01	1.5	0	17.0	<ul style="list-style-type: none"> ▪ C9 build test completed ahead of schedule. C10 integration test begun. ▪ Supported CMMi pre-assessment.
ST-5	G	G	Y	Oct-02	2.0	-0.5	1.0	<ul style="list-style-type: none"> • 1 SSC tester resigned. Test Lead (C. Firman timeshared with SDO) • Project Delta-CDR held July 21-22, 1 RFA affects FSW • ACS DynSim has been malfunctioning for more than a month, threatening FSW deliveries and start of AT (fixes completed 8/20, verification on going). •Supported CMMi pre-assessment.
Swift BAT	G	G	G	Jun-02	3.0	-1.5	3.5	<ul style="list-style-type: none"> • “Last” FSW build installed just before ship. • FSW testbed moved to building 1.
SDO	G	G	Y	Aug-04	7.0	+0.5	4.5	<ul style="list-style-type: none"> • Completed Common SDN FSW build 2.1 • Supported CMMi pre-assessment • Working staffing issues • Preparing FSW PDR 9/14 – 15
GPM	G	G	G	Aug-04	1.5	-1.3	1.0	<ul style="list-style-type: none"> • 6/25, Project was directed by HQ to do a full-RSDO implementation. • Working with project on hybrid options. • FSW team to complete prototype of cFE, CFDP, and document Ipsec study by end of fy04.

FSW SYSTEMS MANAGEMENT

	Jun	Jul	Aug	ISD Review	CS	CS Chg	SSC	Status
JWST ISIM and SI FSW Management	G	G	G	Jun-01	2.0	0	3.5	<ul style="list-style-type: none"> • Michael Aguilar moving to 443 project support. • Working trades of supporting FGS in ISIM FSW. • ISIM L3 requirements in rework to accommodate event driven changes.
JWST Spacecraft FSW	G	G	G	Oct-02	1	+1	.5	<ul style="list-style-type: none"> • Rick Sabatino began as 582 Term 8/23
Swift FSW	G	G	G	Jun-02 Jun-04	1	0	0	<ul style="list-style-type: none"> • Supporting launch site I&T • Developed list of recommended Observatory tests • Completed Operations Agreement. • Clarified post-launch FSW CCB structure.
SDO	G	G	G	Apr-04 Aug-04	1	0	0	<ul style="list-style-type: none"> • Delivered SDN FSW to EVE instrument.
GPM	G	G	G	Aug-04	.5	0	0	<ul style="list-style-type: none"> • Reviewing GMI proposals • Working s/c to SI ICD and SOW for RSDO RFP. • Working on Software Management Plan that complies with NPR 7150
NPP	G	G	G		1	0	.5	<ul style="list-style-type: none"> • S. Leake attended the BATC SC Sim design peer review, 8/23-24 in Boulder, CO.
GLAST	G	G	G		0	0	1.5	<ul style="list-style-type: none"> • LAT staffing is improving. • Schedule remains difficult. • Need s/c FSW oversight person

IMDC and ISAL

Formal Studies	Jun	Jul	Aug	ISD Review	CS	CS Chg.	SSC	Status
IMDC	G	G	G		0.5	0.0	0.0	Supported Con-X, PhyLM, SIRICE
ISAL	G	G	G		0.5	0.0	0.0	Supported PHyLM, Lunar Gene, CLPP
<p>Total IMDC Missions Supported = 53 (since 4/01)</p> <p>Total ISAL Instruments Supported = 20 (since 12/03)</p>								

FSW Proposals

Proposals	Jun	Jul	Aug	ISD Review	CS	CS Chg.	SSC	Status
SPIRIT			G		0.6	+0.6	0.0	<ul style="list-style-type: none"> •Art Ferrer & L. Hallock started supporting, kickoff meeting held 8/16 •Proposal study is expected to be completed by Dec '04
LOLA	Y	Y	Y		0.2	+0.1	0.5	<ul style="list-style-type: none"> •Supported Red Team review. •Identified significant deficiency in C&DH hw/sw system engineering within LOLA Proposal •FSW proposal reworked & submitted to project
LRO	G	G	G		0.2		0.0	<ul style="list-style-type: none"> •Low activity.
HRV	G	G	G		0.1	+0.9	1.0	<ul style="list-style-type: none"> •A. Ferrer, B. Rehm & L. Hallock supported SEB. •FSW System Mgr. CPP in process. •Plan to discuss fy05 staffing with B. Scott.
LISA	Y	Y	Y		0		0.0	<ul style="list-style-type: none"> •Met with project system engineer & scientist to determine needs. Funding not available until fy05 (term-hire workable)

FSW Advances

	Jun	July	Aug	ISD Review	CS	CS Chg.	SSC	Status
Core FSW Executive (cFE)	Y	G	G		4.3	+1.5	1	<ul style="list-style-type: none"> Prototype demo scheduled for mid September. Requirements document out for review. Formal test team taking shape.
OS Abstraction	G	G	G		.8	-.4	0	<ul style="list-style-type: none"> VxWorks done. Linux ports in test (MR2). In process of being Open Sourced.
cFE AP Plug & Play (GMSEC)	Y	Y	G		0.1		1	<ul style="list-style-type: none"> Target end date Nov. 1 (started late). Picking up progress.
CCSDS SOIS	G	G	G		0.1		0.2	<ul style="list-style-type: none"> Monthly telecons. Red Book work continues.
CFDP	G	G	G		1			<ul style="list-style-type: none"> To be tabled after prototype (Sept.), with requirements document, user's guide & code.
Ethernet/IP	G	G	G	Dec-03	0.1		0.8	<ul style="list-style-type: none"> On schedule. Performance testing done. Code review scheduled in late August.
MR2	G	G	Y		1.7	+ 1.0	0	<ul style="list-style-type: none"> FPGA incompatibility had impact on s/w schedule. Prototype now using G3, not PPC. 9/13/04 target is very tight.

FSW Advances (2 of 2)

	Jun	Jul	Aug	ISD Review	CS	CS Chg.	SSC	Status
FSW Reuse Library	G	Y	Y		0.1	0	0.5	<ul style="list-style-type: none"> Limited progress due to lack of CS time. Will try to put contractor more in charge.
Software-only Dynamic Simulator (GMSEC)	G	G	G		0.1		1	<ul style="list-style-type: none"> Progressing well. Only a few software modules remain to be implemented. Integration test w/ GDS hardware will start soon.

Acronyms

ACS	Advance Camera for Surveys (HST)	NICMOS	Near Infrared Camera & Multi-Object Spectrometer (HST)
ATMS	Advance Technology Microwave Sounder (NPP)	NIRCam	Near InfraRed Camera (JWST)
AXP	Advanced X-ray Polarimeter	JWST	James Web Space Telescope
BAT	Burst Alert Telescope (Swift)	NPP	NPOES Preparatory Project
Cassini CAPS	Cassini Plasma Spectrometer	OOO	Organic Origins Observatory
Cassini CIRS	Cassini Composite Infrared Spectrometer	PSU	Penn State University
IC&DH	ISIM Command & Data Handling (JWST)	SAMPEX	Solar Anomalous & Magnetospheric Particle Explorer
CCB	Configuration Control Board	RTEMS	Real-time Executive Multiprocessor System
CCR	Configuration Change Request	RTOS	Real-time Operating System
COS	Cosmic Origins Spectrograph (HST)	RXTE	Rossi X-ray Timing Explorer
cFE	Core Flight Software Executive	SAM	Science Analysis at Mars
CPU	Central Processing Unit	SDO	Solar Dynamics Observatory
DCR	Discrepancy Change Request	SEB	Source Evaluation Board
DRS	Disturbance Reduction System (ST-7)	SI	Science Instrument
EOS	Earth Observing System	SICADS	Science Instrument C&DH Simulator (HST)
EVE	EUV Variability Experiment (SDO)	SI C&DH	Science Instrument Command & Data Handling (HST)
FKSI	Fourier-Kelvin Stellar Interferometer	IRAC	Infrared Array Camera (SIRTF)
FQT	Final Qualification Test	RW	Reaction Wheel
GLAS	Geo-science Laser Altimeter System (IceSat)	SA	Solar Array
GLAST	Gamma Ray Large Area Space Telescope	SEU	Single Event Upset
GMSEC	GSFC Mission Services Evolution Center	SITS	Science Instrument Test System (HST & JWST)
GN&C	Guidance, Navigation and Control	SOIS	Spacecraft Onboard Interfaces
GPM	Global Precipitation Measurement	SSM	Support Services Module (HST & JWST)
HST	Hubble Space Telescope	ST-5	Space Technology 5
IMDC	Integrated Mission Design Center	ST-7	Space Technology 7
ISAL	Instrument Synthesis and Analysis Lab	STIS	Space Telescope Imaging Spectrograph (HST)
ISIM	Integrated Science Instrument Module (JWST)	SWAS	Sub-millimeter Wave Astronomy Satellite
LANL	Los Alamos National Laboratory	TRACE	Transition Region and Coronal Explorer
LAT	Large Area Telescope (GLAST)	TRMM	Tropical Rainfall Measuring Mission
LISA	Laser Interferometer Space Antenna	UARS	Upper Atmosphere Research Satellite
LOLA	Lunar Orbiter Laser Altimeter	WFC3	Wide Field Camera 3 (HST)
WMAP	Wilkinson Microwave Anisotropy Probe	WIRE	Wide-Field Infrared Explorer
MASIS	Monitor & Science Instrument Simulator (HST)	WISE	Wide-field InfraRed Survey Explorer
MLA	Mercury Laser Altimeter (Messenger)	XRT	X-ray Telescope (Swift)
MLS	Microwave Limb Sounder (Aura)		
MR2	Modular, Reconfigurable, Rapid		