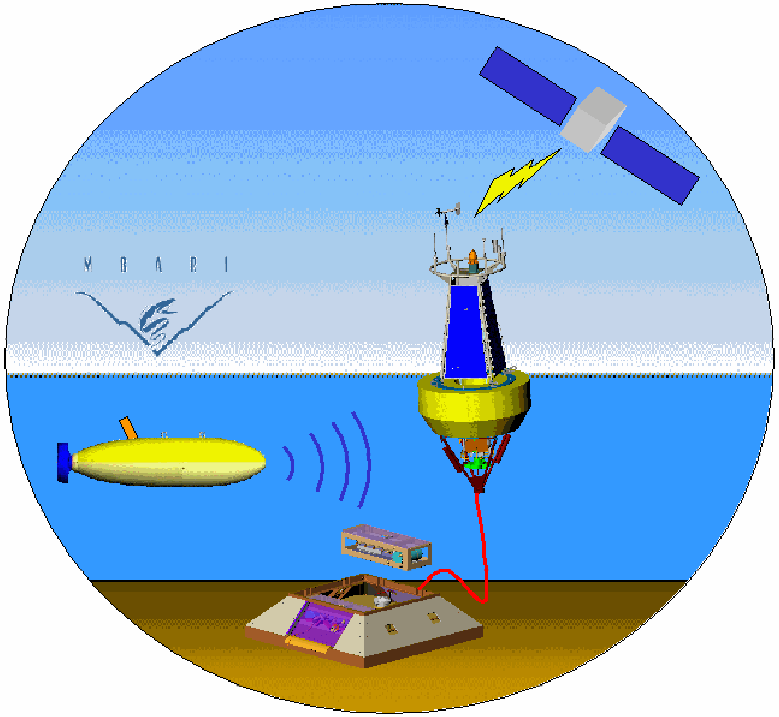
SIAM 2005 Kickoff



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M B A R I

SIAM 2005 task categories

- Deployment support – MTM-3, CIMT: (~10 days?)
- MSE: 153 days
- Transition to OSG: 50 days
- PUCK development: 45 days
- General enhancements and bug fixes: 60 days
- Total: 318 days (allocated 290 days)

- MARS prototype: 40 days (NSF *Sensors* project)

Features needed for MSE: 153 days

- Multi-node sleep management: 20 days
  - Nodes must awaken for telemetry transfer
  - Not the same as Herlien's "Phase 2"
  - Likely requires Medusa "wakeup packet" feature, MMC "wakeup on UART activity" feature

Features needed for MSE: 153 days

- Vertical profiler services – McLane, Seahorse: 20 days
  - Autonomous profiler schedule control via RF/inductive modem
  - Vendors have some work to do…
  - Need Seahorse implementation for March profiler deployment (service will run on workstation in cupola)
    - Could run same service later on MSE node
    - Demonstrates “run anywhere” service capability - of interest to MARS

Features needed for MSE: 153 days

- Instrument list not finalized; freeze in mid-April
  - RDI Long Ranger
  - ASIMET suite (including precipitation)
  - HydroRad-4, HydroRad-2
  - Seabird CTDs with fluorometer and backscatter?
  - ISUS
  - pCO2, ESP, BiOSA, Bioluminescence, Osmo-sampler???
  - Nortek, Nobska, or RDI ADCP
  - BIN CTD (Seabird?)
  - HydroScat-2
  - Camera?

Features needed for MSE: 153 days

- Individual instruments on profilers are probably not SIAM-enabled
  - Use profiler XML to extract individual instrument records?

- Data "snapshot" capability – summarize data from high data rate instruments: 10 days
  - Not yet known if this is needed; depends on instrument list and sampling schedules

Features needed for MSE: 153 days

- Assumptions
  - Autonomous event detection and response is not required in MSE 2005
  - No pump/shutter coordination on MSE
  - Timekeeping is MMC responsibility (not SIAM)
  - No Medusa work for SIAM, other than diagnostic retrieval
  - Are these assumptions valid?

Transition to OSG: 50 days

- PUCK configuration tools – automate PUCK configuration and onshore management
- Node configuration tool – simplify process of specifying port configuration, communication links, other properties
- Documentation

Miscellaneous enhancements, bug fixes: 60 days

- “Generic” instrument service - behavior driven by ascii “properties” - no additional Java code needed
- Improve communication efficiency over Globalstar
- Etc...

Embedded PUCK development: 45 days

- Approach #1: Put PUCK electronics inside instrument housing
  - E.g. PUCK board inside Seabird battery compartment
- Approach #2: Modify instrument firmware
  - ISUS – use Luke Colletti's code base?
  - Collaborate with vendor – Seabird, Nortek, other?
- Work with users and vendors

MARS prototype: 40 days

- Investigate usefulness of SIAM on MARS
  - Based on requirements identified at NSF Sensors Workshop 2004
- Port SIAM elements to non-Sidearm environment – e.g. port InstrumentService to "MARS shore station"
- Investigate use of PUCKs on MARS (SIIM)
- Schedule?

Some 2005 critical milestones

March 8:	Seahorse profiler deployment
April 12:	MTM-3 deployment
April 15:	Finalize MSE instrument list
May 15:	Go/No-go decision for MSE
July:	CIMT turn-around
October 26:	MSE deployment

M0 CIMT turnaround support

- Any need for SIAM support?
  - Help with system integration
- Possible that EK-60 will be added to M0
  - Instrument has RF modem; could be stand-alone ala M0's pCO2

Schedule notes

- OSG transition - minimize SIAM team support needed for I&T
- Enhancements/bug fixes also make life easier for OSG, I&T
- PUCK development - don’t want to lose momentum with consortium

High-risk items

- MSE instrument list
  - About ten possible new instrument services
  - Need to refine and prioritize list ASAP
- Multi-node sleep management for MSE
  - Requires careful collaboration with MMC team
  - Depends on instrument list, number of nodes

Schedule outline

Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec
Seahorse profiler service	Multinode sleep manager	MSE I&T	MSE support
	McLane profiler service	Globalstar issues	
Node configuration tools	Puck configuration tools	Data snapshots	MARS prototype

Embedded pucks

MSE instrument services

Bug fixes

Plug-and-work consortium

Assignments

- Chase – Seahorse vertical profiler service
- Risi – *Embedded puck* implementation
- Salamy – unit tests, system tests, software release management
- Davis – PUCK configuration tools
- Headley and O'Reilly – everything else

- Will refine schedule and task estimates based on engineer input

Agile ("XP") development

- Iterative approach – always have "working prototype"
- "The Excellent is the enemy of the Good"
- Team workspace in Building G
- Daily developer scrums
- Software release and user meeting every other week
  - Especially important for transition to OSG
- Automated unit testing

End