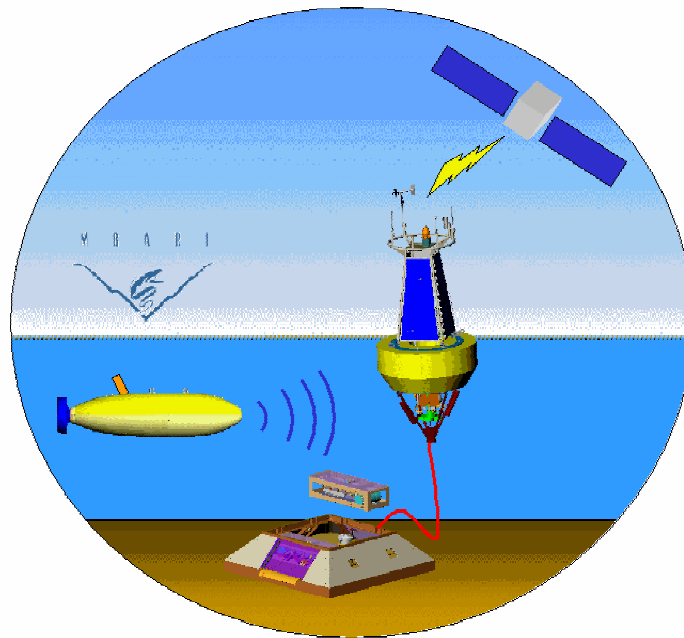


SIAM users meeting



January 22, 2004

Agenda

- Milestones
- Development strategy
- Critical features
- Story development

Deployments and milestones

February 13

Begin MTM
hardware integration

March 23

MTM deployment

Early May

CIMT system
integration

June 5

CIMT deployment

August?

MTM BIN
deployment

MTM: March 23

- Globalstar and Freewave wireless links
- Power management not required
- High-rate data logging of strain gauge
- New instruments
 - RDI Long Ranger ADCP
 - Power subsystem
 - A/D (optical data)
- Pucks?

CIMT deployment: June 5

- Phase 1 power management
- Freewave wireless link
- CIMT 2003 instrument suite
- Pucks
- End-to-end metadata

MTM BIN: August?

- BIN deployment
- Multi-node portal
- Science instruments on BIN
 - RDI Workhorse ADCP
 - Hobilabs HydroScat-2
 - Seabird SBE-16

Mandatory vs optional features

- Limited time and software resources; must carefully decide what is actually required
 - Some features must be deferred
- For CIMT deployment, we must have plug-and-work self-identifying instruments:
Keith Raybould
 - Full end-to-end metadata transport

Agile/XP development strategy

- Daily developer scrums in Building G, at 9AM - Observers welcome
- Continue our two-week development cycles
 - Release and demonstrate software to users
 - Determine next set of user stories

Agile/XP development strategy

- User meetings every two weeks
- Functional software always available for user evaluation
 - Evaluation/demo system will be set up shortly
- Hope for increased user involvement in software evaluation

Users

- Science
 - MTM BIN instruments: Ryan, Paull
 - CIMT: Chavez, Ryan, Johnson, et al
- MOOS mooring team: Mellinger et al
- Observatory support group: Kelley, Zorba
- Engineering support: Headley, Okuda?

Key features for MTM

- Power subsystem service
- Persistor logger service
- Wave sensor, RDI *Long Ranger* services
- Globalstar satellite modem
- Short-haul RF (Freewave)
- Node diagnostic packets

Key features for CIMT

- End-to-end metadata generation and transport
- Puck configuration tools
- Phase I power management
- Science instrument enhancements
 - Satlantic radiometer?

Key features for MTM-BIN

- Multi-node “discovery” mechanism
- Multi-node portal
- Optical interface diagnostics
- BIN science instruments

User stories

- Brief description of system functionality, written by developers and/or users
- Users prioritize story
- Developers estimate effort, provide implementation
- Users evaluate

Short-haul wireless story

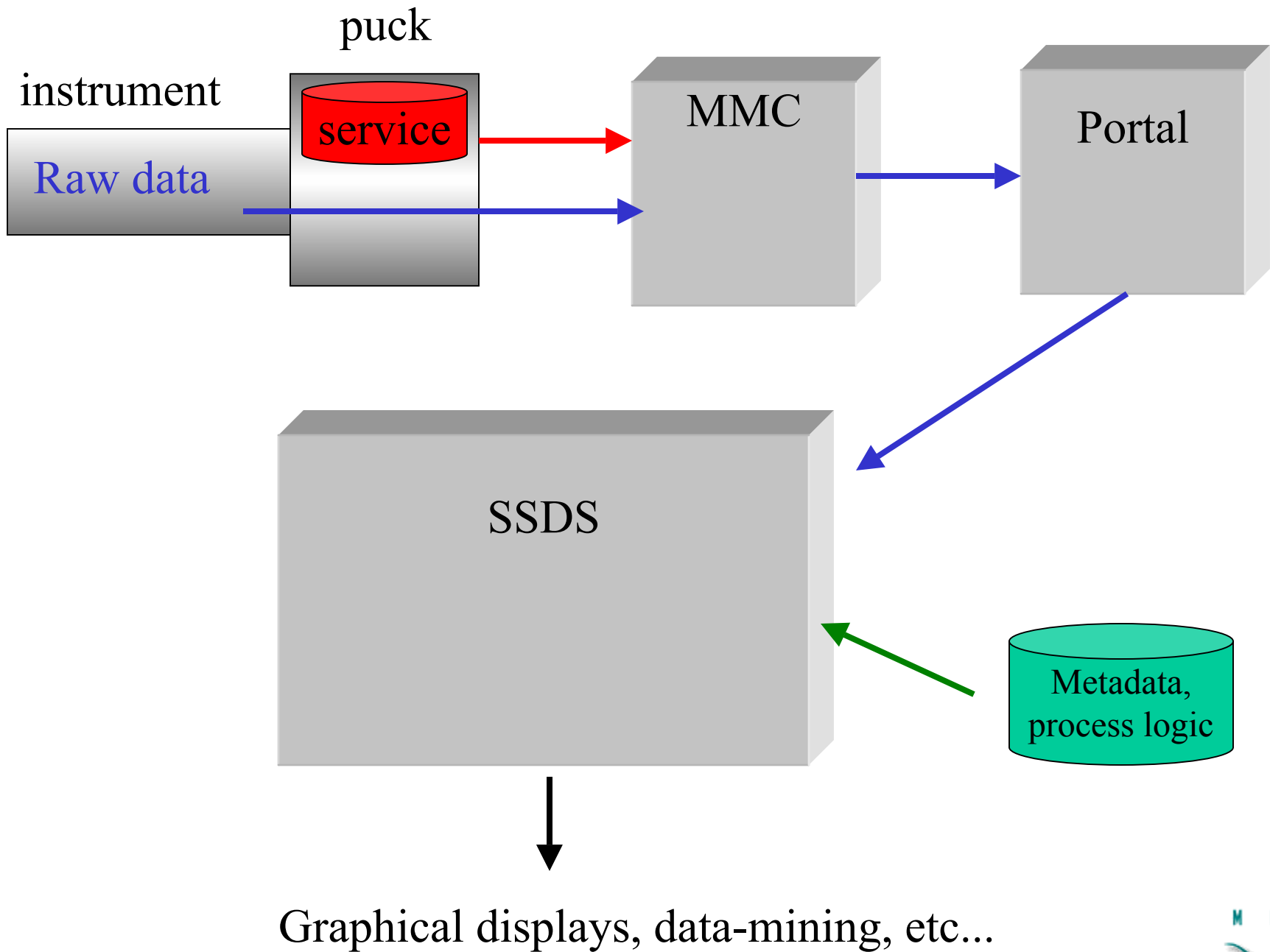
- Freewave will augment Globalstar on MTM
 - Short range: several kilometers - ship-to-mooring communications
 - High data rate: at least 38400 baud, compared to Globalstar's 7800 baud
- How will short-haul link be used?
 - Maintenance
 - High-volume data retrieval
 - Linux “console” vs SIAM application

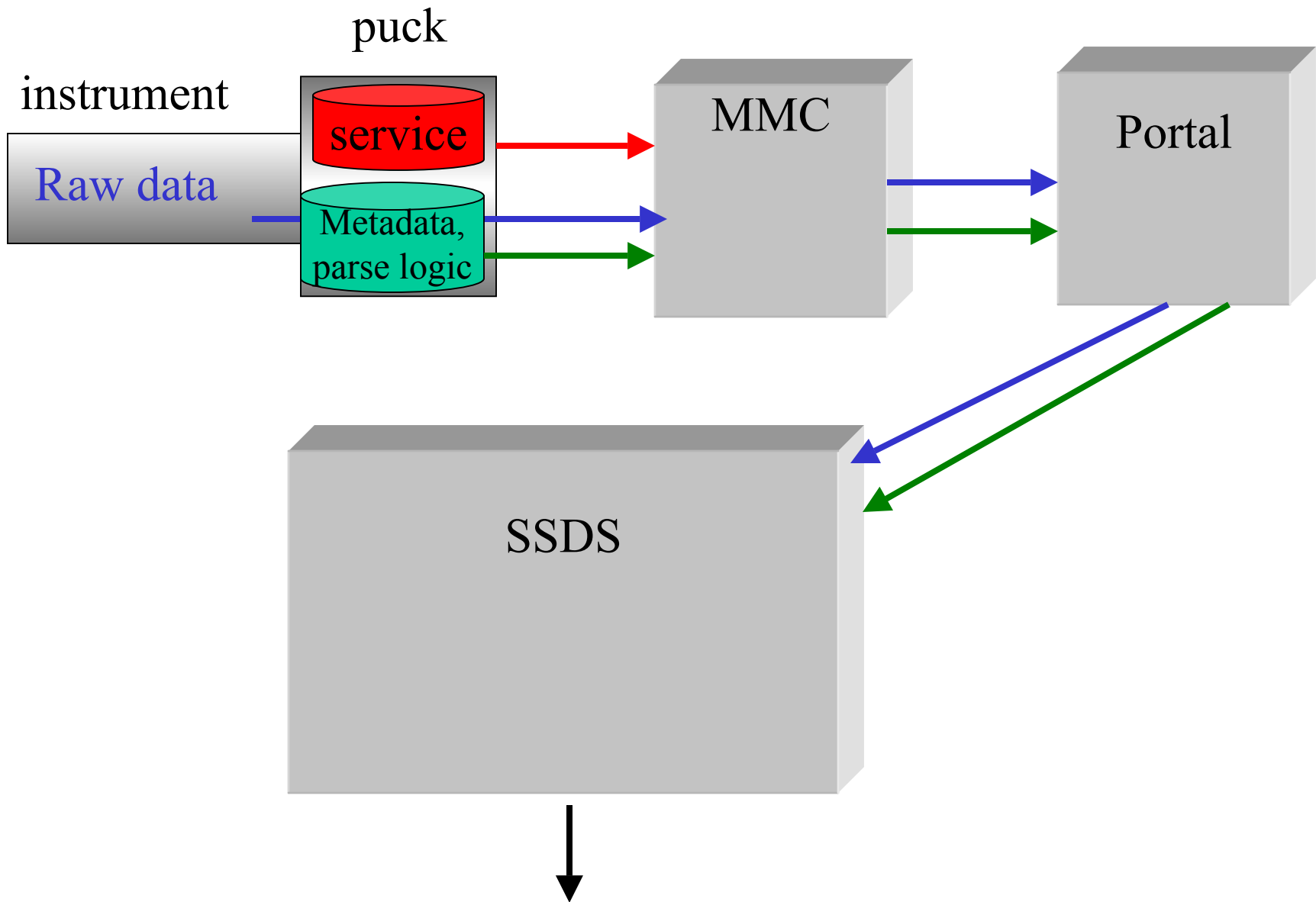
End-to-end plug-and-work story

- Shore-side data system must be able to handle instrument data with no prior knowledge of instrument
 - Process raw data
 - Plot/visualize data
 - Archive/retrieve data
- SIAM service and puck must provide shore-side with sufficient metadata/logic when instrument is plugged into system

End-to-end plug-and-work story

- Today's system
 - Node retrieves instrument service from puck, starts service, acquires and logs samples
 - Some instrument metadata is “hard-wired” on shore
- Full automation is required for CIMT
 - All instrument metadata will originate from puck





Graphical displays, data-mining, etc...

End-to-end plug-and-work story

- Propose first implementation for Garmin GPS