

Following is a summary of hand-written comments submitted by Scott McLean of Satlantic Instruments. Any errors in transcription or summarization are mine. – Tom O'Reilly

Instrument pucks

Puck must contain standardized header, UUID, etc. Need standard format SOON (XML is fine).
Puck could simply contain header, other metadata could be stored elsewhere (looked up via reference ID in puck).

Puck discovery process appears slow when booting entire mooring (many pucks)

Need to standardize puck memory soon, so that we can adopt.
Should puck header include IEEE 1451 "data sheet"?

Memory store on sensor or at SSDS? Registration information ("ID") may be all that is required?

How could puck deal with video plankton recorder, digital video, complex sonar sensors? i.e. telemetry may be on fiber channel.

MBARI puck block diagram: Similar to Satlantic SIM/SatNet; predates patent? Have isolated/non-isolated versions.

Issues:

Number of connectors

Reliability

Embedding puck into sensor is the way to go.

Must be easy for customers/manufacturers

Satlantic has puck-like device, which costs several hundred per puck. Three out of four customers refused puck option due to cost (20-50 pucks required per system).

How does puck deal with coordination between multiple devices (e.g. lights, pumps, shutters...)

SIAM

Concern over bandwidth/power limitations to provide sufficient resources to achieve scientific objectives with multiple nodes, ethernet, fiber networks.

"Only" \$3.6M for fiber optic cable to buoy!

- System overhead to boot nodes from sleep
- Resource allocation will be *critical*, may drive centralized control over primary link/power resources.

Power management: Satlantic system has separate "power supervisor" that requires heartbeat pulse every 10 seconds, or main processors shuts down (logging system fault to FLASH). Also has fault recovery process.

Service discovery implementations: What about JXTA?