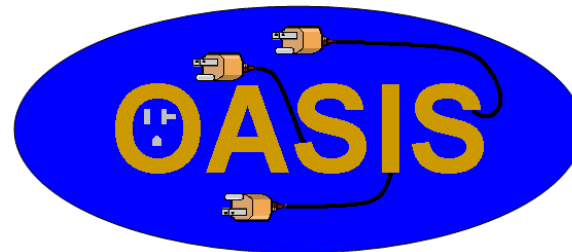
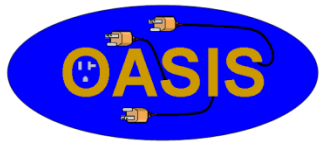


Open Architecture Ship Interface Standards



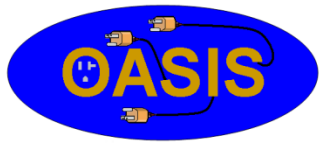
Brian Stocker
LCC(R) Project Manager
PMS 317



OASIS Purpose

- Create repeatable methodology for identifying and establishing standard interfaces, where applicable
- Leverage commonality of designs across varying classes of ships
- Standard interfaces:
 - Facilitate reduced modernization and life cycle costs
 - Permit risk reduction via later introduction of technology
 - Permit rapid insertion of technology
 - Sustain warfighter superiority while maintaining affordability
 - Increase availability/fleet readiness through reduced maintenance/modernization time

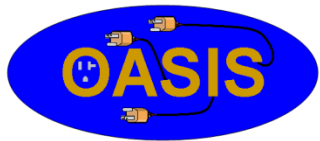
Catalyst for GFI/CFI risk reduction and increased operational availability at reduced cost



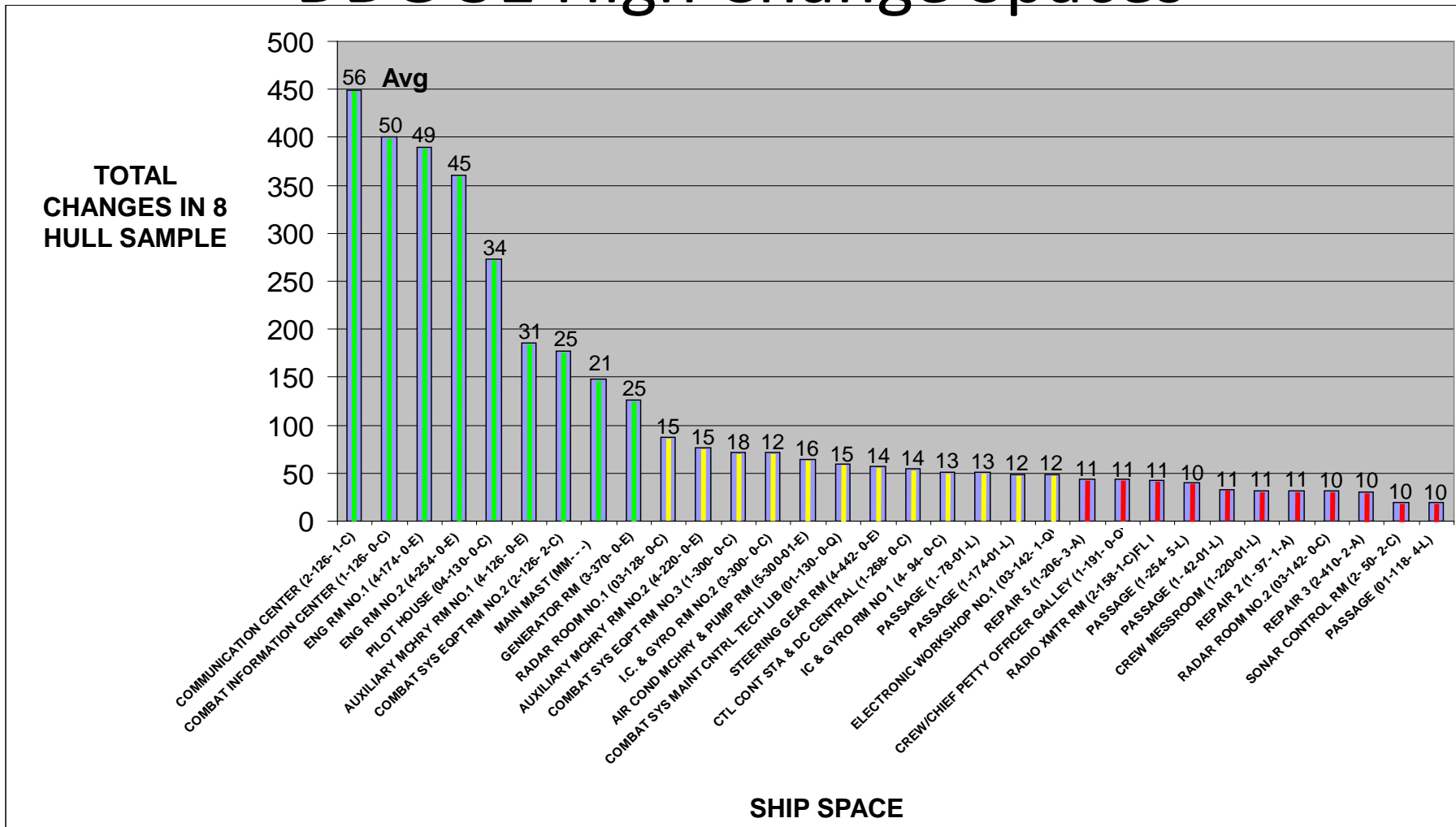
Fleet Issues & Challenges

- Mission equipment and system upgrades are inevitable & necessary
- Change brings cost
 - Most costly changes
 1. Foundations
 2. HVAC services
 3. Cabling & Power/Distribution
- Top Two Compartments with highest rate of change for equipment: Comms Center and Combat Information Center
- Ship interface impacts largely left out of OA discussion

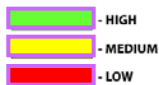
Premature data fidelity and late changes often create significant cost and schedule impacts to the shipbuilder and government



CG(X) Shipyard Studies: DDG 51 High Change Spaces



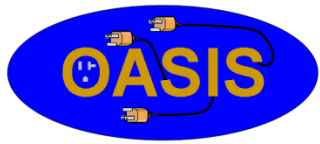
**DDG-51 Historical Reference Data
- High Change Activity Areas**



HULL SAMPLE:

- DDG 51
- DDG 53
- DDG 68
- DDG 72
- DDG 79
- DDG 83
- DDG 90
- DDG 102

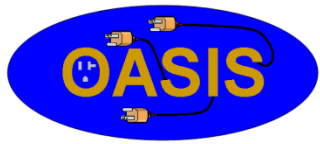
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OASIS Objectives

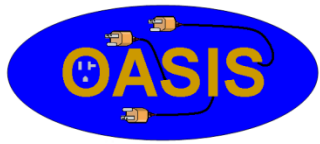
- Create standard interfaces for mission system equipment
 - Facilitates:
 - Decoupling of system design/production from ship design/production
 - Reduced installation, reconfiguration, and life cycle costs
 - Increased ability to support technology refresh
- Focus on high risk interfaces within an ICD
 1. Foundations – potential for standard interface to reduce/eliminate hot work
 2. HVAC services – potential for ducting removal and quick disconnect
 3. Cabling & Power/Distribution – potential for increased density and quick disconnect

Standard Interfaces / Open Architecture allow more timely and affordable insertion of new technology for the warfighter

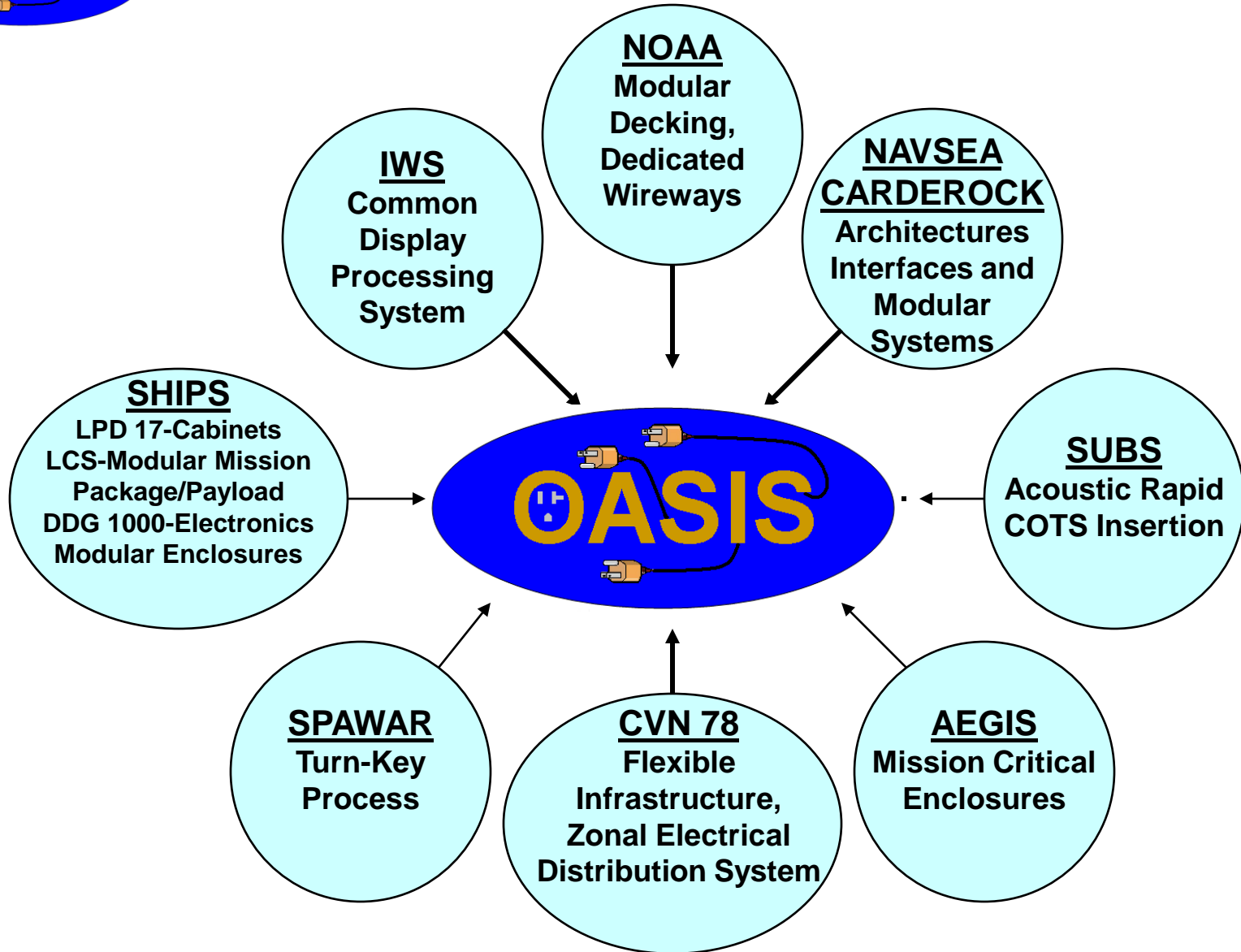


OASIS Background

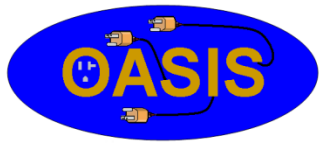
- Gathered representatives from organizations
 - PEOs, NAVSEA, SPAWAR, NSWCCD
 - Utilize NSRP to gather shipbuilder rep's
 - Understand production issues
 - Facilitation of the effort
- Visits – existing OA/modularity examples
 - NGSB VASCIC facility – Newport News
 - SPAWAR Test and Integration Facility - Charleston



Current OA Efforts



Best Practices/Lessons Learned are integrated with OASIS effort



Current Status

- Gather Existing OA practices
- Roadmap
 - Create process for identifying standard interfaces
 - Initial draft outline
- Select initial subset
- Spec template
 - ICD development



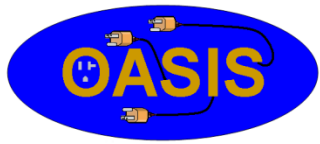
PEO IWS CPS



LPD 17 CEE

The Roadmap and Spec Template will comprise a process that can be used to standardize other interfaces.

Targets of Opportunity: JHSV, T-AKE 14, DDG 116, CG/DDG MOD, LCC(R), T-AOX



Plan Ahead

- Sept 22 – OASIS team meeting #3 (DC)
- Oct 8 – NSRP Executive Control Board Brief (DC)
- Early-Oct – Introductory meeting with System Integrators on OASIS
- Mid-Oct – EB Visit – COATS and USS NORTH CAROLINA PSA (Groton)
- Dec – Deliverables: Roadmap and Spec Template