

RAAMS

Rapid Adaptive Asset Management System



Creating tomorrow's products from today's innovations.



Orbital Research Inc.



Orbital Research Rapid Adaptive Asset Management System

The Sea Basing requirements critical to the Navy-Marine Corps strategy for the 21st century rely heavily on efficient and automated materials handling processes. The need for radical change in the Navy's materials handling processes, specifically UNREP, will increase dramatically as new requirements are imposed on both legacy and next-generation ships such as MPF(F), LHA(R), LPD-17, CVN-21, and T-AKE.

Orbital Research's Rapid Adaptive Asset Management System (RAAMS) will enable these fundamental changes by providing total system resource visibility and a framework for optimizing and interfacing manned and automated systems. When implemented, RAAMS will **reduce the total life cycle cost** for large Navy vessels, **reduce operational time and personnel requests** for materials handling, and **maximize the war fighting capabilities** of the Navy.



RAAMS:

- Reduces personel requirements
- Improve load out efficiency
- Retrofits to legacy vessels
- Accommodates new technology such as RFID and Contact Memory Buttons
- Real-time status updates of strike-up/strike-down
- Integrates with storeroom management systems
- Real-time coordination of human/semi-automated and automated materials handling systems
- Aids sailor decision making through a graphical cognitive decision system
- Rapidly adapts to changing operational conditions

Orbital Research is a high technology company dedicated to developing and commercializing innovative solutions for the military, transportation, controls, and medical industries through leveraging core technology areas of micro-electromechanical systems (MEMS) and advanced control software. Founded in 1990, Orbital Research now has a team of 50 scientists and engineers whose continued success springs from the basis of relationships, experience, creativity and focus.

Naval Materials Handling for the 21st Century

RAPID IDENTIFICATION TECHNOLOGY



AUTOMATION



ASSET VISIBILITY



OPTIMIZATION



- Human Factors
- Asset Information
- Material Compatability
- Ship Stability

RAAMS leverages emerging rapid identification technologies and advances in automation to optimize materials handling processes and increase total system resource visibility. The location and progress of assets are provided to RAAMS via various methods including rapid identification technologies such as bar coding, RFID tagging, and Contact Memory Buttons. Ship status monitoring and integration with storeroom management

systems allows RAAMS to intelligently plan cargo routes and delivery schedules based on storage/usage requirements and operational condition. Sailors interacting with the graphical RAAMS decision support system are presented with current information including alternate delivery paths, locations of obstructions and bottlenecks, and changes to delivery directives.



Orbital Research's Rapid Adaptive Asset Management System

RAAMS provides a framework for total system resource visibility and a means for optimizing the interface of manned and automated systems.

Key Features of RAAMS

- Designed to interface with existing and future materials handling equipment
- Integration with rapid identification technologies such as RFID or Contact Memory Buttons
- Graphical cognitive decision support system for sailors and automated material handlers
- Real-time adaptation to changing operational conditions

Anticipated Benefits of Implementing RAAMS

- Enhanced Naval warfighting capabilities
- Reduced total life cycle cost for Naval vessels
- Reduced crew size and operation time
- Improved performance of existing materials handling systems
- Enhanced supply forecasting through better asset tracking
- Provide needed asset management to realize the Navy-Marine Corps vision of maximizing force projection through Sea Basing

