

Presentation to LGEN Robert Dail, US Army Deputy Commander, USTRANSCOM

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Agile Port and High Speed Ship Technologies



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CCDoTT

- California State University, Long Beach sponsored, government approved and supported R&D center dealing with maritime related transportation issues on behalf of both commercial and military interests.
- Location: California State University, Long Beach
- Sponsor: Department of Defense, Office of Naval Research
- Established research partners in academia, government, commercial industry and the military, all working in coordination.
- Prepared an approved Operational Concept Document on the High-Speed Ship Agile Port program.
- Managed over 100 projects since 1995.

CCDoTT's Role

- Conduct multi-year project planning.
- Coordinate research for commercial and military transport.
- Develop enabling technologies for both.
- Demonstrate programs that validate effectiveness of technologies.
- Work with stakeholders to find end users for the technologies.
- Hand-off technology for exploitation by end-users and/or military (Technology Transition).

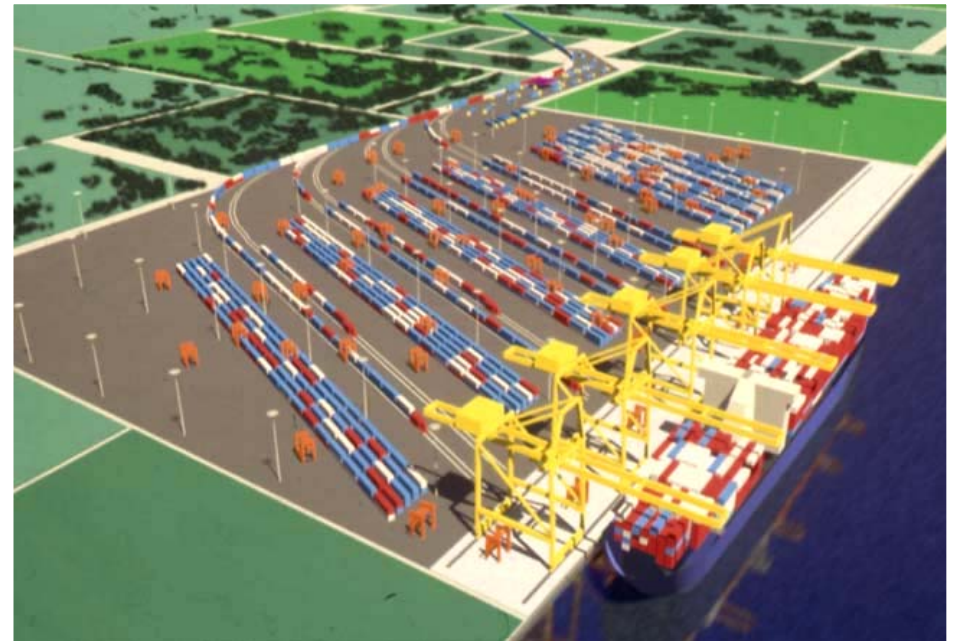
CCDoTT Key Initiatives

- High-Speed Ship Systems
- Agile Port and Terminal Systems
- Advanced Technology and Support of Emerging Seabase Concepts
- Rapid Deployment Technologies
- Transportation Infrastructure Security
- Decision Support Tools

Agile Port and Terminal Systems

Objective: Develop infrastructure and processes to move cargo through the port faster, cheaper and with less impact on the surrounding community. Enhanced productivity of existing facilities.

- Critical to High-Speed Ship Systems.
- Agile Port Operational Concept Document, 1995.
- Efficient Marine Terminal Demonstration – FY 03.
- Pacific Northwest Agile Port System Demonstration – FY 05.
- Advanced technology options (MagLev).



Efficient Marine Terminal Concept
 Tested FY 03 at Port of Tacoma
(DVD of demonstration available)

High-Speed Ship Systems

Objective:

- Develop enabling technologies for faster ships for military/commercial cargo.
- Handoff to end user – Technology Transition.

Focus:

- Develop multi-hull Computational Fluid Dynamics optimization tools.
- Advanced ship control, propulsion systems, alternative power options.
- High-Speed Ship hull forms and lifting bodies.
- Short sea marketing and economic feasibility, and coastal ferry options.

Rapid Deployment Technologies

- Force Transformation (10-30-30 DOD Concept)
- Seabasing support systems:
 - HALSS Trimaran early insertion and logistic support
 - Heavy Airlift support capability
- Strategic Mobility 21:
 - Fort to Foxhole Power Projection Support Platform to test logistics concepts from a remote port
- Sense and Respond Logistics
- Commercial Express Pentamran Ship Design:
 - Feasibility study for High-Speed dual-use commercial/military pentamaran
- Agile Port System Demonstration:
 - Demonstration in Pacific Northwest to utilize commercial Agile Port concept and to support military surge loadout

Decision Support Tools

Allows military and commercial planners/operators and processes to collaborate in real time linking planners, supporting and supported commands.

Collaborative Visualization

- Agile Transportation for the 21st Century (AT21) Advanced Concept Technology Demonstration.
- AT21 Jump Start - teleconferencing/real-time planning prototype - backbone of ACTD.
- \$3M+ CCDoTT funded.
- Prototype to Operational - support Afghanistan and Iraq operations.
- Significantly reduced planning and execution time while improving coordination between all levels of command.
- “Saves hours and hours a day,” Gen. Welser says. “Over a period of weeks, who knows how many lives that saves, how much faster the job gets done?”

Strategic Mobility 21

- Applies the components of the Agile Port System (APS) to both military and commercial requirements.
- Integrates APS components into operational concepts (set out in FY04 project concepts of operations).
- Advanced Logistics Technology Demonstration approach.
- Centers on development of a multi-modal transfer facility functioning as a remote agile port.
 - DOD Power Projection Support Platform (PPSP).
 - Sustainment distribution networks.
 - Serves as basis for future logistics experiments.
 - Identifies capability gaps in the end-tend deployment and distribution process.

USTRANSCOM Related Programs of Interest

Current Program Actions (2005):

- Pacific Northwest Agile Port Demonstration
- Feasibility Assessment of Short Sea Shipping to Service the Pacific Coast
- Evaluation and Implementation Plan for So. CA Maglev Freight System
- Strategic Mobility 21
- Technology Transition and Outreach

Planned Program Actions (2006):

- Port Disruption Model for West Coast
- West Coast Short Sea Shipping – Ship Description/Port Interface
- Pacific Northwest Agile Port Demonstration Assessment
- Rapid Container Transfer Concepts
- Simulated Port Access Evaluation

For More Information:

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Thank you