



SUMMARY REPORT

EAST COAST CCDoTT PROGRAM REVIEW

Submitted to:

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*Agile Port and High Speed Ship Technologies***

***Project 2
Technology Transition and Outreach***

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SUMMARY REPORT

EAST COAST CCDoTT PROGRAM REVIEW

Prepared for:

Stanley Wheatley, Principal Investigator
Center for the Commercial Deployment of Transportation Technologies

FY 04 Project 2, Program Element 5.04.1
Technology Transition and Outreach

Task 2.2 Outreach Activities / Conferences

Submitted by:

Steven Hinds, Program Administrator
Center for the Commercial Deployment of Transportation Technologies
California State University, Long Beach

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Summary Report

East Coast CCDoTT Program Review

Executive Summary

On March 16, 2005, the CCDoTT organization and invited guests were assembled at the Hall of States building in Washington, D.C. for the purpose of presenting to attendees, a progress report on a number of FY 04 funded programs currently in progress.

The presentations consisted of visual program data and verbal presentations by the principals associated with each of the programs assisted by technical support groups also associated with the program undertaking.

Sufficient time was allocated to permit extended discussion by participants. Several members of the CCDoTT Advisory Committee were in attendance.

Further details of the day's events are included in this report.

Summary Report

East Coast CCDoTT Program Review

1.0 Introduction

The purpose of this document is to outline how the Center for the Commercial Deployment of Transportation Technologies developed and validated a technology vision for its various transportation innovations, with the eventual goal of transferring these new technologies to actual practice for government/military, and commercial end users. This plan was described in CCDoTT's "Current Year Technology Transition Plan".

Since CCDoTT's work is in the DOD category of 6.3 – 6.4 applied research projects, the program deliverables are considered as a planned precursors to marketable products. The term "technology vision" has been used to describe how technology will be developed and expanded for current and future tasks, in order to improve maritime and related transportation. This includes a wide array of creative innovations developed, through progressive research, to improve commercial goods movement / military deployment technologies in support of maritime and related intermodal transport.

In order to validate CCDoTT's technology vision and begin the ultimate technology transfer process CCDoTT has implemented a variety of outreach mechanisms. One of those is to host two major conferences, one on the East Coast and another on the West Coast. These events are open to both military and commercial maritime transport industries and include briefings about all of the current CCDoTT projects.

The East Coast Conference (named "CCDoTT Program Review" or CPR), was held March 16, 2005 in Washington, DC and is the subject of this report. It provided the opportunity to brief partners, academia, military and government representatives interested in CCDoTT projects currently in progress. It also allowed the potential to expand support for projects, gain feedback on processes and results from interested stakeholders and potential end users, and contact experts in areas aligned with the project areas. The Agenda and presenter information are included in the Appendices to this report.

2.0 East Coast Conference Overview

The CPR was specifically targeted to allow government and military interests to have feedback on the current CCDoTT projects underway. Special invitations were extended to members of the Agile Port/High Speed Sealift Executive Committee, a group CCDoTT has had the opportunity to brief twice during this contract cycle. Additional invitations were extended to marine related technical organizations and designated government and industry offices.

The objectives of the CPR were:

- (a) To brief attendees on the nature and status of ongoing R&D programs underway in conjunction with direct CCDoTT support;
- (b) To provide sufficient technical information to advance the interest of prospective end users;
- (c) To seek further insight into relative requirements, opportunities or problems associated with future Program Sector interests.

3.0 Summary Comments:

The broad nature of the attendees as cited in the appendices, including both military and commercial interests, was such as to encourage numerous technical exchanges between the presenters and the group. The distinct nature of several of the ongoing programs dealing with the issue of High-Speed Ships and the introduction of a large multi-hull concept and the associated construction and maintenance issues continues to surface as a major consideration.

The ongoing work dealing with prototype development of an axial flow propulsion system and the ongoing laboratory testing of a scale model version generated a number of comments on the basis of the concept under development and its prior performance in the U.S. space program. Of further concern cited, was the issue of effectively extrapolating the test data and performance to prospective full power systems in accordance with dynamic similitude guidance.

The Articulated Stable Offshore Platform (ASOP) presentation again represented an innovative approach to marine technology development in both the area of CFD program development in seeking conformance with “as-built” model data and in seeking the technical ability to extrapolate data to conform to larger scale models. The problems associated with developing operational implementation of this technology have now surfaced as a major consideration.

Another innovative approach by the CCDoTT group in addressing the Agile Port sector, was the introduction and subsequent market and financial assessment program that will address the potential of a high-speed container movement system operating between the local LA/LB port areas and a designated inland intermodal interface center. The novelty of this undertaking is starting to gain attention. The issue of maglev is presently a commercial type of transportation system that is applied mostly to people moving. The issue of cargo movement is seen to be well within the technology.

The issue of ongoing CFD development and system optimization remains a relatively new capability within the university engineering group. What appears to be emerging as part of the ongoing discussions within the industry, is the availability of data to confirm the status of the CFD optimization. Further, the apparent broad industry interest in multi-hull related CFD developments recognizing the emerging requirements for large, high-speed support vessels.

An Agile Port development program that has emerged as a key precursor to a major inland port transportation system involving both military and commercial movement is the ongoing Agile Supply Network Optimization program. This program has defined the basic issues associated with an improved intermodal inland interface center operating in conjunction with both commercial and military cargo movements and is emerging as the precursor to the Strategic Mobility 21 program authorized and funded for FY 05.

In summary, the all-day presentations and discussions afforded the CCDoTT players an opportunity to develop discussions and interest on the part of a wide variety of both military and commercial attendees while concurrently introducing the nature of the CCDoTT program as an “incubator” for concepts and technical developments and subsequent performance demonstration in advance of prospective operational implementation.

The list of attendees and program notes are included in the Appendices.

4.0 Advisory Committee Meeting

Although conducting a meeting of the CCDoTT Advisory Committee in conjunction with this event is an important part of this process, there were not enough Committee members in town at the time to hold a quorum. There were several Committee members present at the event who contributed to the discussions.

5.0 Conclusions and Recommendations

5.1 Conclusions

The content and quality of the presentations received favorable notice from any number of the participants. The Agenda and associated timing of the presentations appears to have been well received and informative. The schedule afforded adequate time for discussion, breaks and a suitable meal arrangement. The logistic support extended by the California State University offices located within the Hall of States suggests that further meetings at that venue will be in the offing.

5.2 Recommendations

1. Suggest that additional lead-time in dealing with prospective participants be considered.
2. Allow one complete day for staff preparation of the facilities, visuals, presentations, etc.
3. Attempt to schedule the event in conjunction with Advisory Committee attendance.
4. Seek to incorporate both written and audio transcription of proceedings with suitable advise to participants.
5. Seek to have suitable “Handouts” available with each presentation.

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APPENDICES



**CENTER FOR THE COMMERCIAL DEPLOYMENT
OF TRANSPORTATION TECHNOLOGIES (CCDoTT)
California State University, Long Beach**

CCDoTT PROGRAM REVIEW

March 16, 2005

**Hall of States Building
444 N. Capital Street, Conference Room 283
Washington, DC**

AGENDA

8:30 a.m.	<i>Coffee Service</i>	
9:00 a.m.	Welcome and Introductions CCDoTT program overview	Stan Wheatley, CCDoTT Steven Hinds, CCDoTT
9:30 a.m.	High Speed Trimaran Technologies	Dr. Igor Mizine, SAIC
10:15 a.m.	<i>Break</i>	
10:30 a.m.	Automated MDO Method for Multihull Vessels	Dr. Hamid Hefazi, CSULB
11:15 a.m.	Advanced Axial Flow Waterjet Pump	David Lavis, CDI Marine Jeff Benson, CDI Marine
12:00 p.m.	<i>Lunch</i>	
1:00 p.m.	Very Stable Mobile Ocean Platform	J. J. McClelland, Navatek, Ltd.
1:45 p.m.	Agile Supply Network Optimization & Security	Dr. Lawrence Mallon, CSULB
2:30 p.m.	<i>Break</i>	
2:45 p.m.	High Speed Intermodal Corridor for POLA/LB	Dr. Ken James, CSULB
3:30 p.m.	EMT/Agile Port System Demonstration	Blair Garcia, TranSystems Corp. Ed Savacool, TranSystems Corp.
4:15 p.m.	Final Comments and Adjournment	Stan Wheatley, CCDoTT Steven Hinds, CCDoTT

ATTENDEES

CCDoTT Advisory Committee Members:

Eugene Pentimonti	Maersk Sealand / CHCP
Lt. General Kenneth Wykle, USA ret.	NDTA

Sponsors:

Dr. Paul Rispin	ONR 33X
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Presenters:

David R. Lavis, General Manager	CDI Marine, SDD
Mr. Jeff Benson	CDI Marine, SDD
Mr. John Purnell	CDI Marine, SDD
Dr. Lawrence G. Mallon, Director of Research	CSULB/CITT
Dr. Hamid Hefazi	CSULB/COE
Dr. Ken James	CSULB/COE
Adm. Jim McClelland	Navatek Ltd.
Dr. Igor Mizine, Sr. Research Scientist	SAIC
Jalal Mapar, Vice President	SAIC
Mr. Ed Savacool	TranSystems Corporation

Invited Guests:

LTC Norbert "Smitty" Smith	Army G4-FPM
Bill Brierre	Brierre
Susan DeRosa	CSULB Foundation
David Giles	Fastship Atlantic
Stephen Blust	Federal Maritime Commission
Rick Thorpe	Herbert Engineering Corp.
Robert vom Saal	Herbert Engineering Corp.
Gerry Dunne	LMI
Scott Burleson	Lockheed Martin
Doug Coates	Manalytics
Bill Aird, Program Manager	MARAD
Bob Bouchard (<i>for Margaret Blum</i>)	MARAD
Mr. David Heller	MARAD
Mr. Mike Touma	MSC
Mr. Steve Wynn	NAVSEA 05D1
Mr. Jack Offutt	NSWC Carderock
David O'Brien	O'Brien and Associates LLP
CAPT Mary Orban	OPNAV N42
Dr. Alan Roberts	OPNAV N42E
CDR Tom Tomaiko	PMS 325
Ms. Terry DeLucia	SDDC-TEA
Ted Lynch	Strategic Marketing Initiatives
Alan Rowen	SNAME
H. J. Janssen	SNAME
Richard Boardman	Wartsila Lips, Inc.

CCDoTT Staff:

Stan Wheatley	CCDoTT
Steven Hinds	CCDoTT
Carrie Scoville	CCDoTT

TOTAL ATTENDEES 41

CCDoTT PROGRAM REVIEW**PRESENTER INFORMATION**

Stan Wheatley, Manager and Principal Investigator	CSULB CCDoTT
Steven Hinds, Program Administrator	CSULB CCDoTT
Dr. Hamid Hefazi, Professor and Chair	CSULB College of Engineering
Dr. Ken James, Professor	CSULB College of Engineering
Dr. Lawrence G. Mallon, Dir. of Research	CSULB CITT
David R. Lavis, Sr. VP and General Manager	CDI Marine, SDD
Jeff Benson, Programs Manager	CDI Marine, SDD
J. J. McClelland, Dir. of Business Development	Navatek, Ltd.
Dr. Igor Mizine, Sr. Research Scientist	SAIC
Blair R. Garcia, Vice President and Senior Associate	TranSystems Corporation
Ed Savacool, Consultant	TranSystems Corporation

California State University, Long Beach (CSULB)**Center for the Commercial Deployment of Transportation Technologies (CCDoTT)****Stan Wheatley, Manager and Principal Investigator**

Mr. Wheatley has been at the helm of the CCDoTT program since 1999. A graduate of the U.S. Merchant Marine Academy, he has served at sea on various commercial and naval ships in all engineering capacities completing his active seagoing career as Chief Engineer of the N.S. SAVANNAH. Following assignments with the U.S. Maritime Administration as Director, Office of Advanced Ship Operations; Director, The National Maritime Research Center; and Director of Ships Operations; Mr. Wheatley was engaged as Vice President of Engineering with a U.S. flag shipping company operating both commercial and government owned ships in worldwide trade.

Steven Hinds, Program Administrator

Mr. Hinds brings to CCDoTT extensive experience in military logistics operations from both the operational and planning perspective. As a member of the Policy Staff and the Supreme Headquarters Allied Powers Europe, he was responsible for the policy coordination of NATO Military Defense Plan. As the Physical Security Officer for the United States Marine Corps, Mr. Hinds was responsible for all physical security issues throughout the Marine Corps; and coordinated with Department of Defense to develop a single standard for physical security guidelines for all services world-wide. Mr. Hinds has served in a number of roles with the United States Government, including that of Deputy Assistant Secretary of the Navy (FSN) (Acting). Mr. Hinds has 10 years experience as an analyst and program manager providing high-level decision makers on the OPNAV staff (N-80 Assessment Division) and the Marine Corps Combat Development Center with decision support analysis supporting the Navy Investment Balance Review (IBO), the Quadrennial Defense Review, and the Maine Expeditionary Forces (MEF) Combat Service Support Review. He has also participated in studies and war gaming joint force closure planning, Ready Reserve Fleet planning and use, infrastructure requirements, Mobility Requirements Study analysis, and many ship requirements studies.

College of Engineering**Dr. Hamid Hefazi, Professor, Aerospace Engineering and Chair, Mechanical and Aerospace Engineering Department**

Dr. Hefazi received his Ph.D. degree in Aerospace Engineering from the University of Southern California in 1985. He has been involved in a broad range of teaching and research activities in fluid mechanics, including geophysical fluid mechanics and computational fluid dynamics (CFD), with emphasis on the computation of transonic flows over complex geometries. His more recent works have been on the application of CFD in turbomachinery, aerodynamic design optimization, aeroacoustics, hydrodynamics, and advanced optimization methods. He has more

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than 36 papers and book chapters in various publications and is a senior member of the American Institute of Aeronautics and Astronautics. He has been the Principal Investigator for twenty-five (25) externally funded research projects during the last 8 years; including projects sponsored by Boeing, Northrop Grumman, Honeywell, National Science Foundation and the Office of Naval research. Since the year 2000, he has been the task manager for the CCDoTT project on CFD Design Tool Development for Fast Ships. Currently, he works on two of the CCDoTT projects on the development of stable ocean platforms and multi disciplinary design and optimization methods for multi-hull vessels. He has worked as a consultant for the Prada 2000 America's Cup challenges in the areas of keel, hull and sail performance for race boats and continued in the same capacity for the 2003 challenge. He is the director of the CSULB's Computational Fluid Dynamics Research Laboratory as well as director of the "Boeing Technology Center" located in the College of Engineering. He is also a member of the California Space Grant Consortium.

Dr. Ken James, Professor, Electrical Engineering and Computer Engineering/ Computer Science

Dr. James joined the faculty at CSULB in 1978 where he is a Professor in both Electrical Engineering and Computer Engineering/Computer Science with research emphasis in fiber optics and advanced ASIC design. Since 1999 he has been Technical Coordinator for CCDoTT, where he oversees numerous High-Speed Ship and Agile Port projects. Upon receiving his BS in Physics in 1968 from Case Institute of Technology in Cleveland, he joined the technical staff of Rockwell International Research Division in Anaheim, California. While employed with Rockwell International as a Design Engineer for VLSI devices and fiber-optic sensors, he completed an MS in Electrical Engineering at California State University, Fullerton in 1972 and a Ph.D. in Electrical Engineering at the University of California Irvine, in 1982. In 1984, he formed OPCOA, Inc. in Garden Grove, California and served as CEO until 1996. The company, through funded research from NASA, produced the first micromechanical optical filter for fiber communications. He is the author of 12 articles and has been awarded 15 patents.

Center for International Trade and Transportation (CITT)**Dr. Lawrence G. Mallon, J.D., LL.M. Director of Research and Development**

Dr. Mallon has served as Counsel and Director of Research and Development, for CITT since 1998 and has been a CCDoTT Task manager in Goods Movement and Inspection Technology since 2000. He is the former Maritime Counsel to the US House of Representatives from 1977-87. He was an Attorney-adviser, Select Committee on the Maritime Industry, California State Senate from 1987-1993. He is the Chair, Southern California Marine and Intermodal Transportation System Advisory Council (SOCALMITSAC) to U.S. Secretary of Transportation, and the Secretary of Department of Homeland Security since 2002. He is the Executive Director of the Pacific Area Port Security Consortium of the California State University System. He is the Chair of the Safety and Security Committee of the AB2043 Goods Movement and Port Security Task Force for the State of California. He holds degrees in international business and economics from Georgetown University, a Juris Doctor degree from Emory University, and a Master of Laws in Maritime and International law from the University of Miami. He was awarded a post-doctoral fellowship from MIT-Woods Hole Oceanographic Institution. He was the official Congressional Observer to the Third United Nations Conference on the Law of the Sea, and to the IMO Legal and Marine Safety Committees. He is a certified Proctor in Admiralty since 1978. He is admitted to practice in the States of Georgia, California, New York, and the District of Columbia and before the Supreme Court of the United States. He is a retired naval reserve officer with Viet Nam era active service and reserve specialty in sealift mobility and logistics.

CDI Marine, Systems Development Division (SDD)**David Lavis, Senior V.P., Government Services and General Manager, SDD**

Mr. Lavis has worked 45 continuous years in the development of high-speed vessels for numerous foreign and domestic projects spanning initial conceptual design through construction, test and in-service operational phases. He has served as an advisor to NATO SWG-6, a committee of 12 countries concerned with high-performance ships, is a Fellow of the Royal Institution of Naval Architects, a Chartered Engineer in the UK, and holds a MSc degree in Aeronautical Engineering from Cranfield Institute of Technology, U.K.

Jeff Benson, Programs Manager

Mr. Benson has been working in government and industry for over 39 years. His most recent accomplishments include program management for development of the low-signature composite masts on the US RADFORD and

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LPD-17, and support to ONR for oversight of the Composite High-Speed Vessel (CHSV) at Northrop Grumman. He has Bachelor's Degrees in Electrical Engineering and Engineering Science & Psychology from the University of Pennsylvania and a Master's Degree in Operations Research from Polytechnic Institute of Brooklyn.

Navatek, Ltd.***Joseph J. "Jim" McClelland, Jr., Director of Business Development***

Admiral McClelland graduated from Tufts University, Medford, MA.. B.S. in biology/pre-medicine. Entered U.S. Coast Guard through Officer Candidate School, served for thirty-six years. M.S. in Physical Oceanography from Naval Postgraduate School, Monterey, CA. Ship Salvage and Helium-Oxygen Diving Officer. Four assignments in icebreakers working arctic and Antarctic. Commanded oceanographic ship and International Ice Patrol. Retired in 2001.

Science Applications International Corporation (SAIC)***Dr. Igor Mizine, Sr. Research Scientist, Advanced Systems and Concepts Division***

Dr. Mizine is the SAIC Lead Scientist on the high speed ship technology development. With 29 years of experience in naval architecture and ship design, he is the foremost authority on fast ship systems. He has directed research and development programs for high speed vessels including the development of the VHST ship concept. Dr. Mizine holds a Ph.D. in applied hydrodynamics and ship design from Krylov Ship Research Institute, St. Petersburg, Russia.

TranSystems Corporation***Blair Garcia, Vice President and Senior Associate***

As a maritime and rail freight and passenger planner, Mr. Garcia has participated in projects involving the planning of commercial and industrial facilities and corridors, land development, utilities layout and transportation planning. Since joining TranSystems Corporation, Mr. Garcia's work has focused on the design and planning of major maritime and intermodal transportation projects. His experience includes projects at major international maritime ports including the Port of Cherbourg, France; Jeddah Islamic Port, Saudi Arabia; and the Puerto Rico Port Authority. In addition to his international marine and rail planning experience, Mr. Garcia has been intimately involved in developing, evaluating and assessing new concepts and technologies (infrastructure, equipment and information technology) related to freight and passenger transport. This work includes the definition and evaluation of port agility and information technology improvement in marine terminals. Mr. Garcia has served as project manager for all TranSystems projects with CCDoTT.

Ed Savacool, Consultant

Ed Savacool (Colonel, United States Army, Ret.) has over 30 years of experience managing complex transportation organizations and projects. He is proficient in program management, acquisition planning support, transportation logistics, strategic sealift systems analysis, and operational testing of transportation hardware and software systems. Ed Savacool served 26 years in the United States Army. His first 14 years of military service was in Army Aviation and the following 12 years in the Transportation Corps. His highest military award is the Distinguished Flying Cross. Mr. Savacool has worked with CCDoTT on numerous Agile Port, High-Speed Ship and Rapid Deployment projects.

**CCDoTT PROGRAM REVIEW
Agile Port and High Speed Ship Technologies**

PROGRAM NOTES

Wednesday, March 16, 2005

Introductions:

Mr. Wheatley opened with introductions and a brief discussion on CCDoTT. All presentations will be available on the CCDoTT website, ccdott.org.

PRESENTATIONS

High Speed Trimaran Technology Development:

Dr. Igor Mizine of SAIC gave this presentation. Jalal Mapar of SAIC, Scott Burluson of Lockheed Martin Aero, and Rick Thorpe of Herbert Engineering were also in attendance to assist with any questions.

Automated MDO Method for Multi-Hull Vessels:

Dr. Hamid Hefazi of CSULB College of Engineering gave this presentation. Dr. Igor Mizine of SAIC was also available for questions.

Question asked if Dr. Hefazi was aware of Professor Beck's work at the University of Michigan. Dr. Hefazi responded yes and that he will contact him and work with ONR to coordinate efforts.

Advanced Axial Flow Waterjet Pump:

Jeff Benson and John Purnell of CDI Marine gave this presentation. David Lavis of CDI Marine, Dick Boardman of Wartsila Lips, and Jack Offutt of NSWC Carderock were also available for questions.

Question asked about the target for propulsor efficiency. Mr. Purnell indicated that the advanced compact waterjet (ACWJ) propulsor (rotor and housing) should be as efficient as today's mixed flow waterjets. He added that the ACWJ will be considerably reduced in size, thereby reducing pump space and weight and saving weight of the entrained water. He went on to point out the significant arrangement benefits of the ACWJ concept.

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Question asked about whether a slender hull is necessary. Mr. Benson responded that the necessity for delivering time-critical cargo, both commercial and military, has driven future sealift ships to require higher speed. He pointed out that achieving high speed will require ships with slender hulls having low drag as well as ships that have an efficient, compact waterjet propulsion system that is a low risk and proven. The LCS designs have slender hulls and would benefit from ACWJ pumps.

An audience member commented that they are delighted to see the Navy going forward with the waterjet.

Discussion on FY07 Rapid Strategic Lift Ship (RSLs).

Concept Design Development of a Very Stable Mobile Ocean Platform:

J.J. McClelland of Navatek, Ltd. gave this presentation. Dr. Hamid Hefazi of CSULB was also available for questions.

Question asked on the purpose of the large size lower hull. Mr. McClelland responded the size of the lower hull will be a function of the user's requirements for the platform for particular applications. In the illustrated example the platform is designed for use in the marginal oil field application, and the pontoons are large in order to store oil.

Question asked if Navatek has contacted the Missile Defense Agency. Mr. McClelland responded to the affirmative, they have tried to get performance requirements for a Sea Based X-Band Radar (SBX). They hope to compare ASOP motions data with the characteristics of large semi-submersible platforms similar to that being used for the SBX. There is difficulty in finding interest, but there may be requirements such as the SBX for a platform such as the ASOP that has lower motions.

Question raised if there is no interest why do the project. Mr. McClelland responded although there may be limited interest in actually building a platform at present the problem of developing the computational code to predict the interactions of multiple bodies relatively close together in the marine environment, that is the floats relative to each other and the platform structure, is very challenging and has considerable potential value in other applications.

Question asked about the Coast Guard Deepwater program. Mr. McClelland responded that at present stable ocean platforms do not fit into the resource mix for Deepwater. This is not to say that the Coast Guard and the Department of Homeland Security would not be interested in platforms for applications such as container inspection or for a surveillance (radar) facility, but only that platforms are now not elements of the Deepwater acquisition program.

Agile Supply Network Optimization and Security:

Dr. Lawrence G. Mallon of CSULB Center for International Trade and Transportation gave this presentation.

Question asked if MSC has been contacted. Dr. Mallon responded yes, he would like to try experiments.

Question asked if network is based on Ro/Ro or container work in the Port of LA/LB. Dr. Mallon responded primarily Ro/Ro.

Question asked if there were any problems encountered with the load plan vs. commercial. Dr. Mallon referred to Operational Practices. More shippers are making changes at the load out. Contingency planning.

Question asked on how the system would handle the 40% local delivery load. Dr. Mallon responded he may work with Union Pacific and the Alameda Corridor. He wants to take a random sampling to an inland location. Block stowage for international intermodal and encourage trans-loading. Do it a little further east (i.e., Ontario) and compare costs.

An audience member commented this was a good presentation.

Feasibility of a High Speed Intermodal Corridor for the Port of LA/LB:

Dr. Kenneth James of CSULB College of Engineering gave this presentation. Steven Hinds of CCDoTT and Doug Coates of Manalytics International were also available for questions on this project.

Question raised re cost of construction and operating capital. Dr. James responded \$25 to \$30B will be needed.

Question asked about using Colton instead of Victorville. Dr. James responded the land is too expensive in Colton. Rail makes money from Victorville outbound, not from the Port of LA/LB to Victorville.

Comment made that the Federal Railroad Administration (FRA) has a MagLev program. Dr. James responded that he hasn't seen them yet. This information is too preliminary to make public. There is too much competition with truck and rail industries for a real discussion of the option.

Mr. Coates added that the future scenario will have 2–3 times the cargo. With the added congestion trucks may not be able to drive to Victorville in a day. This is the time to put in an alternate solution.

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Mr. Hinds added there will also be “zero pollution” costs. That alone will be more expensive than the cost per move. 1 in 7 jobs in the Los Angeles basin are port related. This is a University project so it is a neutral party to the field.

Question asked about why it only goes 90 mph. Dr. James responded that is the speed of a double-stacked container on a 6% grade, the incline of the El Cajon pass to Victorville.

Question asked if it is a single track system. Dr. James responded the plan is for a double track system.

Question asked about the magnetic effect on RFID tags. Dr. James responded that will not be a problem. The magnetic field of the MagLev is equal to the magnetic field of the Earth, less than with the Metro system.

Pacific Northwest Agile Port System Demonstration:

Steven Hinds of CCDoTT and Ed Savacool of TranSystems Corporation gave this presentation.

Steven Hinds opened with a video presentation of the EMRII demonstration completed in prior CCDoTT efforts. CCDoTT is now ready to demonstrate the whole system. The commercial demonstration will be held at the Port of Tacoma, and a military demonstration is planned at Ft. Lewis, WA.

Mr. Savacool commented on the synergy between the Agile Port System Demonstration at the Port of Tacoma, WA, and the Agile Supply Network/Strategic Mobility 21 project out of Victorville, CA.

Question asked about use of a convoy for the demonstration. Mr. Hinds responded no convoy will be used, just straight rail.

Question on timeframe of demonstration. Mr. Hinds responded it is anticipated to occur about July, 2005.

Discussion on Ft. Lewis. It is located 5 – 10 miles SW of the Port of Tacoma. ICORPS wants to go through Olympia, WA.

Question raised about if East Coast approaches have been considered. Mr. Hinds responded to the affirmative. RAPID in Philadelphia could be used as an Eastern test site. Mr. Savacool added the objective is to put together a national model.