

CIGMA

Containerized Intermodal Goods Movement Assessment: 2008

An assessment of the issues and trends impacting the transportation of containerized products throughout the logistic chain of N.A.

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THE TIOGA GROUP

Presentation to
Sandhouse Gang

 Northwestern University Transportation Center

Sept. 16, 2008



So what is CIGMA & Why do the study?

- CIGMA is a composite assessment of the issues and trends impacting the movement of containerized products into North America.
- Every facet of the transportation chain deals with various issues and trends in their own best interest and these actions interrelate to other components of the transportation chain.
- These entities initiating the first actions are not cognizant of the effect their actions may have on the other elements of the transportation chain.

Background history of CIGMA!

- 1997 First Transload Study
 - 26 Retailers - will look for alternative to POLALB
 - Transloading of ISO to DOMCONs to increase
 - Inland Empire and Import Warehouse Development
- 2000 Transload Study Update
 - 2nd Tier of Steamship Lines lack inland intmdl infrastructure
 - Transloading peaking
 - Alameda Corridor increasaing On-dock infrastructure
 - All water thru Panama Canal to Gulf and East Coast
- 2003 Transload Study Morphs into Trade Flow Study
 - Plans for Prince Rupert
 - 2002 Lockout surges AWEC
 - EC DC respond to 36% US pop. Logistics Parks Develop
- 2006 Trade Flow Update
 - IPI off-dock & AWEC = dropping Transloading percentage
 - Congestion becoming the issue

Why do CIGMA in 2008?

- 2008 Issues Affecting Trade Flow Movement
 - Higher IPI Rates
 - Increased Bunker Charges
 - Continued Diversion of Traffic AWEC
- 2008 Issues Affecting Traffic Through LA/LB
 - TWIC Program
 - ILWU Contract Negotiations
 - Ports Clean Truck Issues and Proposed Fees
 - Port Infrastructure Cargo Fees
 - Lowenthal Ports Fees
 - SCAG RTP Port Container Fee
 - SCAG RTP Railroad User Fee

2006 vs. 2007 Inbnd/Outbnd Loads

2006 versus 2007 Inbound/Outbound Loads for West Coast Ports								
Port	Inbound/Import Loads (TEU)		Volume Change	Percent Change	Outbound/Export Loads (TEU)		Volume Change	Percent Change
	2006	2007			2006	2007		
Los Angeles	4,408,185	4,410,169	1,984	0.0%	1,423,620	1,607,643	184,023	12.9%
Long Beach	3,719,680	3,704,593	(15,087)	-0.4%	1,290,843	1,574,241	283,398	22.0%
Oakland	877,649	870,284	(7,365)	-0.8%	840,127	909,633	69,506	8.3%
Vancouver	1,120,780	1,180,711	59,931	5.3%	762,388	857,550	95,162	12.5%
Seattle	799,138	810,453	11,315	1.4%	438,806	503,690	64,884	14.8%
Takoma	746,327	694,032	(52,295)	-7.0%	368,229	445,871	77,642	21.1%
Portland	89,693	110,741	21,048	23.5%	124,791	149,387	24,596	19.7%
Total	11,761,452	11,780,983	19,531	0.2%	5,248,804	6,048,015	799,211	15.2%

2006 versus 2007 Inbound/Outbound Loads for Largest East & Gulf Coast Ports								
Port	Inbound/Import Loads (TEU)		Volume Change	Percent Change	Outbound/Export Loads (TEU)		Percent Change	
	2006	2007			2006	2007		
New York & New Jersey	2,508,993	2,619,592	110,599	4.4%	1,299,285	1,477,903	178,618	13.7%
Virginia Ports	862,278	901,943	39,665	4.6%	579,728	657,412	77,684	13.4%
Charleston	901,478	778,331	(123,147)	-13.7%	662,257	628,771	(33,486)	-5.1%
Savannah	866,189	1,074,024	207,835	24.0%	782,446	1,005,367	222,921	28.5%
Houston	654,165	683,602	29,437	4.5%	613,999	706,099	92,100	15.0%
Total	5,793,103	6,057,492	264,389	4.6%	3,937,715	4,475,552	537,837	13.7%

San Pedro Bay Cargo Forecast - LALB

	000 Loaded TEU						CAGR %			25 Yr %
	2005	2010	2015	2020	2025	2030	05-10	10-20	20-30	05-30
Imports										
East Coast	9,653	12,215	14,982	18,164	22,174	27,670	4.8	4.0	4.3	4.3
West Coast	8,976	13,262	18,181	24,305	32,258	43,657	8.1	6.2	6.0	6.5
SubTotal	18,629	25,477	33,163	42,468	54,432	71,327	6.5	5.2	5.3	5.5
Exports										
East Coast	5,170	6,497	7,465	8,477	9,688	11,188	4.7	2.7	2.8	3.1
West Coast	3,331	4,178	4,908	5,523	6,190	7,012	4.6	2.8	2.4	3.0
SubTotal	8,501	10,675	12,373	14,001	15,877	18,200	4.7	2.7	2.7	3.1
Total										
East Coast	14,823	18,712	22,446	26,641	31,861	38,858	4.8	3.6	3.8	3.9
West Coast	12,307	17,440	23,089	29,828	38,447	50,669	7.2	5.5	5.4	5.8
Grand Total	27,130	36,152	45,536	56,469	70,309	89,527	5.9	4.6	4.7	4.9

Export Complexities – 2007 & 2008

- WC Ports up 15.4% - EC Ports up 14.4%
- Drivers – Devaluation of dollar & demand for export grains
- Decline in imports decreases availability of containers
- Ship capacity affected by deployment & export weights

Inland Market Regions



Inland Routing Examples

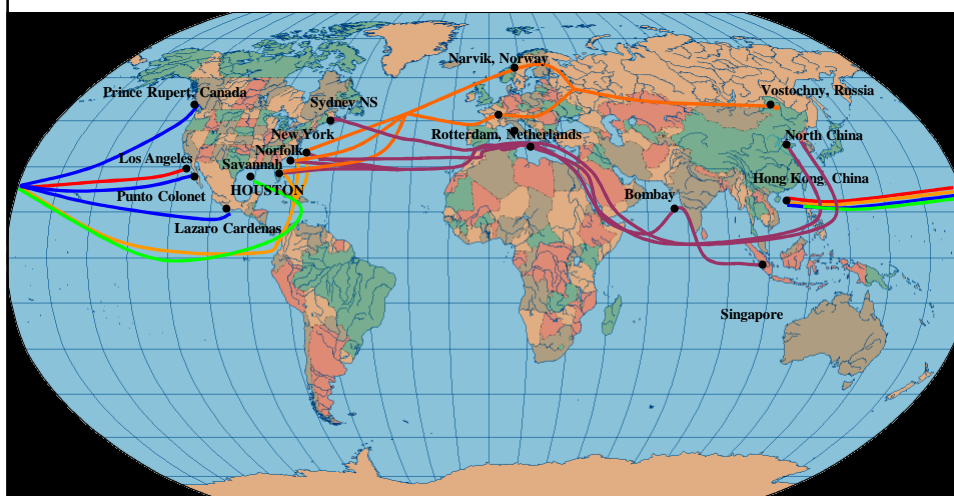
Origin	Destination	Ocean Route	Port	Intact or Transload	Inland Route
China	Northeast	TransPac WC	LA/LB	Intact 40'	Rail Intermodal
		TransPac WC	LA/LB	Transload 53' Cont	Rail Intermodal
		TransPac WC	Oakland	Intact 40'	Rail Intermodal
		TransPac WC	Oakland	Transload 53' Cont	Rail Intermodal
		TransPac WC	Seattle/Tacoma	Intact 40'	Rail Intermodal
		TransPac WC	Seattle/Tacoma	Transload 53' Cont	Rail Intermodal
China	Southwest	All Water EC	NY & NJ	Intact 40'	Truck
		TransPac WC	LA/LB	Intact 40'	Rail Intermodal
		TransPac WC	LA/LB	Transload 53' Cont	Rail Intermodal
China	West Coast	All Water GC	Houston	Intact 40'	Truck
		TransPac WC	LA/LB	Intact 40'	Rail Intermodal
		TransPac WC	Oakland	Intact 40'	Rail Intermodal
China	Midwest	TransPac WC	Seattle/Tacoma	Intact 40'	Truck
		TransPac WC	Seattle/Tacoma	Intact 40'	Truck
		TransPac WC	Seattle/Tacoma	Intact 40'	Truck
Europe	Midwest	TransPac WC	LA/LB	Intact 40'	Rail Intermodal
		TransPac WC	LA/LB	Transload 53' Cont	Rail Intermodal
		TransPac WC	Oakland	Intact 40'	Rail Intermodal
		TransPac WC	Oakland	Transload 53' Cont	Rail Intermodal
		TransPac WC	Seattle/Tacoma	Intact 40'	Rail Intermodal
		TransPac WC	Seattle/Tacoma	Transload 53' Cont	Rail Intermodal
Europe	Midwest	Atlantic EC	NY & NJ	Intact 40'	Rail Intermodal
		Atlantic EC	NY & NJ	Intact 40'	Truck
		Atlantic EC	Virginia	Intact 40'	Rail Intermodal
		Atlantic EC	Virginia	Intact 40'	Truck
		Atlantic EC	Baltimore	Intact 40'	Rail Intermodal
		Atlantic EC	Baltimore	Intact 40'	Truck

Choice of route and strategy subject to many factors

- Rising fuel costs
- Profitability concerns on marginal services
- Changing balances of domestic equipment for transloading
- Development of inland logistics parks Railroad intermodal capacity and strategy
- Concerns over long-term port capacity and congestion potential
- Devaluation of the dollar

What is the origin of my cargo?
What size ship should I use?

Should I go Panama or Suez?
What port can handle the ship?





Ocean Carrier Vessel Size and Capacity

- The additions in 2007 of 399 cellular ships totaling 1,362, 572 TEU pushed the total of available container capacity over the 10 million TEU mark in 2007. The top 20 (by capacity) steamship companies reached 10,099,145 TEU by May 6, 2008.
- Although some of the order numbers are hard to verify AXS-Alphaliner reported last October that in the previous five months orders for 100 of the VLCS of 12,500-13,500 TEU were concluded since the first batch of eight ships that had been ordered by CSAV in May of 2007.
- The breakdown by year of delivery for these 100 ships stands as follows:
 - 2010 = 29 units 2011 = 52 units 2012 = 19 units

Emma Maersk 14000 TEU Vessel



So Which U.S. Port Can Handle the Emma Class Vessels?

Near Dock Staging Area – Port of LA

ON DOCK RAIL



Slide Courtesy POLA

**OUT THE PORT GATE
TO THE TRANSLOADER OR OTR**



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**AFTER THE TRANSLOAD
DO YOU GO BACK TO THE RAIL----- OR OVER THE ROAD**



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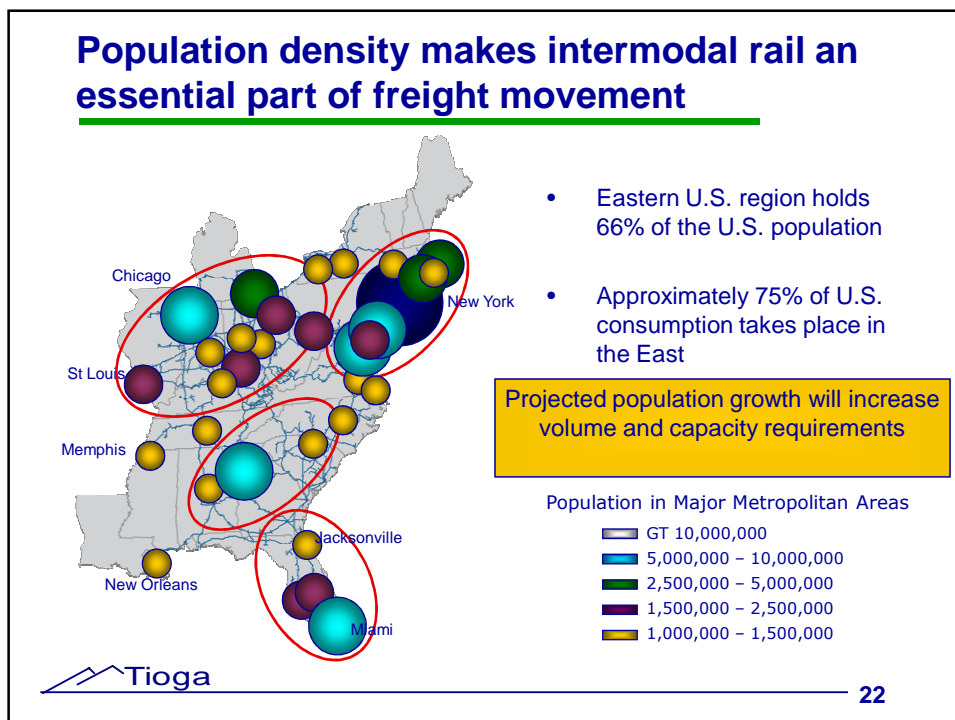
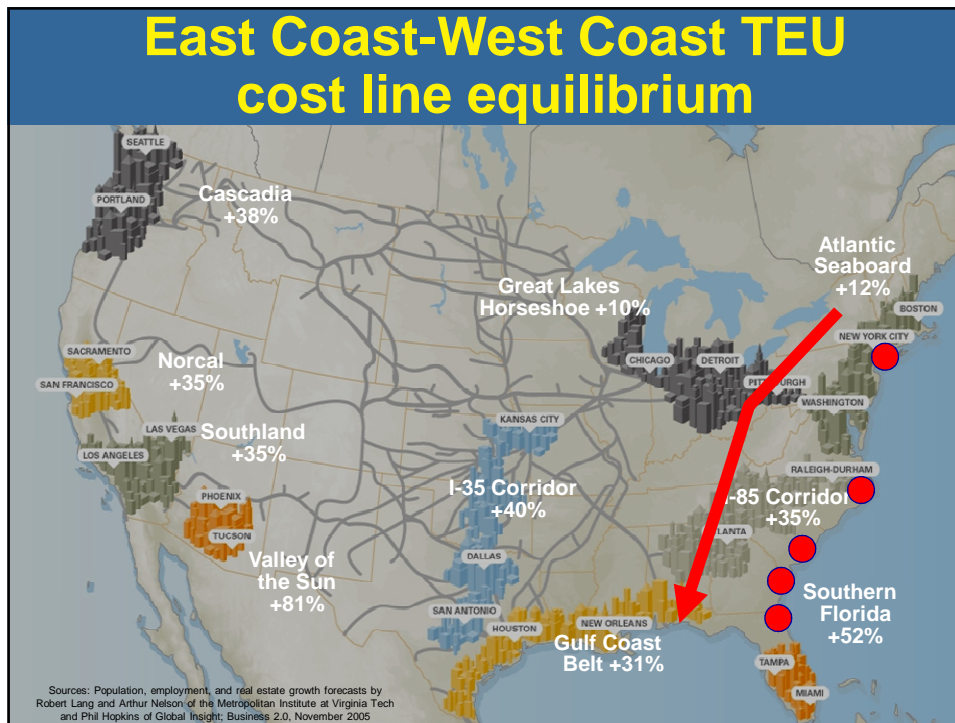
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Did the increase in IPI Rates Promote Transloading?

- With increases in IPI rates and higher bunker charges it was expected that steamship companies would be encouraging more transloading to reduce their inland costs.
- Comments from the steamship companies do not support that premise as the carriers would slow down or make fewer calls rather than drop a port of call.
- Existing infrastructure on the WC and especially in San Pedro with abundance of on-dock capabilities would seem to favor continued movement of containers directly from the ships to an on-dock railcar and movement in trains directly Eastbound to the warehouses and distribution centers in the Heartland of the country.

What About Increased Bunker Charges?

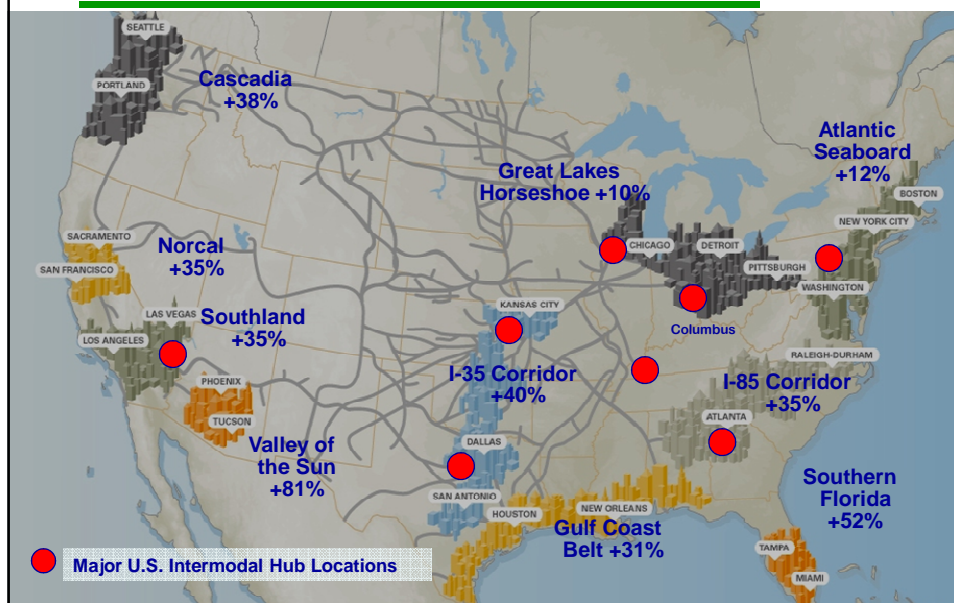
- Bunker prices have tripled within the last three years and as of May of 2008 had increased 87% since the beginning of 2007 and now represent as much as 50-60 percent of total ship operating costs, depending on the type of ship and service.
- Belief higher bunker charges would result in the cutting back of some of the AWEC resulting in a return of some of the traffic that had migrated to the all-water services.
- Comments from the steamship companies do not support that premise as the carriers would slow down or make fewer calls rather than drop a port of call.



What About Transloading?

- For the most part the transloading occurring on the East Coast and Gulf has been into a box for movement by highway.
- Transloading in the PNW and Oakland is growing but given first port of call rotations does not lend itself to calling their first
- So. CA has warehouse space available near port as well as in the Inland Empire. So. CA is the largest local market near a port and generally has a plentiful supply of containers and trailers for transloading imported goods.
- Los Angeles also generates a lot of Domestic Containers and trailers from the freight moving to consumption for 25 million people in the PSW.

Major Population Centers Forecast for 2030





Just a Sample of Current or Proposed Dev.

- Columbus of course has the Rickenbacker Airport complex.
- Charleston is seeing development in the Berkley and Dorchester County areas along I-26.
- Dallas has the Dallas Logistics Park as well as ProLogis Park in Lancaster and ProLogis Freeport Corporate Center in Coppel.
- Houston has the CenterPoint development near Kendleton.
- Jacksonville has speculation taking place at the Cecil Field complex.
- Kansas City has the KC Logistics Park in Gardner and the Richards-Gebaur Airfield in Missouri.
- Norfolk has the Inland Port area of Front Royal.
- NYNJ has the area near Exit 8A on the Jersey Turnpike seeing development.
- Portland has the Trammel Crow development less than a mile from the port.
- Stockton might work for Oakland.
- Tacoma has the First Park Northwest Landing in DuPont.
- Victorville and Barstow in Southern California.



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Which Retailers Will Transload?

- Variance in the nbr. of stores and the amts. of vol. retailers might have which leads to variety of different logistic chains in the system.
- Some retailers have the volume to move intact and distribute from inland Logistic Parks.
- Others will find transloading is driven by their product density
- Some retailers with small enough volumes will consider transloading in China in order to drop-ship the containers directly to their stores with the correct product mixes.



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DELIVER THE PRODUCT TO THE STORE



What About Those Motor Carriers?

- UP Streamline product provides an opportunity to utilize or in some cases sample the rail intermodal product.
- End of 2007 est. 92,000 units of excess capacity in the industry. Over supply will eventually meet the current demand by business failures, carriers parking equipment and delays in replacing older tractors.
- Is this result of shippers driving down the charges of motor carriers as long as there was a surplus of carriers? Some carriers believe there could be “day of reckoning” coming as this fall out of motor carriers will force the shippers to finally have to pay the higher fees.
- This “rude awakening” scenario goes along with the theme we have been seeing as railroads increase IPI rates and the steamship companies try to recover their higher bunker charges. The leverage the shippers once held over the transportation industry may be coming to an end and the field of realistic costing may be coming into being.

ISSUES AFFECTING TRADE FLOW MOVEMENT THROUGH PORTS OF LOS ANGELES AND LONG BEACH

- TWIC Program
- ILWU Contract Negotiations
- Ports Clean Truck Fee
- Ports Infrastructure Cargo Fee
- Lowenthal Ports Fee
- SCAG RTP Port Container Fee
- SCAG RTP Railroad User Fee

These fees are in addition to the two existing fees already on books. The Pier Pass \$50/TEU applied to movements of containers during peak traffic periods and the container fee applied to containers moving by rail to retire the debt on the 20-mile Alameda Corridor.

ISSUES AFFECTING TRADE FLOW MOVEMENT THROUGH WEST COAST PORTS

- TWIC Program

Transportation Worker Identification Credentials:

Estimates that as much as 25% of local drayage drivers will be disqualified and could lead to a shortage of drivers to move the containers on and off the Port Complex.

ISSUES AFFECTING TRADE FLOW MOVEMENT THROUGH WEST COAST PORTS

- ILWU Contract Negotiations

The International Longshore Workers and Warehouse Union

The ILWU six year contract expires in July. Negotiations have started and there is hope of an early settlement. ILWU workers for the first time in 2007 experienced making less money than the previous year due to the reduction in the number of imports handled.

Most retailers have already put alternative logistics options in place since the 2002 lock-out. Smaller importers are hoping for smooth negotiations with no disruptions.

ISSUES AFFECTING TRADE FLOW MOVEMENT THROUGH PORTS OF LOS ANGELES AND LONG BEACH

- Ports Clean Truck Fee

Scheduled for implementation originally June of 2008. It may have been moved back to October of 2008 with recent meetings. \$35/TEU with funds to be used to help operators purchase new trucks that meet the ports strict diesel emission guidelines.

Who Pays? Beneficial Cargo Owners

**ISSUES AFFECTING TRADE FLOW MOVEMENT
THROUGH PORTS OF LOS ANGELES AND LONG BEACH**

- **Ports Infrastructure Cargo Fee**

Scheduled for implementation at the Ports' in January of 2009 in the amount of \$15/TEU. Funding to be applied to needed infrastructure improvements in the immediate area.

Who pays? Beneficial Cargo Owner

**ISSUES AFFECTING TRADE FLOW MOVEMENT
THROUGH PORTS OF LOS ANGELES AND LONG BEACH**

- **Lowenthal Ports Fee**

Proposed legislation by California Senator Alan Lowenthal that would impose a \$30/TEU fee on containers moving through the Ports of Los Angeles, Long Beach and Oakland. The funds to be applied toward infrastructure improvements in roadways and tracks in outlying areas.

Who Pays? Beneficial Cargo Owner

**ISSUES AFFECTING TRADE FLOW MOVEMENT
THROUGH PORTS OF LOS ANGELES AND LONG BEACH**

- **SCAG RTP Port Container Fee**

Southern California Association of Governments:
Regional Transportation Plan:

Another \$30/TEU Port Container Fee to eventually be applied to
infrastructure improvement.

Who Pays? Ports and Railroads

**ISSUES AFFECTING TRADE FLOW MOVEMENT
THROUGH PORTS OF LOS ANGELES AND LONG BEACH**

- **SCAG RTP Railroad User Fee**

Southern California Association of Governments:
Regional Transportation Plan:

Another \$15/TEU Container Fee with the funds to eventually be
applied to infrastructure improvements.

Who Pays? Railroads

Take Away Points from Northwestern Presentation

- Continued diversion AWEC stimulating shorthaul intermodal & Motor Carrier traffic from East Coast ports.
- Transloading percentage will increase slightly.
- Opportunity for truck builders with demand for new equipment as 'Green Truck' issue ripples through the industry.
- As economy strengthens probably shortages of domestic containers may develop.
- Retailers continue to expand in population growth areas.
- Motor Carriers trying to stimulate Railroad interest in short haul lanes like the Kansas City, KS to Marion, OH.

NEOMODAL TERMINAL
WHEELING AND LAKE ERIE RAILROAD
NAVARRE, OHIO IN NORTHEAST OHIO



DATE
28 ACRE FACILITY WITH 16 ACRES ADJACENT FOR CY
800 ACRES FOR LOGISTIC PARK NEARBY

CIGMA PARTICIPANTS

<u>RAILROADS</u>	BNSF, CP, CSXT, FEC, KCS, NS, UP & UP STREAMLINE	
<u>STEAMSHIP CO.</u>	APL, CHINA SHIPPING, CMA-CGM, HANJIN, HYUNDAI, MAERSK, MOL, NYK, OOCL & ZIM	
<u>MOTOR CARRIERS</u>	DART, J B HUNT, KNIGHT, SCHNEIDER, SWIFT, U.S. XPRESS & WERNER	
<u>PORTS</u>	CHARLESTON, JACKSONVILLE, LA, LONG BEACH, NORFOLK, NYNJ, OAKLAND, PORTLAND, SAVANNAH (GPA), TAMPA & TACOMA	
<u>TRN/LDR, 3PL, IMC'S</u>	ABILITY/TRI MODAL, AMERICAN LOG. INTL, CAL CARTAGE, CENTURY/UNIV CH ROBINSON, HUB GROUP, MAERSK LOGISTICS, NYK LOGISTICS PACER STACKTRAIN, PERF. TEAM, TWIN MODAL & WERNER GBL LOG.	
<u>RETAILERS/SHIPPERS</u>	BEST BUY, BLUE LYNX, CIRCUIT CITY, DOLLAR TREE, LOWES, MENARDS, MICHAELS, PIER ONE, WAL-MART, CARGILL & NORTH STAR RAIL INTMDAL	
<u>REAL ESTATE DEV.</u>	ALLEN GRP, CBRE, CENTERPOINTE, HILLWOOD & IDI	
<u>IMS WORLDWIDE</u>	PRINCIPAL	CURTIS SPENCER
<u>LB CITY COLLEGE</u>	INSTRUCTOR	JIM MUCCI



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CIGMA 2008

- **Containerized Intermodal Goods Movement Assessment**
- ***Containerized transportation issues and trends in the North American logistics chain***
- Executives and planners with **importers, distributors, transloaders, ports, railroads, motor carriers, real estate developers, and public agencies** need current, insightful information on North American containerized trade issues and trends.
- The future of China as a dominant supply source versus rapid growth in India
- Asia cargo share shift to East Coast Ports
- Outlook for West Coast port capacity, rail service, and drayage rates
- Expansion of South Atlantic ports to serve Southeast population and distribution growth
- Future of NY/NJ and Virginia Ports as the primary East Coast entry points
- Outlook for inland rail service from the East Coast
- Impact of bulk vessel shortages on containerized export demand
- The Tioga Group is addressing this need by offering an integrated review, assessment, and forecast of major current supply chain issues in North American containerized trade. The report focuses on the 2008/2009 time horizon to capture the dynamic nature of the international supply chain.



- Tioga interviewed over 60 firms representing all supply chain elements, including:

BNSF	MOL	CH Robinson	Wal-Mart
CSXT	OOCL	Schneider National	CenterPoint
CN	NYK	Pacer Stacktrain	Hillwood
CP	Dart	Best Buy	GA Ports Authority
NS	JB Hunt	Circuit City	Ports of LA & LB
UP	Hub Group	Lowe's	Port of NY & NJ
APL	USXpress	Michaels	Port of Oakland
Maersk	Cal Cartage	Pier One	VA Port Authority



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- **CIGMA 2008 addresses critical needs.....**
- Importers must react to foreign production costs, ocean and inland transport costs, port issues, and market dynamics
- Ocean carriers must react to vessel economics, routing demand, fuel cost, and port capacity
- Rail carriers must react to capacity constraints, port volume, and transloading trends
- Motor carriers must react to driver shortages, fuel cost, emissions regulations, and security requirements.
- ~~Commercial real estate developers must react to land availability, transportation trends, and trade outlook~~
- Public agencies must allocate scarce infrastructure funds and mitigate impacts
- **.....for critical information.**
- Import growth projections
- Import production sources - China, other Asia, and India
- Ocean routing trends for West Coast, all-water East & Gulf Coast, Panama, and Suez Canal services
- Vessel size trends, fuel cost, and ocean carrier network changes
- Port issues and capacity with major focus on West Coast Ports
- Import distribution and transloading trends
- Rail intermodal pricing, capacity, and contract issues
- Motor carrier driver supply, fuel cost, security, and environmental issues
- **Ordering Reports**
- The **CIGMA 2008** report will be available beginning July 1st at \$500 per copy or \$400 each for five or more copies. Educational institutions can purchase the report for \$250 per copy. Complete the form below and fax to **The Tioga Group** at 1-215-557-2145. An invoice will be included with the report(s). Email questions to **CIGMA@tiogagroup.com** or call 1-215-557-2142. To order by credit card please go to this link:

<https://www.IntermodalofChicago.org/secure/TiogaGroup.asp>

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THE CIGMA REPORT 2008

THANK YOU FOR YOUR TIME

Any interest or questions regarding the

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report by The Tioga Group can be made to
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215-775-2142



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