

regulatory or administrative relief because this condition will probably be the environment into the future as it has been for the last 75 years. We at Lykes support and are in favor of a level playing field and state today that we will support Sea-Land's application for subsidy as long as they remove themselves from foreign-flag operations and domestic transportation operations, and live within the rules of the regulatory environment that most remaining U.S.-flag operators have been living with for decades.

Questions & Answers

* Has Lykes considered giving up its subsidy in order to have foreign operations?

It has been considered on several occasions. The decision has not been firmly made.

* How many more years do we have before that decision will be made for you by lack of government action?

Probably months is a better answer than years.

* Do you have a strategic plan for when these months are up as to where Lykes is going to go?

We have been working on waivers for years to operate foreign flag vessels and we are no closer today than we have been. We are finding it very difficult to diversify inside the system.

* If nothing happens with the U.S. Merchant Marine policy, what is going to happen?

Over the last 20 years, we have lost about 20 operators. After I said that, I came up with 16 that have gone out of business in the last 20 years. I think that is what is happening. It is not going to happen to Lykes Brothers Steamship Company, but the flag at the stern of the vessel might be a little different.

RAIL LINKAGES TO SHIP, BARGE, AND TRUCK

Dr. Craig E. Philip, Sr. Vice President
Ingram Barge Company
Nashville, Tennessee

I'd like to talk about intermodalism from a carrier's perspective—in particular, how it affects the maritime

industries. The changes of the last 20 years have been so significant and happened so fast that I don't think it is fair to call it a rapid pace of change. I think it has been more like magic.

A concept that is similar to the concept of mega-modalism is what I call multi-modalism. I think the term intermodal is really too narrow and by the definition of the term may restrict us in thinking about strategy and change over the next 20 years.

It is impossible to be in a discussion about contemporary issues in transportation, especially an internationally oriented discussion, without automatically using the term intermodal to describe much of what is going on. I will focus on three topics.

1. What is this idea of multi-modalism?
2. Who has won so far and why?
3. Some thoughts on how it might evolve in the future.

Intermodal has been defined primarily according to technology. The textbook definition is the transfer of freight from one mode or type of carrier to another. In the 1960s and 1970s, we commonly described intermodal as referring to the movement of highway trailers on railroad flatbed cars, but strictly speaking intermodal really refers to just about every type of transportation movement that any of the carriers are involved in. Virtually every movement we make as inland barge carriers is part of an intermodal movement whether it be grain products that start at a field elevator and move to the water by rail or truck, then by barge, then to another terminal, then to an ocean carrier. Almost all movements are intermodal.

In the 1980s, the term intermodal was expanded to refer to the movement of ocean carriers by rail and then ship or ship and then rail. While this physical definition is perfectly suitable to draw boundaries around what is meant by intermodal transportation, multimodalism is defined more in terms of the customers who are being served than by the service that is being provided.

Service from the shippers' perspective is the set of options that deliver the necessary transportation service from true origin to true destination, from purchase order to invoice. From the shippers' perspective, we are trying to make the movement uni-modal. We don't want the shipper himself to care at all about the intermediate transactions that the carriers perform either as mega-modal independent entities or as a whole group of carriers aligned in sequence together.

The second distinguishing feature, as intermodalism unfolded, was that the roles and responsibilities of the various participants were basically well defined. The rail

carriers provided services between rail terminals and almost always operated those rail terminals. Steamship companies provided ocean transportation from one port to another. Ports provided all the shoreside infrastructure. Truckers and draymen did the intervening service and customs brokers or forwarders managed the paperwork transaction. The paperwork transaction was and is always more complicated than the physical transaction itself.

Today the roles of the parties are dynamic and complicated. Many participants offer services that go well beyond the bounds of their traditional domain and responsibility. Perhaps every carrier is trying to be a mega-carrier to some degree. Railroads today provide door-to-door services in addition to the wholesale line haul product. Several railroads have even experimented from time to time with providing ocean transportation services. The roles are dynamic because they change over time and they change even from customer to customer. The best examples of this come from the mega-carriers like American President Lines and CSX Sea-Land Services. Both of these carriers provide modally oriented transportation services just like they always did, whether it is rail or ocean transportation from port to port or railhead to railhead. Both of them strive also to provide to the very same customer base, a richer and different set of transportation options; entire door-to-door service, some complex combination of wholesale-retail product, or even a set of options going beyond the traditional transportation functions such as the relationship between Fritz and Sears.

When one looks back on the brief history of intermodalism much of it in the 1960s and 1970s was defined in terms of shifting existing demands between modes. Rail carriers looked at mechanisms to shift from boxcars to intermodalism as a way to keep that freight on the railroad. Perhaps ocean carriers were doing the same, shifting from break bulk to container in order to keep that freight on their shipping line. But in the case of multimodalism, I think the carriers and service providers have really sought and are trying to develop new markets, in many respects, inducing demand. The best textbook example of this derivation of new demand involves the service offerings of Federal Express and now its many imitators. Federal and the others have basically created a new demand for a particular type of transportation service; namely, the overnight delivery of small packages. This is a service that I think is truly intermodal, and whether it is multi- or mega-modal, it probably qualifies for those definitions as well.

We have the same derivation of demand in this container-oriented transportation movement as Federal Express. A \$29 gasoline airplane I bought my neighbor's

son for his birthday came with 7 or 8 subassemblies but each of these subassemblies came in separate packages. Each of the packages identified the manufacturer and the origin of that little piece, each one was made in a different country. I thought about this. Here is a \$29 toy and somebody has a logistics infrastructure that has allowed them to bring all those individual pieces together—to say nothing of the planning to decide where they will be constructed and put them all together and still sell this toy for \$29. I think this is a derived demand that is based in part on the logistics multi-modal, mega-modal infrastructure that we have in place today and I don't think it would have been possible 20 years ago with the type of infrastructure we had then.

Who is winning this multi-modal game? There are generic statements such as, "It is the guys who provide high quality, a superior level of service, and who are customer responsive."

There is no question that an international orientation is going to define the people that are successful in the multi-modal game today and in the future. This may not necessarily mean that a carrier has to be providing an international service per se, but being a partner with carriers that are indispensable.

On the port side, the hinterland issues will be the crucial and key ones for the next couple of decades. The ports that have been successful, like Los Angeles and Long Beach, have had huge natural advantages owing to the 14 or 16 million people that live in that basin. They draw and attract an incredible amount of freight to their territory because of that local hinterland. Seattle and Tacoma don't have a large hinterland but they are a day closer to the Pacific rim countries than Los Angeles and Long Beach, so they have had a natural advantage. But look at the hinterland opportunities that Los Angeles and Long Beach have exploited compared with Seattle and Tacoma. Freight goes through Seattle and Tacoma and basically goes to one interior gateway in Chicago. Los Angeles and Long Beach, with the participation of the rail carriers, serves a whole variety of hinterland destinations and if they can overcome their infrastructure problems in the 1990s, in terms of linking with the rail in particular, they will probably be able to continue to exploit that competitive advantage.

Finally, because few carriers will be in a position to provide all of the services required by even a single one of their large customers, developing alliances and partnership is a key to the future.

What will happen in the future? First, we will see continuing efforts to generate cooperative ventures between historic competitors. Nowhere is this more evident than on the ocean side in the Pacific where the alliances are rapidly forming. Who would have imagined

that Sea-Land and Maersk would be partners even a year ago. These types of alliances are simply inevitable.

We will also see continued alliances emerging between transportation suppliers and transportation buyers, especially in the middle of the transportation chain. The barge lines, the railroads, truck lines, and other intermediate producers short of those mega-carriers are going to try and tie themselves more closely to the umbrella multimodal or mega-modal service organizations. Who owns the barge companies today? Domestic grain companies, now foreign grain companies, oil companies, petroleum companies, coal producers, even railroads. These are examples of the way that these multimodal alliances are going to emerge between suppliers and buyers.

In terms of specific changes, I think there will be continued evolution and sophistication on the part of ports as they try to select and support partnerships. Until recently there was a tendency on the part of ports to view maximizing the number of competitors as being an overwhelming and desirable feature that would define their probable success both on the ocean and the land side. What is becoming apparent, at least to the carriers, is that more competition does not necessarily define a healthy set of relationships or prove to be the foundation for continued growth, especially where massive investment in infrastructure is concerned. This will be equally true with rails. They will take more aggressive action to rationalize their route structures so they can better make their capacity meet the long-term demand which will be put on their resources. Certainly if the rail carriers are going to shift and make significant infrastructure investments around ports, they have got to rationalize elsewhere.

Will steamship companies be continued buyers of rail transportation companies? My answer is a guarded no. We have gone through an extraordinary period of investment in this business and with all the investment we are now facing up to the hard reality that none of us are making any money. Investments that are intended to strengthen alliances are probably going to continue in the future. The Japanese model is typical of the way companies have worked there for decades with cross investments by suppliers and buyers. I think this is the pattern which will unfold in the future.

Summary

In the 1970s the rage was moving from uni-modal planning to multi-modal planning. There is something profound going on in the industry, and it has happened faster than anyone anticipated. I hope with conferences

like this we will all go away with a better idea of how to do things better in the next 20 years than we did in the last 20 years.

Questions & Answers

* What are the challenges that you see in the next decade for transportation providers?

How competitors figure out a way to put aside their differences and become allies. Competitors cooperating when you have so many institutional, legal, and emotional barriers will be the key as to who comes out the winner and who is the loser. How to reconcile competitive and cooperative issues is the biggest challenge.

* Do you see the railroads aligning themselves with a particular port or trying to accumulate other ports in their system to develop further systems?

This depends on having an alliance between a single railroad or two and a port in order to belly up to the bar to make those investments. Southern Pacific invested more than \$100 million in a great intermodal complex in the Los Angeles basin. When the ports approached the railroads about that project in the early 1980s, they approached all three railroads and said that they wanted all three to come together to build this facility. The other two rail carriers decided not to. I think that if the other two had said yes, then none of them would have made any investment in that facility because none of them would have felt they were getting a competitive advantage for making that kind of massive investment. It turned out this singular relationship is the key to making the dollar. The ports have historically wanted lots of competition among the rail carriers and they need to look at ways where they can favor single rail carriers, and maybe single ocean carriers, to induce the kind of investment that will be needed to keep the infrastructure ahead of the demand.

* Hasn't the balance of power been in the other direction where the ports sought out the rails and the ocean carriers?

If you look at the relationships in the era of regulation, it is not surprising that the railroads were recalcitrant partners. In the case of California, the railroads are told that the rate they can charge from Los

Angeles to Chicago was the same as the rate from Oakland to Chicago, but Oakland to Chicago is 500 miles longer than Los Angeles to Chicago. It is no surprise that none of the rail carriers were enthusiastic partners of the port of Oakland. Their own economic self-interest told them that it was stupid. I hope that era is behind us where you have adversaries between ports and railroads and between ports and ocean carriers.

* With the new partnerships and ports still linked to wanting multiple railroads—let's say there are alliances between ports and railroads—are there operating systems and techniques available to handle large complex multiple-line containers and expertise in the ports and a single railroad?

We're still far behind the demand curve in terms of our capability to deliver the seamless product. We may have a technology surprise in the 1990s in this area that could facilitate the seamless system.

* Do we have the capability to control and move the cargo within a single partnership?

We have to answer that question in perspective. Toyota measures the transport time of parts in fractions of days. When they measure how successful they are, it is in meeting their standards. We may not be very good at this transfer of cargo between the marine terminal and our facility and then at the other end of the line, but we are providing a service to that market for which an ocean, rail, and truck transportation product can realistically be measured in fractions of days, and that is pretty remarkable. Are we where we want to be? No, but the kind of service, at least in some cases, that we are providing is incredible. The answer to the question is, "Yes, we are doing it in part in a very small segment of our total business, but we are incapable of doing that in a much broader perspective." We cannot in any way provide that sort of service to every one of our customers. This is the challenge because we don't have the capability or the systems or the process developed to do that.

* How do you translate those small success segments to the national system to make this intermodal pipeline technically work?

It is a combination. We heard a lot about partnerships. There will be a few mega-modal

companies, but it is within the relationship of partnerships that we can develop the systems that will support those needs and that type of a seamless system. Until those partnerships are in place and we start cooperating rather than competing, it won't happen.

* What if a rail serving a single port is not a good partner?

This is the risk that you take whenever you choose a partner. You have foreclosed your option in the future of choosing another partner. Then the choice is a big issue and a big risk.

You have to have the network connectedness. People that don't have it better get it. I don't think the government will do it.

* How do you extrapolate those successes that appear to work and have it affect a national cargo freight system? Is it possible? Usually a marriage between a port and a railroad excludes other railroads. What system is used to make it national instead of just a narrow segment?

We've talked about partnerships and strategic alliances—what is the role of the public sector in encouraging or facilitating these kinds of partnerships to happen so the United States can compete internationally? What roles do you see the federal government playing? The state government play? The port authority play? What would help you create a partnership?

When we were trying to export all the coal we could in the world, every port around the country wanted a deep-water port. Logically there might have been a few that ought to be placed but who makes that decision? Who sits up there and says this one will have a deep-water port and this one won't? You have the political question that has to be answered. Right now with the Harbor Investment Trust Fund, the questions are who will get the amount of dollars to improve what ports; and where and how you make those decisions. The whole regulatory process gets involved in this and even though you have some antitrust immunity, when you get inland and get into cooperative ventures you might run up against the Justice Department, so there are problems.

* Are you suggesting that the United States needs a maritime industrial policy?

I am not suggesting, it is the only way. The most efficient government is a benevolent dictator but I am not suggesting that he always stays benevolent. That's the problem.

There is nobody up there looking out for the welfare of the U.S. maritime industry, and even for the shipment of U.S. international trade there is nobody concerned, nobody coordinating!

COMMENT FROM SID ROBINSON, PORT OF LOS ANGELES

Let's look at how the national transportation system operates and cooperates. When I asked earlier what are the main obstacles to getting a more effective transportation system, you said those who have previously been competitors will learn to cooperate. This makes good sense, but then your response to the question, "Why did the Alameda corridor get built in the Los Angeles-Long Beach area?": "Because the carriers did not cooperate but rather one of them saw the great competitive advantage of linking up with Los Angeles."

You've got vertical cooperation versus horizontal cooperation. What happened in the case of the Intermodal Container Transfer Facility (ICTF) was vertical cooperation between a single rail carrier and two ports. Another model could have been used if it had been possible at the time or if it would be possible in the future for them to cooperate in a way that wouldn't forego all the competitive advantages. In the current legal structure, that is not easy to do. It may be easier on the water side because the antitrust on either side of the port is different. You can have cooperation vertically along the chain or horizontally among the players. Both are going to be necessary. The water side is testing the extent of what can be done with horizontal cooperation. I'd like to see more of this model used on the land side as well.

You can compete and cooperate at the same time. Los Angeles and Long Beach share the same bay and we compete with each other. However, when we get together and take a look at our areas of mutual interest, we come to the conclusion that our strategic policy would be to work together to attract cargo to sunny California and then fight like hell to see who gets it. That was our strategy and we were able to identify a number of areas such as the ICTF. When we do dredging and filling in the two harbors, we recognize that when one port dredges and fills an area it affects the circulation of the whole harbor. We really need to know what the other port's plans are to make sure we are working together. But then we fight to get the

customers. So cooperation and competitiveness are not mutually exclusive.

A U.S.-flag carrier is a second-class citizen because it can't affect cooperation the way a foreign-flag carrier can. We have a national transportation policy, yet it does not address the crucial bridge weight laws which vary throughout the United States. A bridge in Maryland can handle 90,000 lbs. if a container comes to the Port of Baltimore, but for that same container coming through Port Elizabeth in New York, those bridges only handle 80,000 lbs. These kinds of fragmented policy issues are all over the United States. It is very frustrating for the trucking industry and the ocean industry. For a foreign country shipping here, it is like dealing with 50 separate states.

A success that the ports of Los Angeles and Long Beach had when I sat on their combined planning board for their 20-20 plan was that after the two very strong competitors got together, the coalition that was formed forced the environmental concerns to focus on solutions. From two competitors getting together, we won't get a national policy, but by showing the constituents of the Los Angeles Basin that they had a combined plan, they took in their own hands the solution to deal with environmental problems. They will get a dredging plan and a fill plan that is consistent because the constituents in the Basin understand that this is a group of competitors that has gotten together and can agree on something. This has been a helpful model to force solutions, considering that we will not get a top-down federal policy direction to help us solve these problems.

SUMMARY COMMENTS FROM PAUL MENTZ

We have covered

- The really critical information requirements.
- The customer-service focus as well as the schizophrenia that we sometimes see—between the demand for high-quality service but also insistence on bargain basement prices—and this tension will continue to pressure the system.
- The importance of issue of scale and a reminder that it is not so simple as saying bigger is better.
- The notion of competitive and cooperative relationships between the different players is creating a key dynamic for the future.
- The diversification of market and the growing complexity of relationships among players. Consolidation both horizontally and vertically and also complex relationships among third parties and between shippers