Business-to-business e-commerce is only just getting started and when it does it is expected to alter business practices forever. Theodore Prince* examines the implications of this trend for the ocean shipping industry.

E-commerce ignore it at your peril

Linier shipping currently faces a number of changes, which, both individually and combined, are able to influence radically the industry’s dynamics. Regulatory modifications include the US Ocean Shipping Reform Act (OSRA) of 1998 and potential loss of anti-trust immunity. Meanwhile, Asian economic troubles, line profitability problems and carrier consolidation present economic challenges.

The advent of supply chain management has moved ocean carriers to weigh the alternative benefits of pursuing the expensive, problematic path of becoming true logistics providers (ie, value-added providers), or seeking to survive in the low-cost world of transportation carriers (ie, commodity providers).

The aforementioned are issues specific to the ocean shipping business. But added to them are all the stresses affecting the entire industrial world today. Shipping lines must contend with the Internet and e-commerce, as well as globalisation.

Over the past five years or so, the Internet has become part of our daily lives, and during that time we have watched a progression of Internet innovations. Internet browsers and the development of the World Wide Web made the web available. Companies like Netscape came into being. Search engines, in response to the increase in the number of web sites, achieved prominence. Companies like Yahoo became Wall Street darlings.

Commercialisation of the Internet, initially business-to-consumer, spawned online shopping. Amazon.com showed that lack of earnings was no barrier to stratospheric market valuations. Other companies, such as eTrade, changed the nature of long established products. Search engines morphed into portals, adding content, shopping and other items. Companies like Excite emerged, while others (ie, America On Line) changed with the times. The on-line auction developed, with eBay being an example.

The above all fall into the new business model of e-commerce, which exists along two dimensions. The first dimension defines the parties: B2B (business-to-business), or B2C (business-to-consumer.) The second dimension defines the transactional nature. Here there exist three categories of service types: sell-side servers are electronic storefronts and catalogues that manage the purchase process from the selection of items through payment; buy-side servers provide the capabilities for purchase orders to be entered and fulfilled; usually there are well established business rules that are incorporated into the e-commerce application; marketplace applications establish electronic communities which both buyers and sellers can access.

The transportation industry in general, and ocean shipping in particular, have seen a proliferation of e-commerce businesses. Most are new companies, but some are the result of other companies trying to develop new products to replace the loss of other product lines. Most sell-side initiatives originate with the carriers. Almost every major carrier offers its customers the ability to log onto its web site to make bookings, or to track and trace shipments.

Many of these initiatives were developed for fairly simple reasons. When a customer opts to visit a website bypassing the service centre, the line usually benefits, as the transaction requires no paid employee. This not only represents a cost saving, but also eliminates the risk of any unfavourable customer/employee exchange. This risk is a constant worry in a full-employment society where lines are unable to attract, and retain, qualified employees.

Some ocean carriers have tried to create a competitive advantage with their web pages by developing signature options unique to their brands. For example, OOCL developed a means to release B/L over the Internet. APL developed a customised portal for each customer.

While they show promise, buy-side transactions are not currently common in ocean transportation. Most shipping lines seem to think that as long as they have a web page with a photograph of their newest vessel, they are engaging in e-commerce. This is not the case and they are missing a lot of opportunities.

It is noteworthy that ocean carriers, despite poor financial results and avoided interest in economies, are not developing buy-side e-commerce. Other transportation companies have transferred much corporate purchasing to such applications.

However, the market does not wait. Despite hesitant ocean carriers, e-commerce has come to the ocean shipping industry. Mostly of the marketplace type, e-commerce options still offer variety.

One type of marketplace e-commerce is a bulletin board. Here, the provider gathers and posts information about available loads (from carriers) and desired loads (by customers). When a customer or carrier sees an item they can contact the other party.

The business model is fairly simple. The bulletin board provider charges a monthly subscription fee and offers various levels of service. The provider wants to make sure that it is the pre-eminent bulletin board. It is unlikely that users will look at more than one or two sites. There is a first mover advantage that can be leveraged if the provider quickly becomes the largest.

To grow revenue the provider has two options, it can expand into other modes of transportation, which may not be easy, or it

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can offer other value-added services. One bulletin board for motor carriers provides credit checks, handles fuel purchases and obtains group discounts. Often these are services rendered by a third party which offers access to their services through the bulletin board, and pays a fee to the bulletin board.

Another type of marketplace e-commerce is the auction. These sites perform a freight rate auction marketplace. For the most part, the market is one-way. Shippers either place their desired bids on the site for carriers to bid on or they may just request the carriers' best rates.

Right now, few opportunities exist for carriers to offer space and seek bids from customers. The technology is available, and such an action would most likely be legal under the system of contract carriage that OSRA created. In a tight market (such as existed in the eastbound Pacific last year) carriers could dream of frantic auctions stoked by shippers desperate for space and equipment. But shipping lines have probably decided that such an action would be unwise, given the political environment in which lines wish to retain their anti-trust immunity for discussion agreements.

After customers enter their bid requirements, carriers, steamship lines and auctioneers, enter their bids. The process is blind. At a predetermined date and time, the customer is advised of the 'winning bid'.

Although this sounds simple, there are some problems that are bound to occur. Customers may wish to limit the bidders. After all, it does the customer no good if the winning bidder is a company with which they are unfamiliar. Filters for bid specifications must be provided. (i.e., certain steamship lines should be excluded or the customer may wish to exclude auctioneers.)

Here, the business model is a combination of subscriptions and transaction fees. The problem, however, is that there is no guarantee that the final bid will reach the customer. Some auction sites attempt to solve this by requiring freight payment through them. While this strategy is not in the US domestic market, the credit risk makes it foolhardy in the international market.

The e-commerce marketplace also offers the exchange method, a similar process to that of an auction, with several distinguishing differences. For example, it is envisioned with the exchange system that ocean carriers will offer space and equipment. Also, one can see the moving rate as the market moves to a price. It is like a commodities exchange. For now, however, only providers offer capacity, and carriers will be kept out by preliminary screening of participants by the exchange operators.

Potential problems do exist with the exchange system. The exchange can serve as a means for ocean carriers to send pricing signals to each other. (There are such precedents in the airline pricing systems.) Thus, an exchange could find itself in receipt of a Federal Maritime Commission subpoena in a future fact finding.

More problematic is the amount of information that the exchange will possess. Although it sanitizes the data of individual parties, it would have the ability to sell information about market and pricing trends to customers and carriers. Like auctions, the business model compensates the site by a combination of subscriptions and transaction fees.

Everyone wonders what the advent of the Internet and e-commerce will mean to the ocean shipping industry. Shipping lines fear, with good reason, that the technology will cause further depression of rate levels. It is a valid concern. Internet auction sites have usually yielded two types of results. For products, the price can sometimes rise, but, for services, the price is driven down.

In today's liner shipping market, the cause is not so much e-commerce, but simple microeconomics. If supply exceeds demand, the price will fall. E-commerce sites will not cause rates to fall further than they would but may cause rates to fall faster. Better communication and information in the marketplace will allow prices to reach the market level more quickly.

Most likely, this will cause shippers to consider their trade lane options more carefully. If they suspect that demand is close to, or exceeds supply, they will want to sign service contracts for most of their expected traffic. But if they suspect that supply will exceed demand, they want to buy most of their capacity on the spot market. Naturally, a bad forecast about market conditions could have catastrophic results.

Since the market is so competitive, ocean shipping companies have been incurring losses in recent years. This has led to a reduction in capacity and an increase in rates. However, the long-term outlook for the industry remains uncertain. The future of e-commerce in the ocean shipping industry is still unknown, and it will be interesting to see how it will develop.

In that case, dealing with invoices may become much more palatable. Rather than getting caught with space which must be sold at steep discounts, shipping lines may seek contracts for large cargo commitments with ocean forwarders. These rates may be lower than those for some cargo, but the results are better than being leveraged off-line. Such action requires less employees, less time and less information technology. The overall economic result may be better than waiting to catch the 'hot spot' at a high rate. Customers have often proven themselves ingenious at using spot market pricing tricks to establish a basis for ongoing rate levels. Ocean carriers may just wish to avoid subjecting themselves to this rate whipping.

Some invoices may feel large enough to move from e-commerce to more traditional methods of doing business. This would offer them the benefit of auction-type economics, without requiring that they share the economic benefit with other parties, some of whom may be industry competitors.

The long-term possibilities of developing a true transportation commodity exchange is intriguing, and we could see further movement in that direction in the future. The natural gas and electricity industries (which, like ocean carriers, are also asset-based, network operating companies) are seeing the development of commodity exchanges as the industry divides between providers and marketers. There have been attempts at providing transportation futures, but they have never operated through a formal exchange. Naturally, there are a fair number of regulatory issues. Regulatory concerns, such as transportation oversight, as well as financial market oversight may come about.

And the landscape continues to change. B2B e-commerce is only getting started and it is expected to change business practices forever. The ocean shipping industry will be no exception. Although the first mover always holds an advantage, it may not be insurmountable. Liner shipping companies will ignore the impact of e-commerce at their risk because the changes will permeate the market and all doing business in it.