Serious bidding

As the transportation peak season ends, international customers and carriers will begin the annual rite of contract negotiations. Similar efforts are already under way in the domestic transportation world.

Passage of the Ocean Shipping Reform Act was meant to change the way business was conducted between ocean carriers and their customers. In the past, these negotiations were highly stagey rituals — with the two parties taking turns making pronouncements, which passed as negotiations. In many of these instances, initial negotiations would be through carrier conferences. Conference unity would last until a contract was reached, and then the various conference carriers would turn on each other in order to maximize their individual allotments.

Today's contract negotiations are confidential — at least in theory. But many feel the process hasn't changed very much. The shipper starts with traffic lanes. These may be limited to a single trade, such as trans-Pacific imports, or they may be global. The pre-OSRA conference system prohibited global contracts — it would have been impossible for a conference to prevent a member line from taking price action on a movement outside a particular conference's jurisdiction. Shippers solicit bids on a number of trade lanes, ending with a range of rates on each point pair. Inevitably a subset of carriers is offered the business — as long as they accept the lowest bid rate on each lane — regardless of how they may have bid. Usually, the incumbent carrier is among those so selected, unless the previous year had been disastrous. In most cases, carriers are eager to retain business due to expansion plans.

This process, obviously, can be performed more effectively. In 1992, Sears Logistics Services sought ways to reduce their truckload transportation expense by using a twofold strategy. First, they awarded business for three-year periods with contingencies for peak and slack periods. The reward of three years of business was to compensate for the risk of losing existing traffic, and for the effort that would be needed to participate in the bidding exercise. To convey the serious nature of the bid, only 14 truckload carriers were given the right to participate in the auction. Carriers were eligible only after passing a rigorous prequalifying screening process. This assured Sears Logistics that all bids winners could handle the business. At the same time, awarded carriers could be confident that they could hold their own among industry peers.

Carriers also were allowed to bid on bundles of business as well as individual traffic lanes. The idea was to create a win-win situation. Sears Logistics was seeking lower transportation expenses that were unattainable by the usual bidding process. Truckload carriers needed to find ways to significantly reduce operating costs — maximizing asset utilization by minimizing empty miles. While the business tendered by Sears Logistics might have managed this process alone, those shipments most likely would have to be coordinated with carriers' other business present and envisioned.

To run the auction, Sears Logistics retained Joe Swanson & Co., a Racine, Wis., consulting company which used combinatorial sequential auctions technology of Net Exchange — developed at the California Institute of Technology. In addition to the administration and support of the auction, they sought to establish ground rules.

The most important issue became when to stop the auction. A single round was ruled out, as it resembled too closely the system they were trying to replace — and research had quantified this as a high-cost solution. Sequential bidding rounds were chosen, with provisional winners announced after each round. In following rounds, the auctioneer held the winning rounds and carriers were allowed to submit new bids. The format enabled carriers to concentrate on lanes where the combination of traffic would generate savings. Bidding stopped when the overall cost did not decrease by a prespecified amount.

The initial auction involved $190 million of transportation and lasted through five rounds, with about a month in between bids. The final amount was $165 million — a reduction of 13%. There was a great deal of multi-lane bidding. A total of 575 bid packages were accepted for 854 lanes, and 1,721 packages were submitted for 4,589 bids. This shows that all carriers did not bid on every lane and that several bids were combined into each package.

This market-making technology has not been widely adopted, but the implications for transportation are significant. Such technology could be used to transform the way capacity is allocated in industries such as air cargo. It could also be used to alter the assignment of transportation assets — such as rail cars — or even infrastructure — such as airline slots. Perhaps the most intriguing possibility for such a system is its use to help establish contract awards as the foundation for a transportation futures market. A carrier might win a multi-year traffic commitment, only to subsequently trade it with another carrier.

Once again, transportation has seen technology advance to a point that begs us to reconsider the manner in which we conduct business.

Ted Prince is a principal with Transgistics LLC in Richmond, Va., and a former chief operating officer for "K" Line America Inc. He can be reached at ted.prince@transgistics.com.