EDI poses promises, problems

A perspective of EDI's potential benefits in intermodal as well as hurdles that must first be overcome

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In the past five years, electronic data interchange (EDI) has been a frequently discussed item in the transportation industry.

However, many members of the industry, still suffering from a distrust of computers, are unwilling to develop their understanding of EDI and to investigate its potential benefits.

This is lamentable for, when properly implemented, EDI can serve as a valuable and efficient information bridge between transportation partners, replacing the paperwork that previously controlled—and impeded—transactions.

Many people envision EDI as a one-way transaction, but data can easily flow back and forth between the parties. For example, full EDI integration and application would include shipping instruction (shipper to carrier) freight bill (carrier to shipper) and freight payment (shipper to carrier).

In the intermodal industry “shipper” and “carrier” are nebulous terms. For EDI to truly work, the transactions must be able to flow beyond an initial transmission and a predetermined relationship. The intermodal industry’s fragmentation results in many participants contributing to a single transaction. In a typical stack-train move, with each level having a shipping instruction, freight bill and freight payment, there might be several roles played. The actual shipper (shipper) might utilize a third party (carrier). The third party (shipper) might utilize a stack-train operator (carrier). And the stack-train operator (shipper) utilizes a railroad (carrier).

Besides shippers and carriers, EDI must communicate with other parties in the intermodal industry. The government is getting increasingly involved with EDI—they certainly have the necessary magnitude of paper to eliminate. Today the U.S. Customs Service is leading the way and other agencies are following.

Intermodal customers are demanding more sophisticated EDI systems as their logistics sophistication increases. Even today, the presence of EDI support can be the deciding factor in a customer’s carrier decision.

Vendors need EDI as well. Although the railroads have developed EDI systems, other parties to the intermodal movement like terminal operators, draymen, etc. must also develop their capabilities.

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In addition to a wide potential audience of users, there is a wide universe of potential uses. EDI has been used mostly for shipping instructions, but the potential for other functions is vast, including:

—Rates, including quoting rates to shippers and receiving rates quotes from carriers;

—Notifications: customers and trucks need to be notified more expeditiously about the availability of their freight. The current methods involving the telephone call and the FAX should become the exception;

—Invoices: collecting monies owed is a prime consideration for any business. The EDI process can facilitate timely submission of the invoice and eliminate data-entry problems and expenses for the payee;

—Payments: on the other side of the payment transaction, EDI can also assist in reducing administrative expenses. It can also improve cash flow; and

—Claims: even though this is an area that nobody likes to talk about, efficient handling of claims is essential. This area is a prime candidate for EDI improvement.

Although EDI has recently proliferated in the railroad intermodal indus-
try, several obstacles to growth exist. Among them are a lack of industry standardization; inability to accommodate hazardous materials; the plethora of intermodal participants; inability to trace shipments; and growing international interdependence.

Industry standardization

The lack of a uniform set of rules or standardization is one of the major impediments to universal EDI use in the intermodal industry. Part of this problem revolves around the debate over the proper method of EDI communication. Some railroads have developed proprietary PC-based software packages. These are fine when the shipper and railroad have an exclusive arrangement. However, these packages are generally incompatible with those of other railroads. The alternative—with a higher initial cost—is network EDI, where all transactions flow through a single point and are then disseminated to proper recipients.

Railroads can no longer afford to be “EDI islands.” While proprietary programs were once extremely useful, serving as shippers’ initial steps into EDI, they are now inhibiting the development of EDI in the industry. Upon first glance, they are a tempting EDI solution because of their low initial investment in terms of time and money, but they cannot be considered serious, long-term solutions. By definition, proprietary packages are limited. A shipper dealing with seven railroads would need seven different packages. Also, these systems require duplicate data entry, the very problem EDI seeks to avoid.

The lack of uniformity in standards poses another great problem in industry standardization. While this may seem to be a paradox, it is true. Although the industry standards may not change, each railroad interprets them differently. For example, many railroads have different requirements for handling specific data elements in a bill of lading transmission.

Railroads can’t each “have it their way.” They need to agree on, and adhere to, uniform interpretations. One hope is that initiatives by AAR and major intermodal shippers to delineate specific methods of handling data elements will eliminate this problem.

“Paperless” interchange was begun by Class I railroads in January 1989. This may have finally forced the railroads to address the issue of uniformity in EDI standards. For years, shippers have complained about the inconsistencies and confusion between carriers, but to no avail. Now the railroads have had to do business with themselves and have had many problems. Movement toward some type of arbitration system by the AAR or some other body will be a welcome step.

The intermodal industry also currently suffers from an inability to consistently define the “context” of data. Standards used are often arbitrary. Intermodal shipping instructions use the same standards as carload shipping. Railroad waybill programs, most of which are 30-plus years old, are often unable to distinguish between the two types. For example, consider the reporting of commodity code for the trailer/container contents.

Through the years, various transpor-
tation modes have developed their own coding systems for commodity classification. Railroads require the full seven-position STCC, although only the first four positions at most are utilized for rating. Intermodal is a substitute for motor carrier; not the other way. Almost all intermodal shippers have systems based on the trucking industry standard: NMFC (National Motor Freight Classification). Railroads have taken the somewhat arrogant stance that they will not accept NMFC and require conversion to the full seven-position STCC. The Harmonized Code used all over the world is still not recognized by railroads in the United States.

Hazardous material

EDI must be able to accommodate reporting of hazardous materials. Intermodal shipments of hazardous material today usually require distinct (manual) handling. This is not efficient. Again, this is an area where various railroads have all applied standards differently. New standards are imminent for hazardous, which, it is hoped, will satisfy the requirements of all parties, while also meeting the requirements of Canada and Mexico.

The railroads have accepted the hazardous material standards in concept. They must now accept them in the course of business. Some railroads have taken the position that while they accept EDI on hazardous material, they want the shipper to sign a number of documents releasing them from any liability in the event of mishap. This is contrary to the spirit of EDI development.

Intermodal participants

By its very nature, intermodal transportation involves a multitude of participants. Most railroads provide ramp-to-ramp transportation and do it fairly well. However, the transportation market is door-to-door and this is the service carrier.

The primary competition for intermodal business is the over-the-road motor carrier, who picks up at the origin’s door and delivers to the destination’s door. In order to make railroad inter-

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modal transportation “look like” motor carrier service, a multitude of ancillary parties are introduced into the transportation equation. Recently, it has become popular to refer to a “seamless” intermodal transportation solution. To achieve this goal, exceptional exchange of data is necessary.

In this seamless transaction, EDI must capture all detailed information in the initial transmission and EDI partners must then be able to pass it on to all participants. Currently it is impossible to capture all this information through EDI because of conflicting interpretations and the inability of railroad waybill programs to capture all of it.

Tracing

A truckload motor carrier picks up a load at origin and delivers it at destination, controlling the move from start to finish. With increasingly sophisticated electronic tracking, many of the advanced carriers know where their loads are at all times. This ability is not limited to motor carriers. Federal Express can tell a shipper with a $10 freight bill where their load is within seconds.

This is in contrast to rail intermodal. Often it is a challenge to learn which participant has the load in its possession, let alone where it is. Playing “detective” is a common pastime for intermodal third parties. Poor customer service and lack of responsiveness are among the most common reasons for shippers to avoid using intermodal.

The most common method of tracking rail shipments is by Car Location Messages (CLMs). While CLMs have many admirable traits, they are sadly deficient in intermodal.

CLMs are only provided by railroads. Private terminals not controlled by railroads become CLM “black holes” for reporting. Such terminals are becoming common for double-stack traffic.

All commercial parties to the transaction are not always identified in the bill of lading or kept in the waybill. In these cases, shipper/consignee reporting is pointless and painstakingly slow manual tracing becomes necessary.

There is no provision for chassis reporting in CLMs. This is a key concern for steamship lines and double-stack train operators.

Different railroads report the same transactions with different CLM codes. Once again, a lack of standardization is a problem.

CLMs are often not created or transmitted in a timely fashion. An event that occurs at 0800 may not be reported until 1130. To add to the CLM delay, the transaction might not be reported as a CLM until 2000. Time lapses need to be corrected if intermodal is to overcome its reputation as being unreliable for time-sensitive freight.

There are not enough CLM codes to report adequately on all activities that occur within an intermodal ramp. A shipper using intermodal can react to poor information quality in one of two ways. One is by constant telephone contact with ramp personnel. The other is to avoid intermodal and use truck.

Correcting CLMs seems impossible. Too many carload shippers use it on antiquated systems. One potential solution to this problem is the development of a new transaction set for intermodal. The Intermodal Ramp Activity (622) is a possible solution to reporting gaps. It has two major attractions. The first is that it is not constrained by CLM code limitations. The second is it can be used by anybody, not just railroads. This matter is currently being reviewed by AAR.

International Implications

The U.S. can no longer establish EDI standards without considering the rest of the world. The growing interdependence of the world economy makes exclusive American standards seem provincial. We need to be aware of our role in world commerce and coordinate standards accordingly. We must work even harder to coordinate the establishment of EDI standards within the U.S.

In the U.S., there are currently two groups establishing EDI standards. TDCC (now TDCC/EDI) has been the group establishing transportation standards. ANSI (X12) has been establishing commercial standards. The groups plan to merge their publication function in 1990.

The United Nations, through its Economic and Social Council’s Economic Commission for Europe (UNECE), has established EDIFACT (Electronic Data-Interchange Administration, Commerce and Transport) as an international EDI standard. Many EDIFACT messages are designed to deal with as wide a span of functions as possible and some international organizations are submitting standards to EDIFACT. The International Maritime Organization (IMO) has submitted five transactions for consideration as EDIFACT standards. The International Standards Organization (ISO) submitted nine container messages for consideration. At present, only the invoice, debit, credit note transaction set is in the final (recommendation) status.

The IFTM (International Forwarding and Transport Message), currently in working paper status, will be an important international transportation message. It is projected to be recommended by the end of 1990. It will consist of provisional booking, firm booking, booking confirmation, instruction, instruction contract status and arrival notice.

In the long term, EDIFACT is expected to become the predominant standard in international trade. In an interdependent world, more and more transactions will be international. Growth of trade with Mexico and Canada represents only a beginning and is a fraction of future international transactions.

The U.S. Government is recognizing the inevitability of international EDI standardization. The Customs Service, after the development of their own system, is recognizing that EDIFACT will eventually be the new standard.

Where once a carrier was distinguished by providing EDI, today carriers are expected to offer it. The absence of EDI is becoming the equivalent of not having insurance or any other basic requirement.

For intermodal, EDI is a strategic tool. It can be used to overcome the problems that now stand in the way of making intermodal competitive with motor carriers. However, if the intermodal industry does not responsibly organize itself to take advantage of EDI’s many properties, EDI may become just another reason to avoid rail intermodal service and ship with motor carriers.