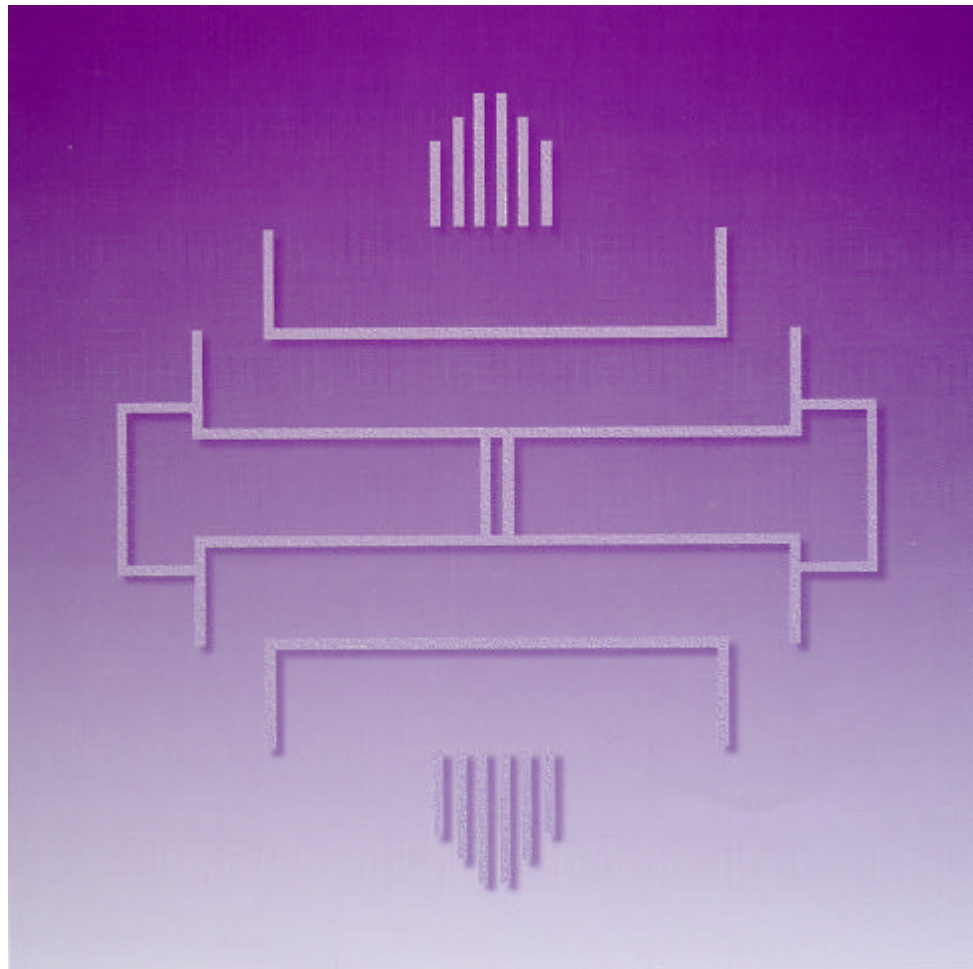


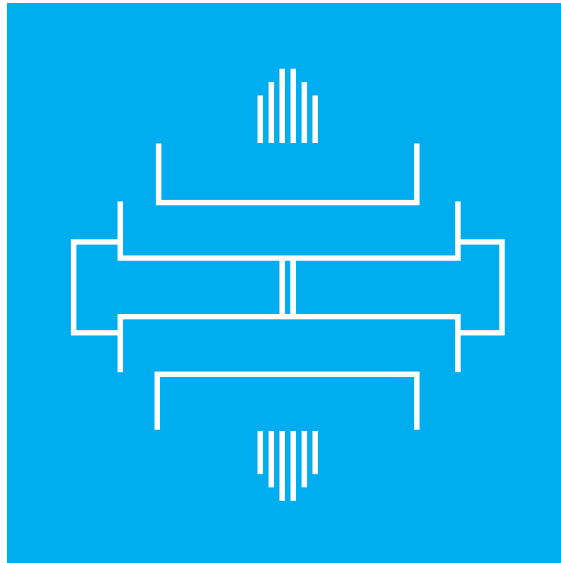


Uniform Code Council, Inc.

VICS EDI ARCHITECTURE GUIDE



*Voluntary Interindustry
Commerce Standard EDI*



VICS EDI
ARCHITECTURE GUIDE

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Uniform Code Council, Inc.

7887 Washington Village Drive, 300
Dayton, OH 45459-8605
937-435-3870

The VICS EDI Architecture Guide addresses transaction sets up to and including VICS version 004040.

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TABLE OF CONTENTS

INTRODUCTION	1
PRODUCT DEVELOPMENT/MERCHANDISING	4
Business Processes	4
Transaction Relationships	5
Transaction Descriptions	6
102 Associated Data	
830 Planning Schedule with Release Capability	
832 Price/Sales Catalog	
840 Request for Quotation	
843 Response to Request for Quotation	
846 Inventory Inquiry/Advice	
852 Product Activity Data	
889 Promotion Announcement	
893 Item Information Request	
ORDERING	9
Business Processes	9
Transaction Relationships	10
Transaction Descriptions	11
850 Purchase Order	
852 Product Activity Data	
855 Purchase Order Acknowledgment	
860 Purchase Order Change Request - Buyer Initiated	
869 Order Status Inquiry	
870 Order Status Report	
LOGISTICS	14
Business Processes	14
Transaction Relationships	22
Transaction Descriptions	24
163 Transportation Appointment Schedule Information	
180 Return Merchandise Authorization and Notification	
204 Motor Carrier Load Tender	
210 Motor Carrier Freight Details and Invoice	
211 Motor Carrier Bill of Lading	
212 Motor Carrier Delivery Trailer Manifest	
213 Motor Carrier Shipment Status Inquiry	
214 Transportation Carrier Shipment Status Message	
215 Motor Carrier Pick-up Manifest	
216 Motor Carrier Shipment Pick-up Notification	

- 223 Consolidators Freight Bill and Invoice
- 224 Motor Freight Summary Freight Bill Manifest
- 240 Motor Carrier Package Status Message
- 250 Purchase Order Shipment Management Document
- 753 Request for Routing Instructions
- 754 Routing Instructions
- 820 Payment Order/Remittance Advice
- 846 Inventory Inquiry/Advice
- 853 Routing and Carrier Instruction
- 856 Ship Notice/Manifest
- 861 Receiving Advice/Acceptance Certificate
- 940 Warehouse Shipping Order
- 947 Warehouse Inventory Adjustment Advice
- 990 Response To A Load Tender

FINANCIAL 33

- Business Processes** 33

- Transaction Relationships** 35

- Transaction Descriptions** 36

- 810 Invoice
- 812 Credit/Debit Adjustment
- 818 Commission Sales Report
- 820 Payment Order/Remittance Advice
- 824 Application Advice
- 831 Application Control Totals
- 856 Ship Notice/Manifest

BUSINESS SUPPORT 39

- Business Processes** 39

- Transaction Relationships** 39

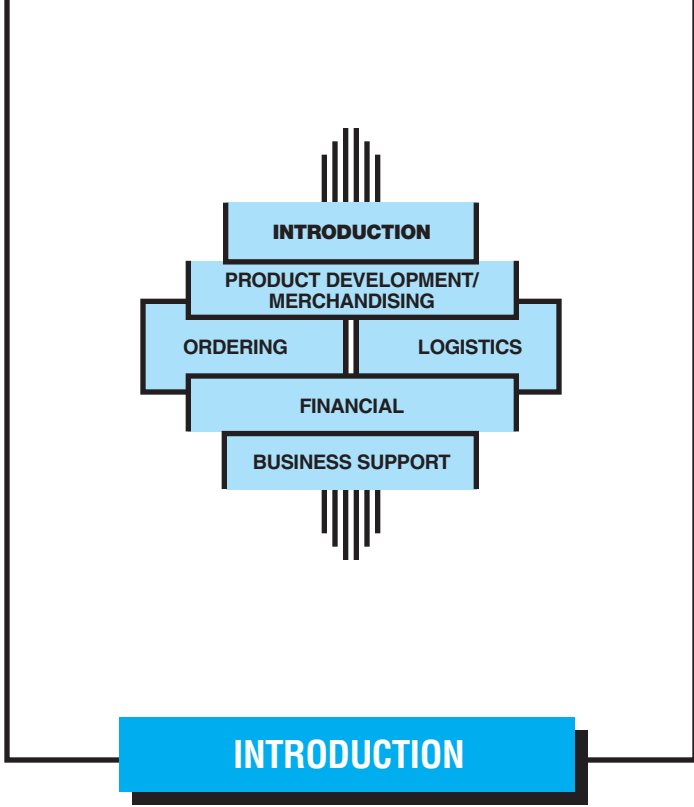
- Transaction Descriptions** 40

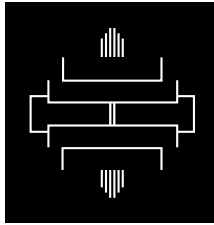
- 816 Organizational Relationships
- 824 Application Advice
- 864 Text Message
- 997 Functional Acknowledgment

IMPLEMENTATION GUIDELINES 42

- Processing Concept And Alternative
- Translation Software Alternatives
- Cost Considerations
- Operating Costs
- Organizing The Project
- Implementation Planning
- Establishing An Implementation Schedule
- Interfacing With Internal Systems And Applications
- Initial Implementation And Start-Up
- Post-Implementation Considerations

IMPORT-Business Flow For North American Business Partners	72
Introduction	72
Partner Definitions	72
Supplier/Manufacturer	
Agent/Broker	
Retailer/Importer	
Consolidator/De-consolidator	
Process Definitions	73
Procurement	
Shipping	
Receiving	
Procurement Business Process	73
Purchase Order	
Change Management	
Shipment Business Process	73
Proposed Shipment Advice	
Shipment Booking	
Cargo Receipt Advice	
Pre-shipment Advice	
Shipment/Manifest Advice	
Transaction Relationships	74
Transaction Descriptions	75
104 Air Shipment Information	
300 Reservation (Booking Request)(Ocean)	
325 Consolidation of Goods in Container	
850 Purchase Order	
856 Ship Notice/Manifest	
860 Purchase Order Change Request-Buyer Initiated	
861 Receiving Advice/Acceptance Certificate	
870 Order Status Report	
Summary	76
APPENDIX	77
Key Supporting Documents	77
Trade Associations	78
Glossary	79





INTRODUCTION

Developed by the **Voluntary Interindustry Commerce Standard (VICS) EDI Architecture Standing Task Group**, a task group of the VICS EDI Standards Maintenance Committee, this guide describes relationships between business functions in terms of specific EDI transactions. It documents, in general terms, the structure and use of EDI transactions, and suggests steps which organizations can take to implement EDI as part of their daily operations and quick response initiatives. This document is based on VICS EDI, Version 004040.

The VICS EDI Architecture Guide is divided into two parts. The first part reviews the structure of VICS EDI in terms of business functions and processes. The second part, "Implementation Guidelines", provides information that can be used as a starting point when developing VICS EDI compatible systems for the first time or expanding VICS EDI processing.

Figure 1 is a road map through the first part of this guide. It presents the five business functions - Product Development/Merchandising, Ordering, Logistics, Financial, and Business Support. Business processes, transaction relationships, and specific transaction sets are identified for each function. A transaction set is a logical grouping of business data that is exchanged by companies. Transaction sets are defined in the *VICS EDI Retail Industry Conventions and Implementation Guidelines for EDI*.

BENEFITS SUMMARY

EDI, and VICS EDI specifically, is a vital tool available to every business. Electronic interchange of intercompany and intracompany data increases efficiency and productivity and can profoundly affect a company's business practices and traditions. EDI cannot be viewed as strictly a technical activity as it impacts many areas of an organization. Current functional procedures may require revision, and new business relationships will need to be established and managed. EDI requires a high level commitment from a broad spectrum of company management. Corporate policies and procedures will also need to be examined.

Companies implementing VICS EDI for the first time and companies expanding VICS EDI processing must quantify their own benefits. The following pages provide a guideline and checklist for benefits. The applicability of benefits and their importance will vary from company to company. Likewise, benefits will vary depending on whether a company is a buyer or supplier.

The following material pertains to the direct benefits that can be achieved using VICS EDI. However, VICS EDI may provide other indirect benefits, such as the opportunity to obtain useful planning and control information on an automated basis. EDI data is in a standard format that can be processed and stored on a computer. It can be integrated with other internal application data to produce enhanced analysis and comparative reporting in a number of important business areas.

VICS EDI can be used to enhance productivity by reducing costs. It can reduce inventory carrying costs, improve inventory turns, help control storage and handling cost, significantly reduce administrative and clerical time, and improve data accuracy and reduce errors.

REDUCED LEADTIME

VICS EDI can provide a direct reduction in the ordering cycle in such areas as:

- Reduced inventory levels
- Inventory cost reductions
- Increased inventory turns
- Better use of warehouse space
- More accurate inventory projections
- Fewer out-of-stock conditions
- Fewer emergency situations

DISTRIBUTION CENTER EFFICIENCIES

VICS EDI can provide important benefits in warehousing operations, such as:

- Improved planning for shipping and receiving
- Lower warehousing costs
- More efficient use of personnel
- More efficient use of dock space
- Lower freight costs

ACCOUNTING EFFICIENCIES

VICS EDI can provide benefits in the accounting function, such as:

- Reduced invoice discrepancies
- Reduced paper
- Less time spent reconciling differences
- Reduced credit/debit adjustments
- Reduced administrative costs
- Reduced proof of delivery problems
- Reduced time to process invoices
- Timely and accurate financial data
- Reduced payment delays

TRANSACTION ACCURACY

The automated procedures associated with VICS EDI can reduce errors and eliminate or reduce costs associated with correcting errors. Some examples are:

- Less time spent in reconciling differences and errors
- Preparation of fewer invoice adjustments
- Fewer back order situations
- Fewer product returns

INCREASED PRODUCTIVITY

VICS EDI provides the opportunity for productivity improvements by reducing administrative and clerical time. Some examples are:

- Reduction of clerical time in the merchandising and sales departments
- Better buying decisions
- More productive use of sales personnel time to present business opportunities
- Less time spent resolving order and invoice discrepancies and disputes
- Better order status information
- Increased opportunities for alternative buying

ADMINISTRATIVE AND CLERICAL COSTS

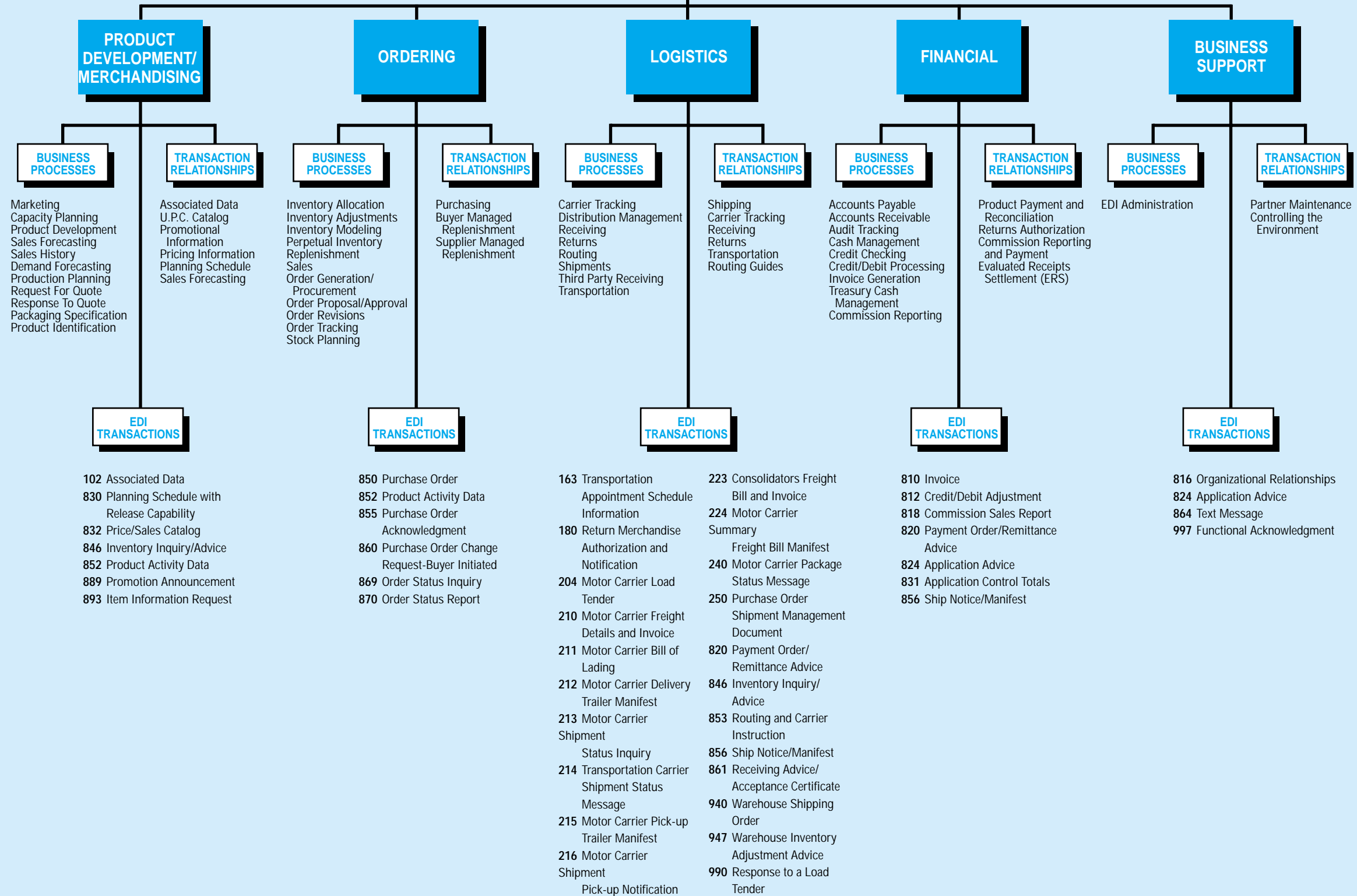
VICS EDI can substantially improve productivity and direct cost savings by reducing or eliminating the time required in traditional paper based systems. Some affected areas are:

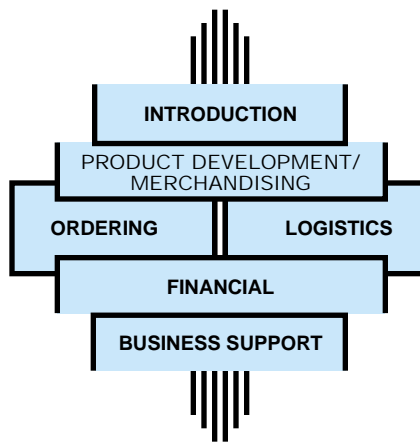
- Document editing and checking
- Document filing and retrieval
- Document matching
- Manual document preparation
- Key entry for computer input



Figure 1

VICS EDI ARCHITECTURE GUIDE BUSINESS FUNCTIONS AND PROCESSES





**PRODUCT DEVELOPMENT/
MERCHANDISING**

Business Processes

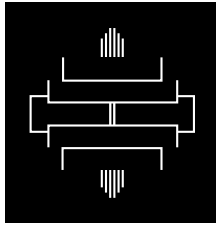
- Marketing
- Capacity Planning
- Product Development
- Sales Forecasting
- Sales History
- Demand Forecast
- Production Planning
- Request For Quote
- Response To Quote
- Packaging Specifications
- Product Identification

Transaction Relationships

- Associated Data
- U.P.C. Catalog
- Promotional Information
- Pricing Information
- Planning Schedule
- Sales Forecasting

EDI Transactions

- 102 Associated Data
- 830 Planning Schedule with Release Capability
- 832 Price/Sales Catalog
- 846 Inventory Inquiry/Advice
- 852 Product Activity Data
- 889 Promotion Announcement
- 893 Item Information Request

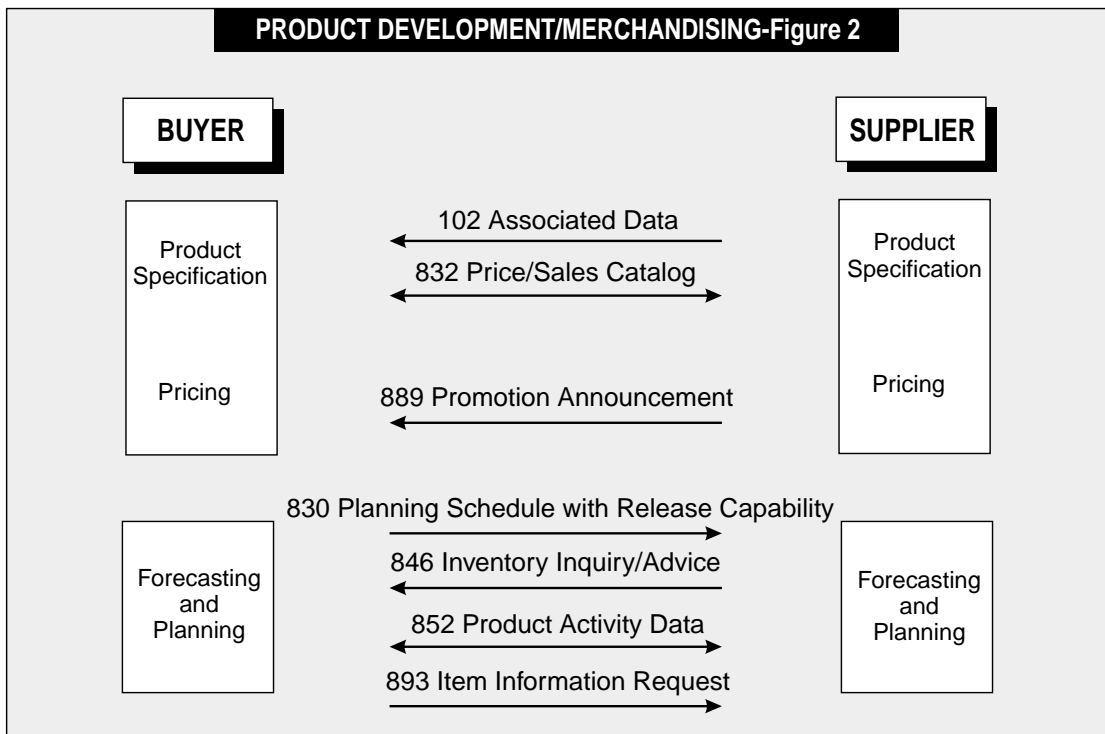


PRODUCT DEVELOPMENT/ MERCHANDISING

Product Development/Merchandising is the process of planning and promoting sales. This includes the development of new product specifications, projecting production requirements and establishing in-store display product presentations.

BUSINESS PROCESSES

Marketing	Generating product sales through advertising and promotional programs/incentives. Marketing also includes collecting consumer data relative to a product category, without regard to the manufacturer, in an effort to analyze consumer attitudes and purchasing trends.
Capacity Planning	Establishing manufacturing requirements (equipment, production run times, machinery/processes) for future production periods.
Product Development	Establishment of specifications for new products as well as product changes.
Sales Forecasting	Evaluation of product flow for projecting production requirements and anticipated sales revenues.
Sales History	Collecting and storing of sales information to be used in projection of future sales.
Demand Forecast	Projecting actual manufacturing capacity over a given time period.
Production Planning	Evaluating real and forecasted demand and establishing a viable manufacturing and assembly schedule.
Request for Quote	A process initiated by a buyer that formally asks a supplier to price a product.
Response to Quote	A response from the supplier to a buyer that provides a price for a product.
Packaging Specifications	Establishing how products should be packaged and their specifications.
Trade Item Identification	Defining each trade item (e.g., style, color, size) and assigning a Global Trade Item Number (GTIN) to each product.



TRANSACTION RELATIONSHIPS

The buyer can use two documents to facilitate the planning process: the **Planning Schedule with Release Capability (830)** is used to provide forecasts of expected demand to the supplier, either for informational purposes or as an actual request for trade items; the **Request for Quotation (840)** is used to request pricing information and possible delivery schedules from the supplier.

Suppliers can also notify potential buyers of their exact product line, expected product introduction and discontinuation dates using the **Price/Sales Catalog (832)**. In conjunction with the **Price/Sales Catalog (832)**, the **Associated Data (102)** is used to transmit multi-media objects such as an image, spectral, audio, etc. Along with the item setup information provided in the **Price/Sales Catalog (832)**, a supplier can send the **Promotion Announcement (889)** to announce a promotion to the retailer. This may include special prices being offered during a specific time period that could have conditions and restrictions associated with the promotion.

The supplier can transmit their current inventory levels and requirements to the buyer using the **Inventory Inquiry/Advice (846)** or **Product Activity Data (852)**.

In support of a collaborative planning, forecasting and replenishment (CPFR) relationship, the buyer can request historical activity information for specific products, locations and time periods using the **Item Information Request (893)**. The supplier uses the **Product Activity Data (852)** to convey the requested information.

TRANSACTION DESCRIPTIONS

Associated Data (102)

The **Associated Data (102)** is used by a buyer/merchandiser to convey multi-media objects, such as a product image and its associated audio. The **Price/Sales Catalog (832)** is usually sent along with the **Associated Data (102)** to furnish product information and specify the associated object reference ID. This ID links the actual multi-media object in the **Associated Data (102)** to the item and the multi-media object attributes in the **Price/Sales Catalog (832)**.

Associated Data (102) Benefits

- Allows audio and image data to be associated with a product
- Automates the transfer and loading of multi-media objects to a database

Planning Schedule With Release Capability (830)

The **Planning Schedule With Release Capability (830)** provides the supplier with a buyer's forecasted quantities for their product line. The starting and ending dates for the forecast are used to describe when products are needed by the buyer, rather than when sales are made to the consumer.

Forecasts may be structured in two mutually exclusive ways. They can be arranged by location and then by product, or they can be arranged by product and then by location. A forecast may be generated for a single location, such as a warehouse, where line item detail provides demand information for products stored at the buyer's warehouse. Alternatively, a forecast may be generated for multiple locations. In this case, line item detail provides total demand for all locations, and sub-line item detail provides demand information for each location.

Planning Schedule With Release Capability (830) Benefits

- Helps to ensure that suppliers will be in-stock for a buyer's desired product
- Allows for a range of forecasting programs - from simple data entry to advanced automated forecasting

Price/Sales Catalog (832)

The **Price/Sales Catalog (832)** is sent from a supplier to a buyer in order to furnish a buyer with information regarding products available from that supplier. It is not a one-time response to a buyer's request for information, unlike the **Response to Request for Quotation (843)**. It is intended to serve as an update to a standing database of supplier product information, and as such, is created by the supplier whenever their product line changes. By maintaining a current, accurate database of a supplier's available products, the ordering process will be more efficient and error free.

This transaction can be sent from a supplier directly to a buyer. However, the most efficient use of this transaction involves a third-party catalog provider which serves as a central database for a supplier's product catalog. In this scenario, a supplier initially establishes their current product line in the third-party catalog. The supplier authorizes customer access to all or portions of their catalog entries. Buyers can access updated catalog information for all suppliers subscribing to the third-party catalog provider. As suppliers add, change, or delete items from their product line, they send **Price/Sales Catalog (832)** transactions to the third-party catalog to reflect these changes. The third-party catalog updates the standing database and can broadcast these changes to the appropriate customers using the

Price/Sales Catalog (832). The buyer can also send this transaction to a third-party catalog provider or supplier to request specific product information (e.g., all setup information for items with a certain style identifier).

Information commonly found in the **Price/Sales Catalog (832)** transaction includes:

- U.P.C. number for the supplier's products
- Supplier's identifier for the products, e.g., style
- National Retail Federation (NRF) size code, and size description
- NRF color code, and color description
- Price
- Discontinue date, if known

Price/Sales Catalog (832) Benefits

- Provides ready access to supplier products or product lines
- Allows the buyer to determine the most favorable product pricing
- Facilitates evaluation of a supplier's product line, new product line extensions or new product introductions
- Ensures consistent trade item identification using the Global Trade Item Identification (GTIN). GTIN provides both the supplier and the buyer with a common item identification system that can be scanned. The uses of GTIN data and the impact on traditional business processes are endless. The data is useful in the planning, inventory management, ordering, logistics, and business support functions by allowing increased detail analysis to be performed and evaluated. In short, the GTIN scanning process links the physical item to additional supporting information, resident on internal databases. If the GTIN number is used by the buyer and supplier in their EDI partnerships as their only means of merchandise identification, the need for labor intensive maintenance of item cross reference tables will be reduced. It provides a means for a more cost effective method of conducting business.

Inventory Inquiry/Advice (846)

The **Inventory Inquiry/Advice (846)** is used by the supplier or manufacturer to notify a buyer of inventory on hand. This is used most commonly by the buyer, to take advantage of special buys or overstock opportunities.

In addition to current inventory levels, the supplier can also use the **Inventory Inquiry/Advice (846)** to notify a buyer of minimum order quantity requirements and total quantity on order for that buyer, as reflected in the supplier's system. The **Inventory Inquiry/Advice (846)** can also be used internally to inform different locations inside an enterprise of their respective inventory positions.

Inventory Inquiry/Advice (846) Benefits

- Allows a buyer to minimize inventory carrying costs

Product Activity Data (852)

The **Product Activity Data (852)** is used by the buyer to transmit actual inventory and product sales by location to the supplier. Information from this transaction is used as input to a vendor's forecasting system.

Various product activity data can be reported by the buyer to the supplier using this document. This includes:

- Sales
- Movement of inventory from warehouse to final sales location
- Current inventory levels
- Additional or exceptional demand over and above scheduled replenishment levels
- Out of stock quantities, e.g., lost sales, rainchecks or shortfalls
- On-order quantities as reflected in the buyer's systems
- Quantities received as reflected in the buyer's systems
- Adjustments to inventory

Product Activity Data (852) Benefits

- Reports inventory movement for data analysis
- Helps to streamline and improve inventory management operations
- Reduces inventory handling costs
- Aids in forecasting future demand

Promotion Announcement (889)

This transaction is used to convey pertinent data relative to the announcement of a promotion. This would include announcement of promotion allowance amounts, dates and performance conditions that may apply; the replacement of a previously transmitted promotion in its entirety; the cancellation of a previously transmitted promotion; changes to promotion dates; or acceptance of a promotion offered by a supplier.

Promotion Announcement (889) Benefits

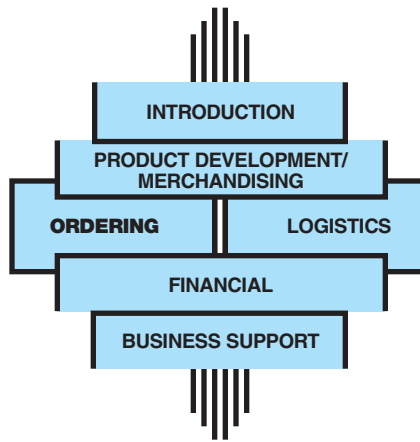
- Allows for systematic announcement of sales promotions
- Conveys price reductions for the retailer
- Ensures accurate trade item databases
- Enables prompt exchange of time sensitive data

Item Information Request (893)

The **Item Information Request (893)** is used within a collaborative planning, forecasting and replenishment (CPFR) environment to request historical activity information from the supplier. The buyer can request information on specific products, locations and time periods, summarized by requested intervals (weeks, months, quarters, etc.).

Item Information Requests (893) Benefits

- Automates the exchange of historical product information between supplier and buyer
- Facilitates the collaborative planning, forecasting, and replenishment (CPFR) process



ORDERING

Business Processes

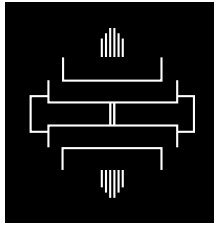
Inventory Allocation
 Inventory Adjustments
 Inventory Modeling
 Perpetual Inventory
 Replenishment
 Sales
 Order Generation/Procurement
 Order Proposal/Approval
 Order Revisions
 Order Tracking
 Stock Planning

Transaction Relationships

Purchasing
 Buyer Managed Replenishment
 Supplier Managed Replenishment

EDI Transactions

850 Purchase Order
852 Product Activity Data
855 Purchase Order
 Acknowledgment
860 Purchase Order Change
 Request-Buyer Initiated
869 Order Status Inquiry
870 Order Status Report

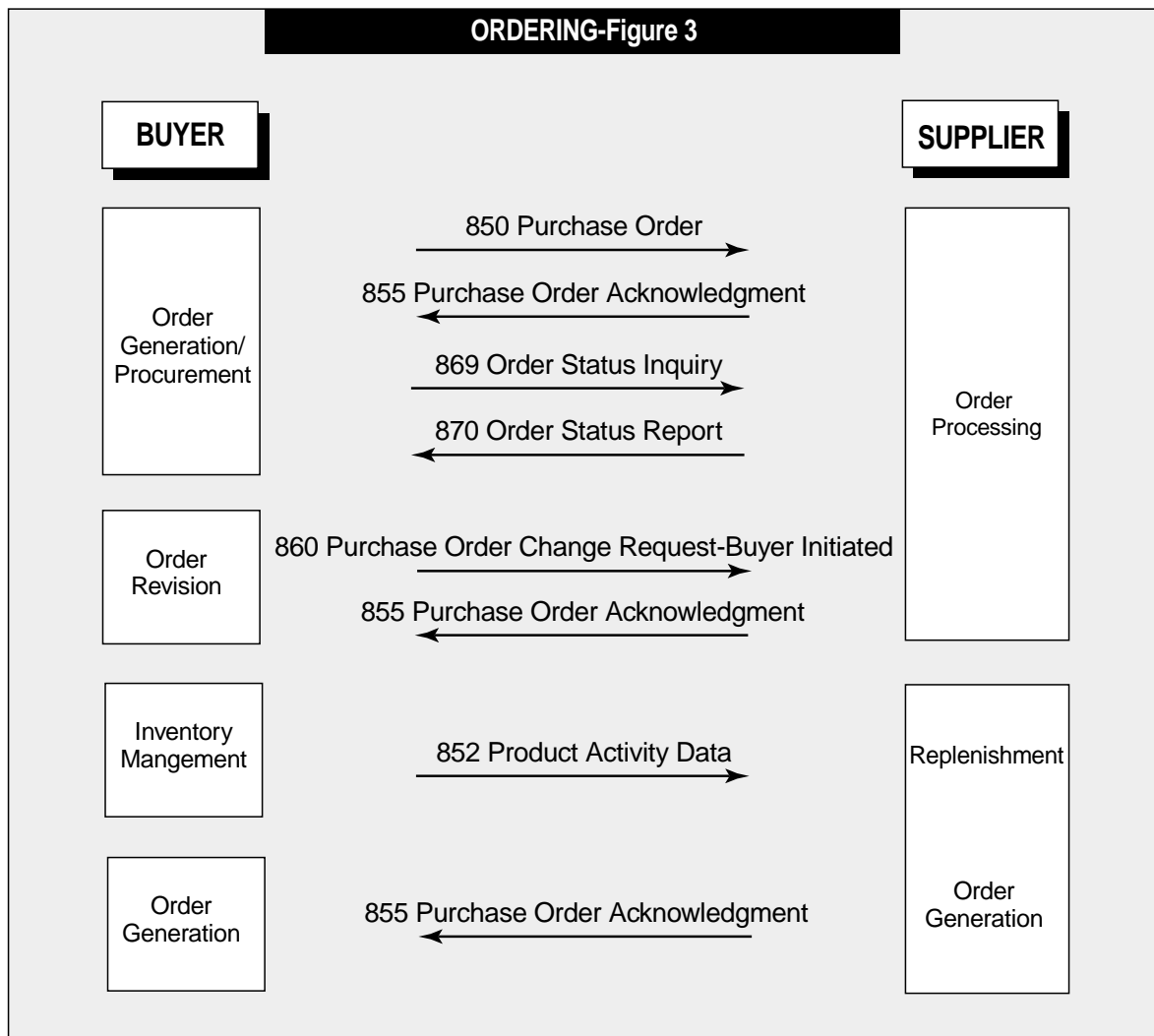


ORDERING

Ordering is the acquisition of needed products or services by the buyer.

BUSINESS PROCESSES

Inventory Allocation	Dividing or distributing products for a specific purpose, location or customer.
Inventory Adjustments	Any stored product quantity changes made to correct a quantity.
Inventory Modeling	Evaluating product flow and establishing the correct quantity needed for a given stocking unit within a given period of time.
Perpetual Inventory	Calculating inventory based on changes to inventory, primarily sales.
Replenishment	Establishing product flow in quantities required to satisfy demand.
Sales	Exchanging products for money.
Order Generation/ Procurement	The acquisition of needed products or services. The order generation/procurement process represents the origin of a purchase order based on the buyer's requirements.
Order Proposal/ Approval	A supplier suggesting to the buyer a replenishment purchase order and the buyer approving the replenishment quantities.
Order Revisions	Changing purchase orders to reflect accurate requirements or deliverables.
Order Tracking	Recording the movements of a purchase order that provides the opportunity to determine the status of an order.
Stock Planning	Evaluation of product flow to determine inventory levels required for a future sales period.



TRANSACTION RELATIONSHIPS

The basic transaction for buyer-driven purchasing is the **Purchase Order (850)**, sent from the buyer to the supplier. This can be followed by the **Purchase Order Change Request - Buyer Initiated (860)** and the **Order Status Inquiry (869)**.

The supplier can respond to the **Purchase Order (850)** with the **Purchase Order Acknowledgment (855)** and/or the **Order Status Report (870)**. The **Purchase Order Acknowledgment (855)** is only a confirmation of the original order and cannot reflect any changes to the order. The **Order Status Report (870)** can be sent in response to the **Order Status Inquiry (869)**, or it can be systematically generated by the supplier based on predefined conditions between trading partners.

In support of buyer-managed replenishment, the **Product Activity Data (852)** can be sent to inform the supplier of sales or other changes in inventory levels. The supplier can use this information for sales trend analysis.

In supplier-managed replenishment, the **Product Activity Data (852)** is used for the reporting of inventory movement. The transaction allows for the notification of current inventory levels, sales, returns, inventory adjustments and demand for immediate unplanned replenishment.

The supplier uses the information to update model stocks, calculate replenishment quantities and ship product to the buyer. To inform the buyer that a replenishment order has been placed on their behalf, many suppliers use the **Purchase Order Acknowledgment (855)**, also known as a reverse purchase order, as a replenishment advice.

In some replenishment programs, the buyer can request a change to a replenishment order using the **Purchase Order Change Request - Buyer Initiated (860)**. It should be noted that the amount of checking and re-verification of proposed quantities, made with a **Purchase Order Change Request - Buyer Initiated (860)** and **Order Status Report (870)**, depends on the sophistication of both the buyer's and the supplier's systems, the accuracy of the forecast, model stock, and product activity data driving the supplier's replenishment system.

TRANSACTION DESCRIPTIONS

Purchase Order (850)

The **Purchase Order (850)** is sent from the buyer to the supplier to order product for shipment. All the customary information included on a paper purchase order can be included in an EDI purchase order, including terms, shipping instructions and other related information. Buyers try to establish defaults for the many variable items on their purchase orders, so only the minimum ordering information is transmitted on each EDI purchase order.

Purchase Order (850) Benefits

- Substantially reduces paper flow activities
- Increases operating efficiencies through reduced data volume and time required to complete transactions

Product Activity Data (852)

The **Product Activity Data (852)** is most useful when the supplier is maintaining inventory replenishment model stocks for the buyer. The buyer provides sales/inventory data to the supplier. The transaction allows a buyer to provide a supplier with a complete picture of the buyer's inventory position as an aid in forecasting and executing a supplier-driven replenishment system. The buyer must also specify if this transaction constitutes a commitment to purchase products or if it is for informational purposes only.

The number of reporting locations and/or volume of stock keeping units (SKUs) will determine the size of the transaction. Some buyers report end sales to be replenished, while others report movement from their distribution centers to their final sales locations, expecting the supplier to replenish their distribution centers.

Various types of product activity data can be reported by the buyer to the supplier using the **Product Activity Data (852)**, including:

- Sales
- Movement of inventory from warehouse to final sales location
- Current inventory levels
- Additional or exceptional demand over and above scheduled replenishment levels
- Out of stock quantities, e.g., lost sales, rainchecks or shortfalls on order quantities as reflected in the buyer's system
- Adjustments to inventory

Product Activity Data (852) Benefits

- Reports inventory movement for data analysis

- Aids in the automation of the replenishment cycle
- Facilitates Vendor Managed Inventory (VMI) programs
- Helps to streamline and improve inventory management operations
- Reduces inventory handling costs

Purchase Order Acknowledgment (855)

Within VICS EDI, this transaction serves two distinct purposes. It can be sent by the supplier to the buyer to provide proof that a purchase order has been received and the content is correct or incorrect. In supplier-managed replenishment programs, the **Purchase Order Acknowledgment (855)** becomes a reverse purchase order and notifies the buyer that either: 1) the actual order that has been placed on their behalf or; 2) these are the recommended replenishment order up to quantities.

Purchase Order Acknowledgment (855) Benefits

- Provides an efficient means of confirming buyer purchase orders

Purchase Order Change Request - Buyer Initiated (860)

Once the capability for processing EDI purchase orders is in place, a method for purchase order changes needs to be developed. As with a paper-based purchase order, there are situations that require changes to outstanding purchase orders. Since the **Purchase Order Change Request - Buyer Initiated (860)** pertains to purchase orders, the information for this transaction is obtained from the same sources as with paper-based purchase order changes. This transaction only communicates changes, additions, or deletions to a previously transmitted PO.

Once again, timing becomes an issue. A control mechanism needs to be in place to prohibit changes past a certain cut-off time. While this is extremely critical in a quick response environment, it is not as great a concern for traditional reorders with ample lead time for fulfillment. Also, applications need to be tailored as to the type of change desired.

Purchase Order Change Request - Buyer Initiated (860) Benefits

- Increases the operating efficiency of executing purchase order change.

Order Status Inquiry (869)

The **Order Status Inquiry (869)** transaction allows a buyer to request pertinent data concerning a purchase order and/or specific trade items on a purchase order. The request is useful since the buyer's distribution center may require information about the specific merchandise.

Order Status Inquiry (869) Benefits

- Provides for increased accuracy of purchase order confirmation and status
- Improves the decision making process in the receiving environment

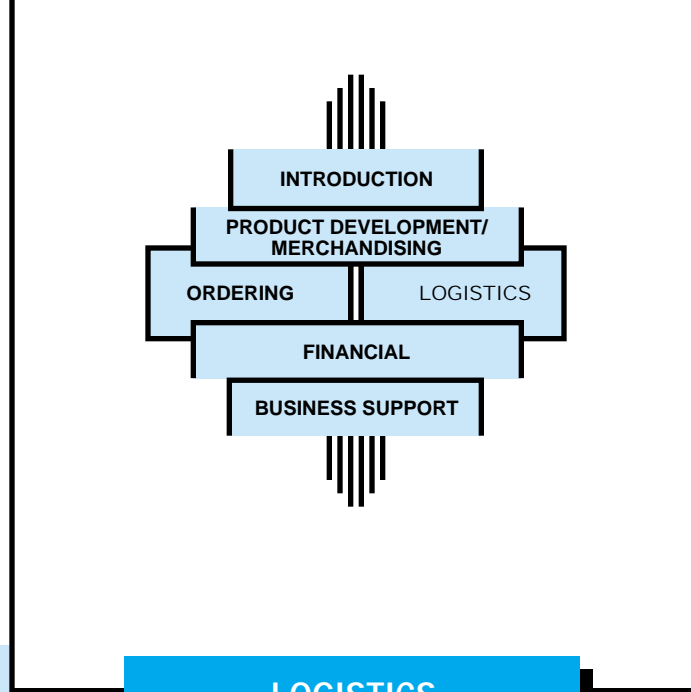
Order Status Report (870)

The purpose of the **Order Status Report (870)** is to inform the buyer of the status of a purchase order and/or trade items on a purchase order. This transaction is prepared in response to the **Order Status Inquiry (869)** or is systematically generated based on predefined conditions between trading partners.

Based on the response, the buyer needs to make a decision regarding forward action. The main consideration at time of receipt should be to determine what action needs to take place to ensure an adequate supply of merchandise.

Order Status Report (870) Benefits

- Provides purchase order status information
- Improves the decision making process in the receiving environment



LOGISTICS

Business Processes

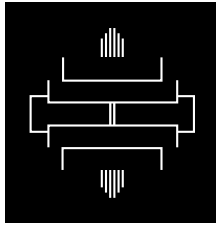
- Carrier Tracking
- Distribution Management
- Receiving
- Returns
- Routing
- Shipments
- Third Party Receiving
- Transportation

Transaction Relationships

- Shipping
- Carrier Tracking
- Receiving
- Returns
- Transportation
- Routing Guides

EDI Transactions

- | | |
|---|---|
| <ul style="list-style-type: none"> 163 Transportation Appointment Schedule Information 180 Return Merchandise Authorization and Notification 204 Motor Carrier Load Tender 210 Motor Carrier Freight Details and Invoice 211 Motor Carrier Bill of Lading 212 Motor Carrier Delivery Trailer Manifest 213 Motor Carrier Shipment Status Inquiry 214 Transportation Carrier Shipment Status Message 215 Motor Carrier Pick-up Trailer Manifest 216 Motor Carrier Shipment Pick-up Notification | <ul style="list-style-type: none"> 223 Consolidators Freight Bill and Invoice 224 Motor Carrier Summary Freight Bill Manifest 240 Motor Carrier Package Status Message 250 Purchase Order Shipment Management Document 753 Request for Routing Instructions 754 Routing Instructions 820 Payment Order/Remittance Advice 846 Inventory Inquiry/Advice 853 Routing and Carrier Instruction 856 Ship Notice/Manifest 861 Receiving Advice/Acceptance Certificate 940 Warehouse Shipping Order 947 Warehouse Inventory Adjustment Advice 990 Response to a Load Tender |
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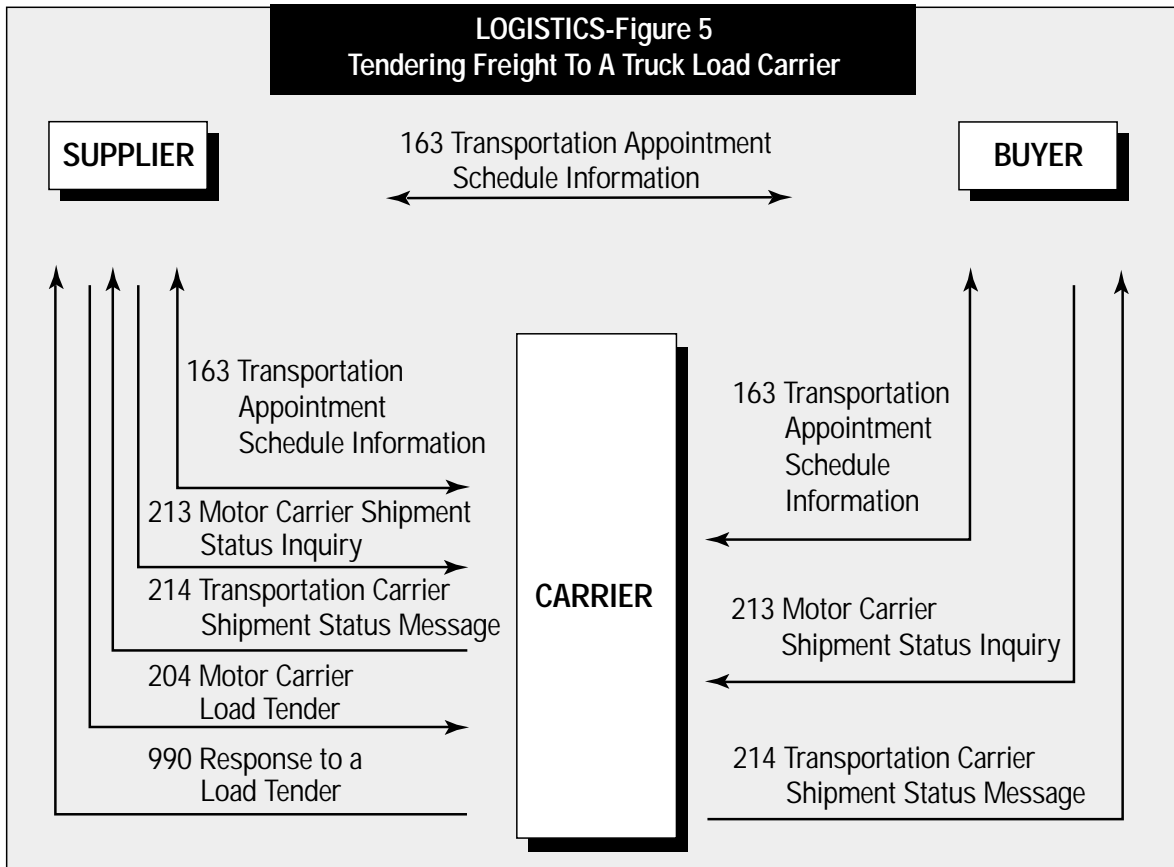
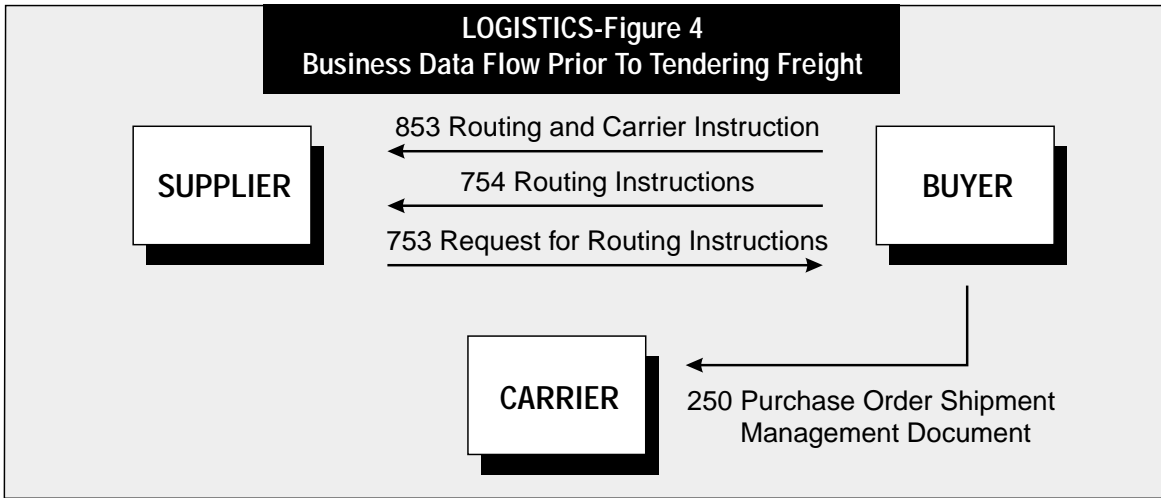


LOGISTICS

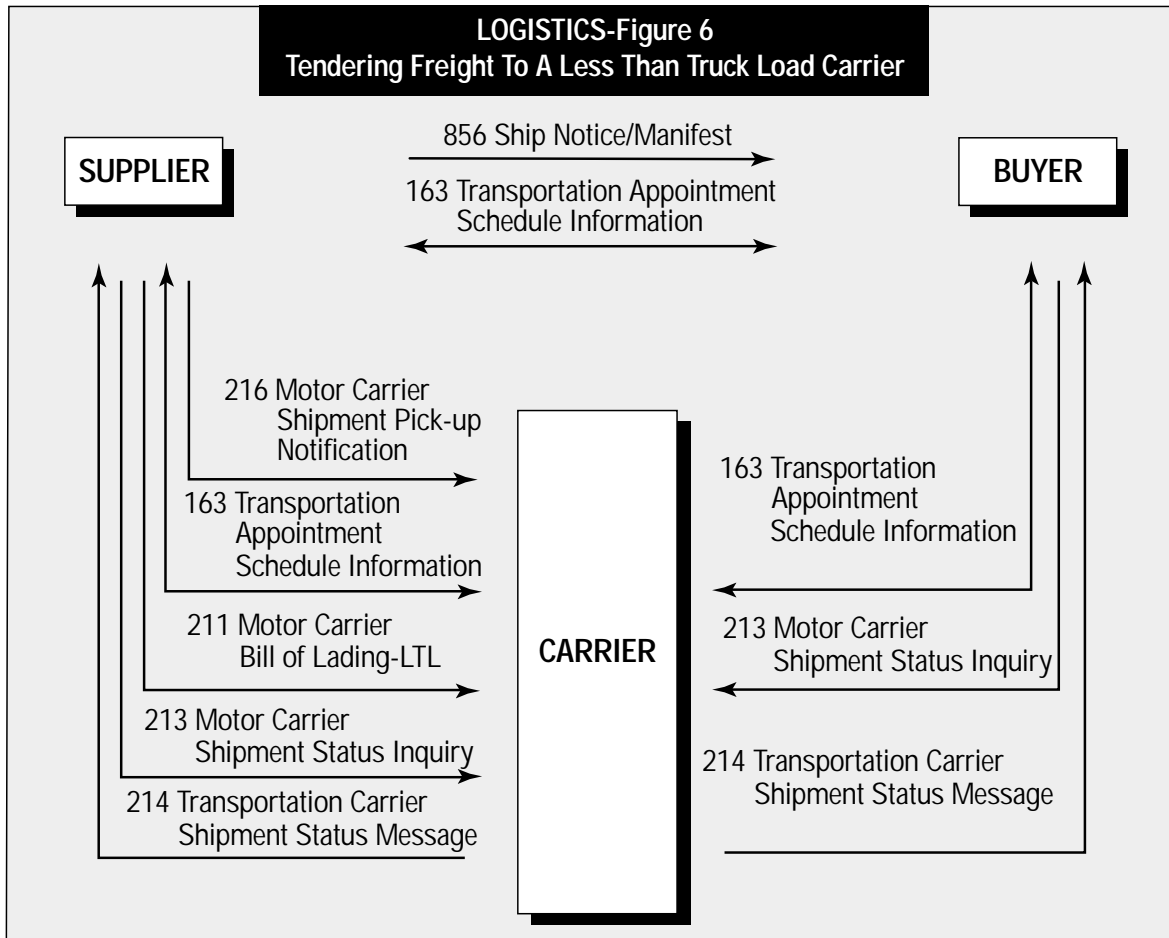
Logistics is the process of procuring, handling, and delivering products, and of integrating the physical product flows with supportive technologies.

BUSINESS PROCESSES

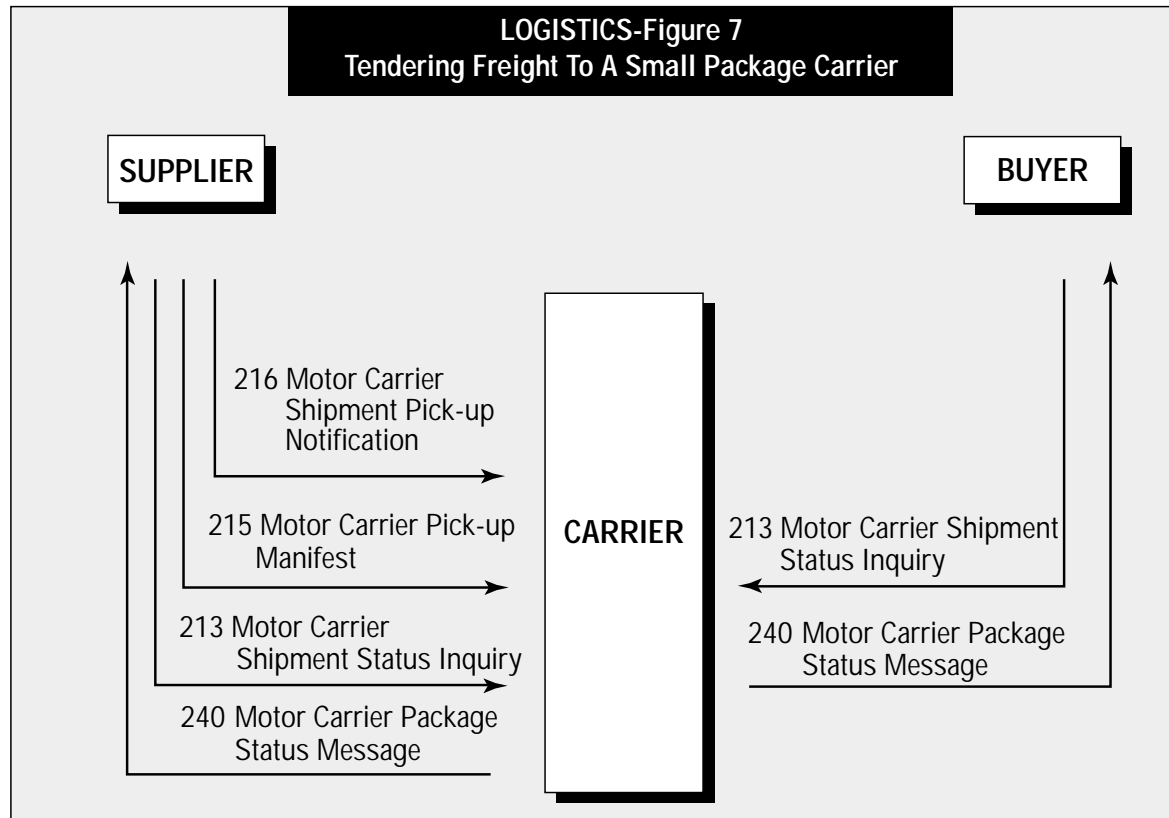
Carrier Tracking	Focuses on the recording of shipment locations as the shipment travels through a carrier's network
Distribution Management	Inventory control, including storing, maintaining, packing, and preparing shipments
Receiving	Physically acquiring trade items from a supplier and adding the product to inventory
Returns	Physically handling merchandise returned from buyers, customers or their distributed locations
Routing	Maintaining and conveying detailed routing and carrier instructions
Shipments	Physically transferring a quantity of trade items to a buyer, customer or location
Third Party Receiving	Receiving, shipping and management of inventory by an independent organization for another organization
Transportation	Scheduling and providing the means of conveying products from a supplier to a buyer through a carrier



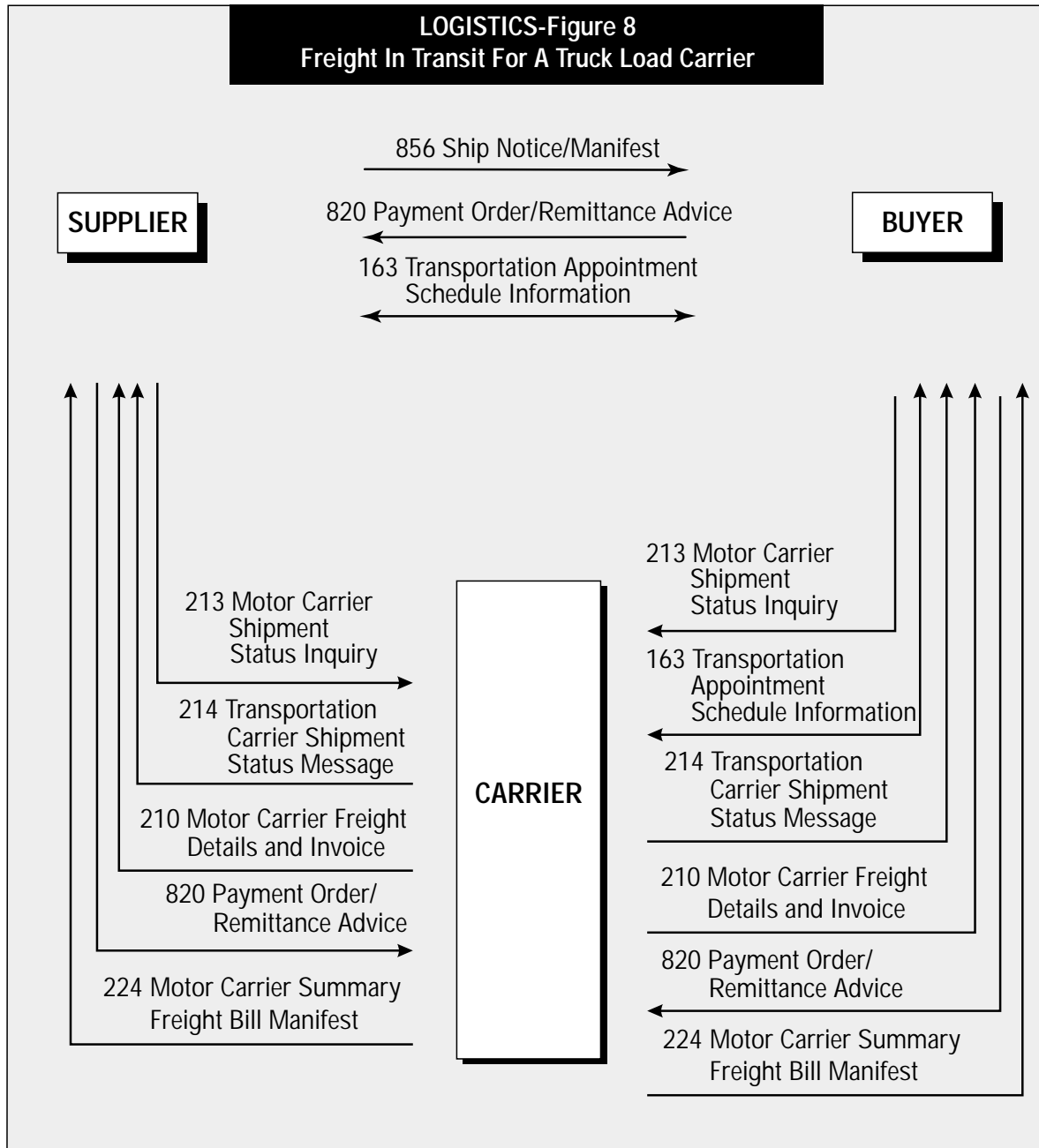
**LOGISTICS-Figure 6
Tendering Freight To A Less Than Truck Load Carrier**



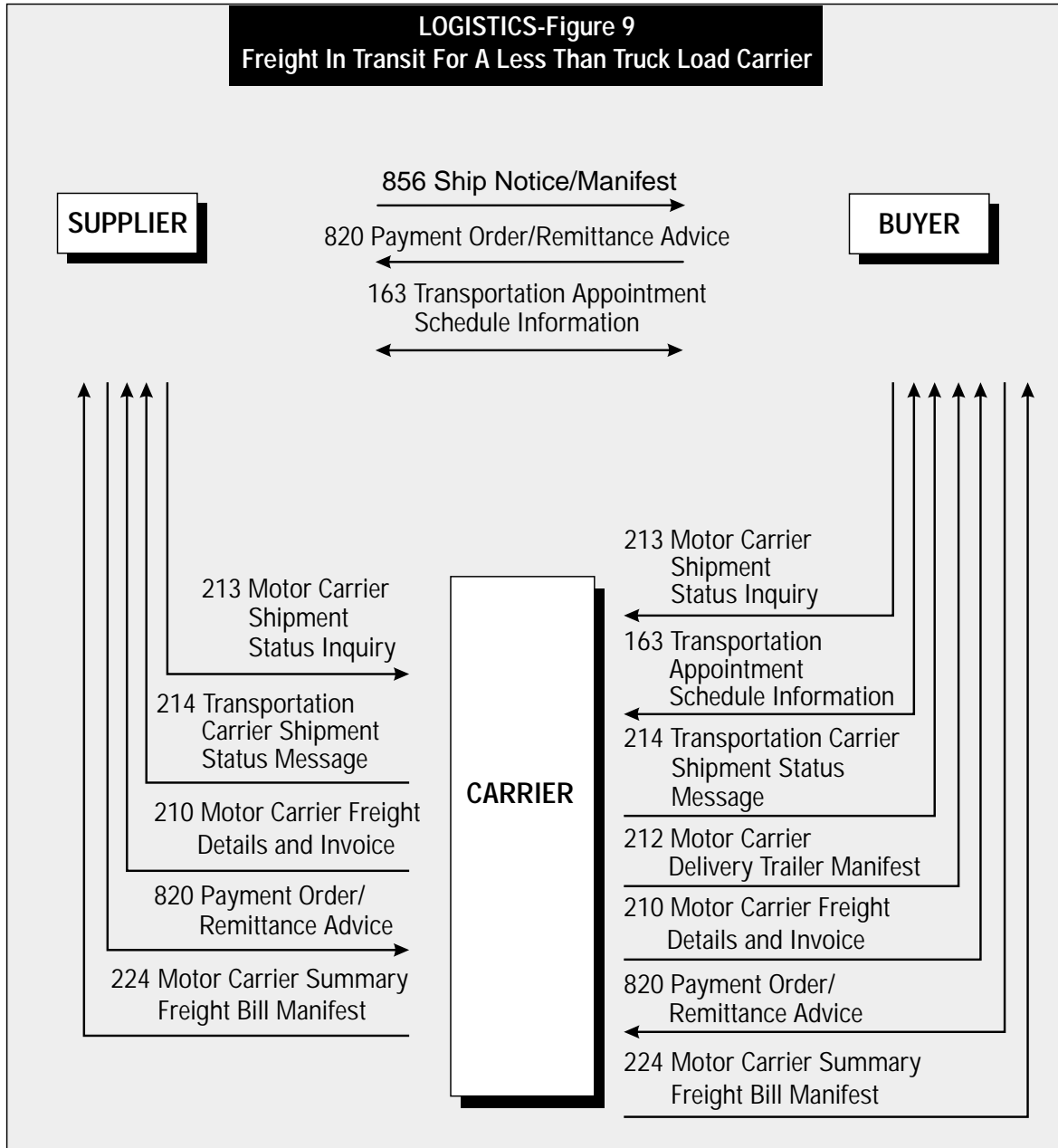
**LOGISTICS-Figure 7
Tendering Freight To A Small Package Carrier**



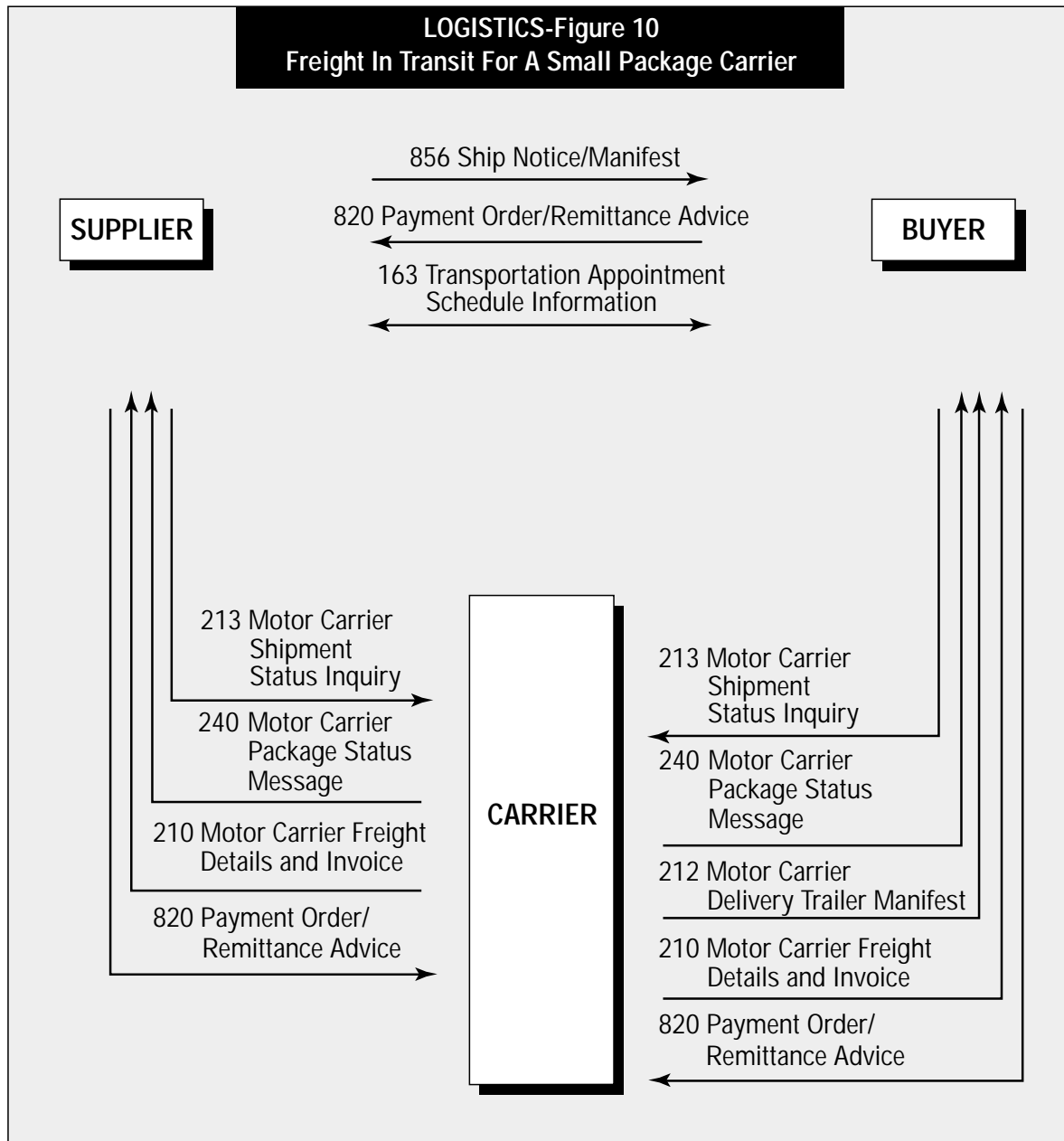
LOGISTICS-Figure 8
Freight In Transit For A Truck Load Carrier



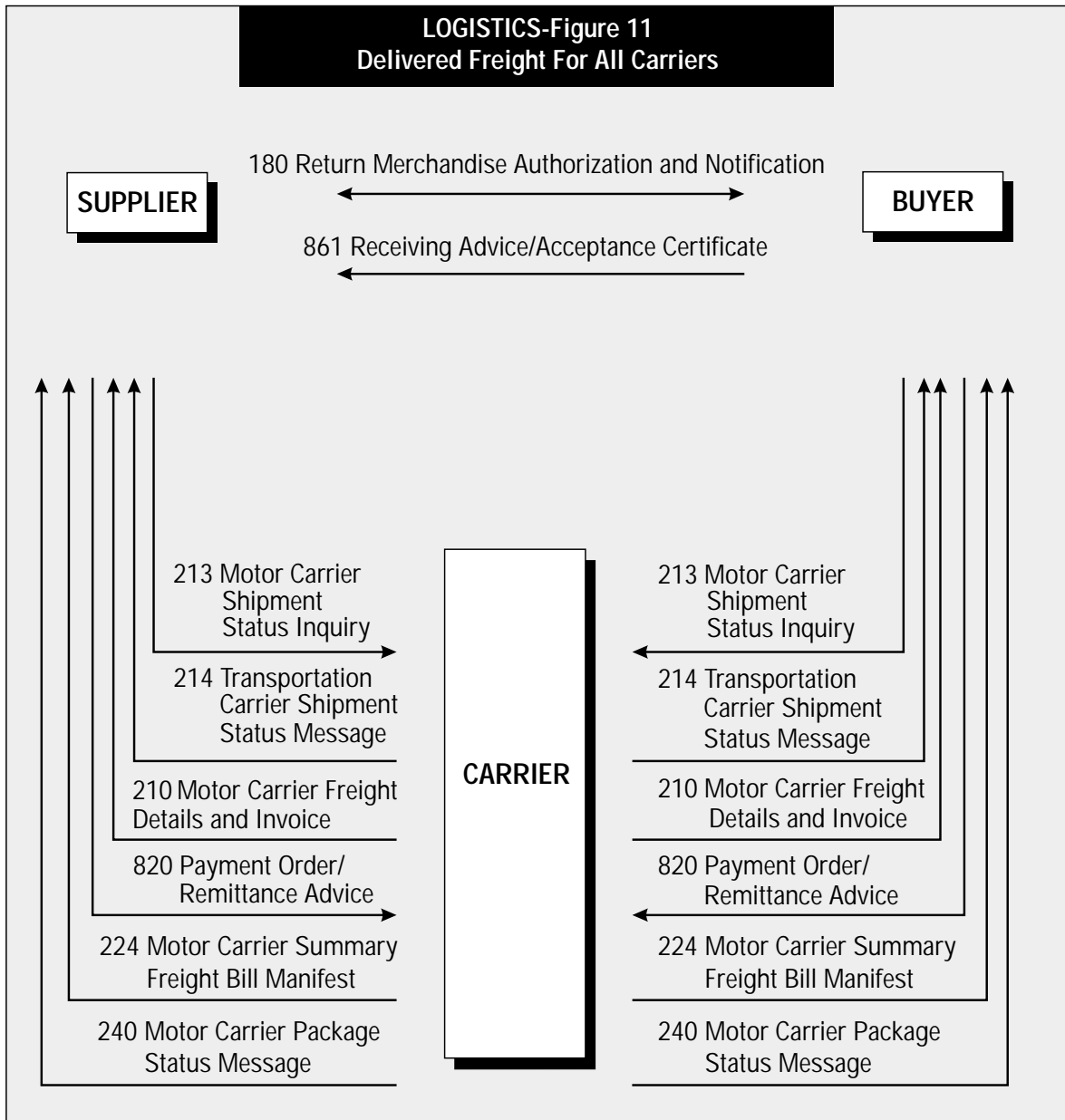
**LOGISTICS-Figure 9
Freight In Transit For A Less Than Truck Load Carrier**

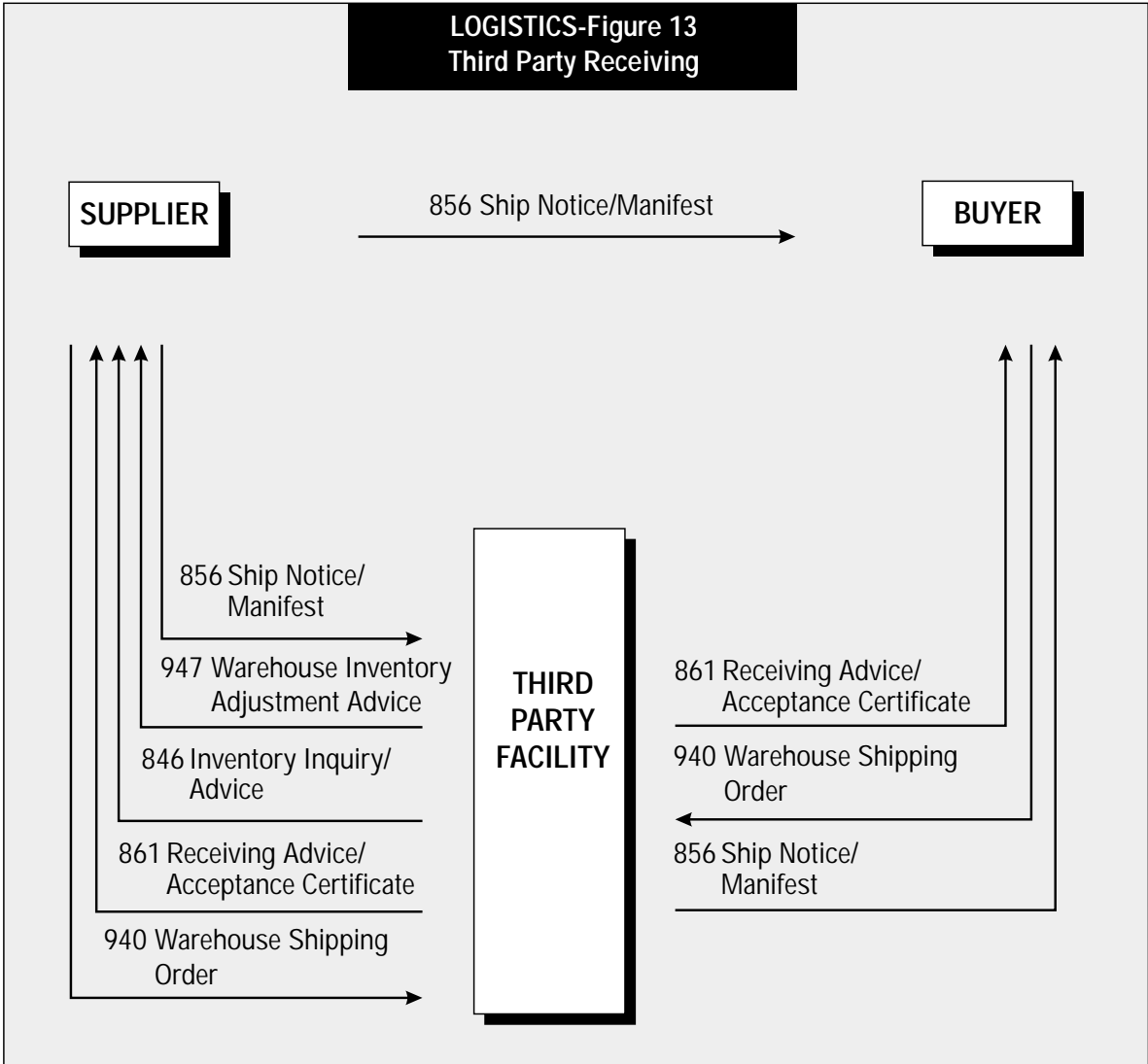
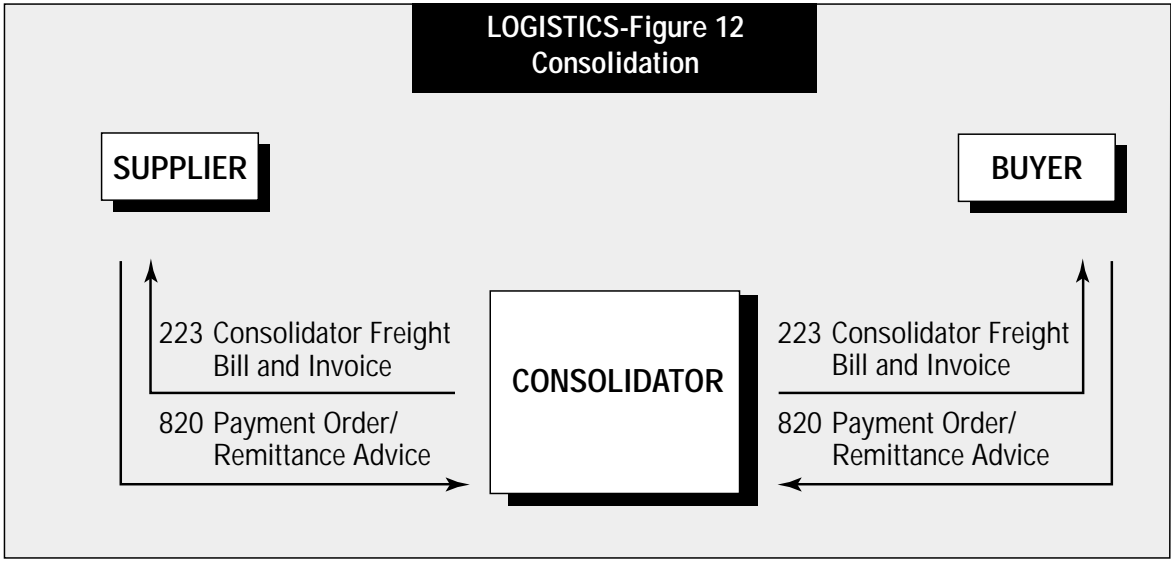


LOGISTICS-Figure 10
Freight In Transit For A Small Package Carrier



**LOGISTICS-Figure 11
Delivered Freight For All Carriers**





TRANSACTION RELATIONSHIPS

The Logistics function can be aided by any documents that indicate or help plan the shipment, distribution and storage of trade items. The supplier sends the **Ship Notice/Manifest (856)** to the buyer to indicate the anticipated movement of a shipment. This includes physical details of freight, number of cartons, volume requirements, bill of lading number, and other pertinent information, as well as identifying the trade items in the shipment. The **Receiving Advice/Acceptance Certificate (861)** is used by the buyer to notify the supplier of receipt of merchandise shipped. The receipt can be reported by shipment number, carton ID, or Global Trade Identification Number (GTIN).

The **Routing and Carrier Instruction (853)** is sent by the buyer to the supplier to provide routing and carrier information. It provides the supplier with detailed shipping guidelines, replacing the buyer's paper routing guide. Another method of providing shipping instructions, the **Routing Instructions (754)** is sent by the buyer to provide routing and carrier instructions to the supplier for a specific shipment. It can be used as a standalone document or in response to a **Request for Routing Instructions (753)** from the supplier.

For truckload shipments, the shipper (in most cases the supplier) sends the **Motor Carrier Load Tender (204)** to tender a shipment. It provides a truckload carrier with a load tender. The truckload carrier either accepts or declines the shipment with a **Response to a Load Tender (990)** transaction.

For Less-Than-Truckload (LTL) shipments, the shipper (in most cases the supplier) sends the **Motor Carrier Bill of Lading (211)** to provide the details of a shipment to the carrier. The **Motor Carrier Bill of Lading (211)** is an exact representation of the shipment; it is considered the contract between the carrier and the shipper.

For small package, the shipper (in most cases the supplier) sends the **Motor Carrier Pick-Up Manifest (215)** to provide a manifest of all of the packages tendered at that time. The **Motor Carrier Pick-Up Manifest (215)** contains the minimum details including the destination, bar code identification numbers, number of pieces, weight, and other identifying numbers.

To automate the pick up notification function, the shipper transmits a **Motor Carrier Pick-Up Notification (216)** to an LTL or small package carrier. The **Motor Carrier Pick-Up Notification (216)** replaces the traditional phone call to notify the carrier of shipment availability including pick-up time, destination, and pick-up appointment numbers.

If the shipper requires a pick-up appointment from an LTL carrier, the shipper either provides a firm pick-up appointment in the **Motor Carrier Load Tender (204)** or uses the **Transportation Appointment Schedule Information (163)** to provide the carrier with a requested appointment. The carrier confirms an appointment using a **Transportation Appointment Schedule Information (163)**.

In some cases in the retail industry, the carrier assists in the management of the purchase order cycle. A **Purchase Order Shipment Management Document (250)** may be transmitted from the buyer (consignee) to the carrier. The carrier uses that data to maintain a database of valid purchase order numbers, shipment windows and sort segregate information.

A truckload carrier may send a **Transportation Carrier Shipment Status Message (214)** to the consignee to indicate that the carrier has accepted a load tender with freight destined for that location. If appointments are required for delivery, the carrier uses the **Transportation Appointment Schedule Information (163)** to request a delivery appointment. All TL and LTL carriers may send a **Transportation Carrier Shipment Status Message (214)** to either the shipper or the consignee after the shipment has been picked up. The **Transportation**

Carrier Shipment Status Message (214) includes the carriers PRO number and optionally, the estimated delivery date. Depending upon the requirements of the shipper or the consignee, the carrier may send additional **Transportation Carrier Shipment Status Messages (214)** as the shipment moves from the origin to the destination. At a minimum, the carrier provides this information upon delivery.

Small package carriers may send a **Motor Carrier Package Status Message (240)** to the shipper and/or the consignee after the package has been picked up. The **Motor Carrier Package Status Message (240)** includes the carriers tracking number and date information (e.g., delivery or estimated delivery). Depending upon the requirements of the shipper or the consignee, the small package carrier may send **Motor Carrier Package Status Message (240)** as the package moves from the origin to the destination. At a minimum, the small package carrier provides this information upon delivery. The **Motor Carrier Package Status Message (240)** can provide pickup, enroute or delivery information to a shipper, or advanced delivery notification information to a consignee.

If the buyer or shipper do not require a **Transportation Carrier Shipment Status Message (214)** or **Motor Carrier Package Status Message (240)** on each shipment or package, the shipper can transmit a **Motor Carrier Shipment Status Inquiry (213)** to the carriers. The motor carrier returns the most current status of the shipment or package.

If an LTL carrier is delivering trailer loads of shipments into a distribution center, the carrier may provide a **Motor Carrier Delivery Trailer Manifest (212)** to the buyer. The **Motor Carrier Delivery Trailer Manifest (212)** includes all of the individual shipments identified by the PRO number and purchase order number. The **Motor Carrier Delivery Trailer Manifest (212)** is transmitted when the trailer doors are closed and ready for delivery to the consignee.

The consignee (usually the buyer) uses the data from the **Ship Notice/Manifest (856)** in conjunction with the **Transportation Carrier Shipment Status Messages (214)**, the **Motor Carrier Package Status Message (240)** or the **Motor Carrier Delivery Trailer Manifest (212)** to schedule receiving dock labor, prepare for receipt of freight, and schedule delivery of freight. The **Ship Notice/Manifest (856)** provides the trade item and the **Transportation Carrier Shipment Status Messages (214)**, the **Motor Carrier Package Status Message (240)** or the **Motor Carrier Delivery Trailer Manifest (212)** provide the delivery details.

In an evaluated receipt environment, any freight charges that the shipper will pay are included in the **Motor Carrier Load Tender (204)** or the **Motor Carrier Bill of Lading (211)**. A **Payment Order/Remittance Advice (820)** is transmitted to the carrier indicating the payment of freight charges. If the carrier disagrees with the calculation of the freight charges or if accessorial charges are incurred during the transportation process, the carrier sends a **Motor Carrier Freight Details and Invoice (210)** or **Motor Carrier Summary Freight Bill Manifest (224)** with a code indicating a balance due. In a non-evaluated receipt environment, the carrier provides freight charges in the **Motor Carrier Freight Details and Invoice (210)**. For prepaid shipments, the **Motor Carrier Freight Details and Invoice (210)** is transmitted to the shipper after pick up of the shipment. For collect shipments, the **Motor Carrier Freight Details and Invoice (210)** is transmitted to the consignee after delivery. In either case a **Payment Order/Remittance Advice (820)** from either the shipper or consignee is expected.

The **Consolidators Freight Bill and Invoice (223)** is used by the consolidator to provide an invoice to the party responsible for payment of the freight charges and consolidator services. A **Payment Order/Remittance Advice (820)** from either the shipper or consignee is expected.

The buyer can use the **Return Merchandise Authorization and Notification (180)** to request or notify the supplier of a return authorization. This transaction can also be used by the supplier to respond and notify the buyer of the authorization or disposition of the returned product.

In a third party receiving environment, the **Ship Notice/Manifest (856)** is sent by the shipper to the third party facility and to the buyer. The third party facility receives the inventory and sends the **Receiving Advice/Acceptance Certificate (861)** to the buyer of the goods. The third party can report overages, shortages and damages at the carton or trade item level. The buyer uses the **Warehouse Shipping Order (940)** to instruct the third party facility to ship the goods to the ultimate destination. The **Ship Notice/Manifest (856)** is sent by the third party to notify the buyer of the actual shipment.

To report inventory adjustments, the third party uses the **Warehouse Inventory Adjustment Advice (947)** and to report physical inventory quantity positions, i.e. book inventory, the third party uses the **Inventory Inquiry/Advice (846)**.

TRANSACTION DESCRIPTIONS

Transportation Appointment Schedule Information (163)

The **Transportation Appointment Schedule Information (163)** is used to schedule appointments for the purpose of picking up or delivering shipments. It can be transmitted between a shipper, buyer, or carrier to request or grant appointment dates and times, as well as arrange changes to existing appointments. When a motor carrier receives confirmed scheduled appointment dates and times in the **Motor Carrier Load Tender (204)**, the **Transportation Appointment Schedule Information (163)** can be used to request changes to the appointment. This transaction set is not used when LTL and small package carriers have standing appointments, or when a motor carrier receives confirmed scheduled appointment dates and times in the **Motor Carrier Load Tender (204)**, the **Motor Carrier Bill of Lading (211)** or the **Motor Carrier Pick-up Manifest (215)**.

A separate transaction set is used to schedule appointments for each shipment or trailer. The pick-up and delivery appointments for a single shipment or trailer may be scheduled in a single transaction set. The pick-up and delivery appointments for a multiple stop shipment may also be scheduled in a single transaction set.

Transportation Appointment Schedule Information (163) Benefits

- Improves shipment planning for shippers, buyers and carriers
- Reduces telephone calls

Return Merchandise Authorization and Notification (180)

The **Return Merchandise Authorization and Notification (180)** notifies a supplier of the possible return of merchandise along with the intended disposition of the merchandise. It also provides the ability for the supplier to authorize a return or other disposition. This transaction facilitates the disposition of previously received merchandise.

Return Merchandise Authorization and Notification (180) Benefits

- Increases efficiency by reducing the time needed to notify and execute a return of product
- Improves inventory accuracy
- Allows for tracking of a Return Merchandise Number (RMN) used to facilitate physical return of product

Motor Carrier Load Tender (204)

This transaction set is transmitted from the organization that controls the shipment (usually the shipper) to the carrier. In the truckload environment the **Motor Carrier Load Tender (204)** is used as a load tender. A load tender is an offer of a shipment to the carrier. As a load tender, the **Motor Carrier Load Tender (204)** contains the minimum details required to allow the truckload carrier to either accept or decline the tender offer. This data includes the origin, destination, and any relevant shipment information. The truckload carrier either accepts or declines the shipment with a **Response to a Load Tender (990)**.

This transaction set may also be sent from the shipper to a third party that provides a freight payment service. In this scenario, it is expected that the freight payment service will transmit a **Payment Order/Remittance Advice (820)** to the carrier.

Motor Carrier Load Tender (204) Benefits

- Improves shipment planning for shippers and carriers
- Provides more accurate data in the **Motor Carrier Freight Details and Invoice (210)**
- Provides more accurate data in the **Transportation Carrier Shipment Status Message (214)**
- Eliminates data entry errors by the carrier

Motor Carrier Freight Details and Invoice (210)

The **Motor Carrier Freight Details and Invoice (210)** is used by the motor carrier to provide an invoice to the party responsible for payment of the freight charges. For prepaid shipments, the **Motor Carrier Freight Details and Invoice (210)** is usually sent upon receipt of the shipment by the carrier. For shipments sent collect, the **Motor Carrier Freight Details and Invoice (210)** is usually sent after delivery of the shipment.

When integrated properly, the receipt of this transaction set can save substantial data entry time for the accounts payable area. In addition, if the shipper has an integrated shipping system, an automatic match and reconciliation can be performed.

Motor Carrier Freight Details and Invoice (210) Benefits

- Reduces data entry errors
- Automates reconciliation

Motor Carrier Bill of Lading (211)

This transaction set is transmitted from the organization that controls the shipment (usually the shipper) to the carrier. In an LTL environment, the **Motor Carrier Bill of Lading (211)** is an exact representation of the shipment and replaces the paper bill of lading. This transaction set includes all of the data required by the carrier to rate the shipment including pick up and delivery detail, freight class, weight, number of pieces, pallets and purchase order numbers. When used, the shipper provides a paper manifest to the carrier upon pick up.

Motor Carrier Bill of Lading (211) Benefits

- Improves shipment planning for shippers and carriers
- Provides more accurate data in the **Motor Carrier Freight Details and Invoice (210)**
- Provides more accurate data in the **Transportation Carrier Shipment Status Message (214)**
- Eliminates data entry errors by the carrier

Motor Carrier Delivery Trailer Manifest (212)

This transaction set is transmitted from the carrier to the consignee (usually the buyer) generally when a distribution center is utilized. The **Motor Carrier Delivery Trailer Manifest (212)** includes data on all of the LTL shipments included on the trailer destined for one and only one delivery location. Potentially, the small package carriers could use this transaction set in the same manner.

Motor Carrier Delivery Trailer Manifest (212) Benefits

- Provides up to date status information on shipments
- Allows the consignee to manage manpower requirements

Motor Carrier Shipment Status Inquiry (213)

The shipment status inquiry is used by a shipper or consignee to request the status of a shipment from a motor carrier. It is not widely used since most motor carriers provide shipment status messages on a regularly scheduled basis.

Motor Carrier Shipment Status Inquiry (213) Benefits

- Provides the ability to request a status on a particular shipment at a particular time

Transportation Carrier Shipment Status Message (214)

A shipment status message is sent by the carrier to the shipper, consignee, or other interested party. It provides the status of the shipment in terms of dates, times and locations. In addition, the **Transportation Carrier Shipment Status Message (214)** can include reference numbers required to match the status to the shipment in the shipper's or consignee's system. These reference numbers include the carrier's PRO number, shipment identification number (i.e., bill of lading) assigned by the shipper, or purchase order numbers.

A **Transportation Carrier Shipment Status Message (214)** will not be sent until the shipment has been received by an LTL carrier or a load tender has been accepted by a truckload carrier. The first shipment status message will usually include the date of pick up, the carrier's PRO number, an estimated date of delivery, and required reference numbers which may include a shipment identification number (i.e., bill of lading) assigned by the shipper, and purchase order numbers.

In many instances, the only additional shipment status messages sent by the carrier will be after delivery of the shipment or if the estimated delivery date originally provided changes. When necessary, updates to a shipment status can be transmitted while the shipment is in route. These shipment status messages would normally be transmitted once a day and only provide the carrier's reference number and the change in status.

Additionally, the **Transportation Carrier Shipment Status Message (214)** can be used to evaluate carrier performance. Many shippers and consignees utilize the original shipment status and the final shipment status to determine if the carrier met its transit time schedules.

Transportation Carrier Shipment Status Message (214) Benefits

- Provides up to date status information on shipments
- Provides confirmation of delivery
- Allows customers to evaluate carrier performance
- Allows more efficient use of dock resources and improved planning for receiving

Motor Carrier Pick-up Manifest (215)

This transaction set is used to replace the paper manifest for small package carriers and includes all of the detail information about every package (shipment) tendered to the carrier at that time. The **Motor Carrier Pick-Up Manifest (215)** contains the minimum details including the destination, bar code identification numbers, number of pieces, weight, and other identifying numbers.

Motor Carrier Pick-up Manifest (215) Benefits

- Improves shipment planning for shippers and carriers
- Provides more accurate data in the **Motor Carrier Freight Details and Invoice (210)**
- Provides more accurate data in the **Motor Carrier Package Status Message (240)**
- Eliminates manual processing as well as keying errors by the carrier

Motor Carrier Shipment Pick-up Notification (216)

This transaction set is used to automate the pick up function in an LTL or small package carrier environment. The **Motor Carrier Shipment Pick-up Notification (216)** is usually transmitted the day before pick-up is required and replaces the traditional phone call to the carrier's terminal. The **Motor Carrier Shipment Pick-up Notification (216)** is not required for LTL or small package carriers that provide daily pick-up service.

Motor Carrier Shipment Pick-up Notification (216) Benefits

- Eliminates phone calls
- Aids in pick-up routing automation

Consolidators Freight Bill and Invoice (223)

This transaction set is used by a consolidator to request payment and provide detail pertaining to freight pickup services, consolidation services, and delivery services.

The **Consolidators Freight Bill and Invoice (223)** is used by the consolidator to provide an invoice to the party responsible for payment of the freight charges and consolidator services.

When integrated properly, the receipt of this transaction set can save substantial data entry time for the accounts payable area. In addition, if the shipper has an integrated shipping system, an automatic match and reconciliation can be performed.

Consolidators Freight Bill and Invoice (223) Benefits

- Reduces data entry errors
- Automates reconciliation
- Allows consolidator to invoice for consolidation services and transportation in one transaction set

Motor Carrier Summary Freight Bill Manifest (224)

This transaction set is used as an invoice to request payment for services rendered for multiple freight bills.

The **Motor Carrier Summary Freight Bill Manifest (224)** is used by the motor carrier to provide a single transaction with multiple invoices to the party responsible for payment of the

freight charges. The **Motor Carrier Summary Freight Bill Manifest (224)** is usually sent on a predetermined scheduled basis.

When integrated properly, the receipt of this transaction set can save substantial data entry time for the accounts payable area. In addition, if the shipper has an integrated shipping system, an automatic match and reconciliation can be performed.

Motor Carrier Summary Freight Bill Manifest (224) Benefits

- Reduces data entry errors
- Automates reconciliation
- Allows single transaction set for multiple invoices

Motor Carrier Package Status Message (240)

A package status message is sent by the small package carrier to the shipper, consignee, or other interested party. It provides the status of the package in terms of dates, times and locations. In addition, the **Motor Carrier Package Status Message (240)** can include reference numbers required to match the status to the package in the shipper's or consignee's system. These reference numbers include the carrier's tracking number, shipment identification number (i.e., manifest) assigned by the shipper, or purchase order numbers.

A **Motor Carrier Package Status Message (240)** will not be sent until the package has been received by a small package carrier. The first package status message will usually include the date of pick up, the carrier's tracking number, an estimated date of delivery, and required reference numbers which may include a shipment identification number (i.e., manifest) assigned by the shipper and purchase order numbers.

In many instances, the only additional package status messages sent by the carrier will be after delivery of the package or if the estimated delivery date originally provided changes. When necessary, updates to a package status can be transmitted while the package is in route. These package status messages would normally be transmitted once a day and only provide the carrier's reference number and the change in status.

Additionally, the **Motor Carrier Package Status Message (240)** can be used to evaluate carrier performance. Many shippers and consignees utilize the original package status and the final package status to determine if the carrier met its transit time schedules.

Motor Carrier Package Status Message (240) Benefits

- Provides up-to-date status information on packages
- Provides confirmation of delivery
- Allows customers to evaluate carrier performance
- Allows more efficient use of dock resources and improved planning for receiving

Purchase Order Shipment Management Document (250)

The **Purchase Order Shipment Management Document (250)** is used to convey data to the motor carrier, relevant to the purchase order, which enables the carrier to assist in the purchase order management process from the time of pick up through delivery. The **Purchase Order Shipment Management Document (250)** is sent by the originator of the purchase order and contains the valid purchase order numbers, shipment windows, pieces, weight, sort segregate data, and other related purchase order information. The carrier uses this data to verify purchase order numbers, help manage the ship windows and verify shipment details.

Purchase Order Shipment Management Document (250) Benefits

- Assists the retailer in managing the purchase order process
- Ensures the carrier has valid purchase order numbers
- Provides the carrier with sort segregate data

Request for Routing Instructions (753)

The **Request for Routing Instructions (753)** allows the supplier to request routing instructions from the buyer. The request will be for shipments originating from one shipping origin point to be delivered to one or more destination points. Information to be provided for this request will include purchase order details (quantities, weights, & cube), commodity classifications in shipment [refer to the National Motor Freight Carriers 100 series], how load [unitized methodology] is being tendered to the pick-up carrier, pick-up date, time of availability for pick-up, and the applicable shipment contact details.

Request for Routing Instructions (753) Benefits

- Improves operating efficiencies through the elimination of telephone and fax requests
- Improves accuracy of data
- Facilitates routing process automation

Routing Instructions (754)

The **Routing Instructions (754)** is used to communicate routing instructions from a buyer to a supplier for a specific shipment. It can be used as a standalone document to provide routing information from a buyer or it can be used by the buyer in response to a **Request for Routing Instructions (753)** sent by the supplier. It is assumed that this transaction set, when utilized, will override any existing routing guide for that particular shipment. This transaction set can be used to communicate PO validation issues and delivery appointments to the supplier and can also be used for shipments originating from one shipping point to be delivered to one or more destination points.

Routing Instructions (754) Benefits

- Allows the buyer to provide special routing for a specific shipment
- Provides the buyer with information required to manage a multi-stop shipment
- Improves operating efficiencies through the elimination of telephone and fax requests
- Facilitates the routing process automation

Payment Order/Remittance Advice (820)

This transaction allows for the electronic payment of invoices sent to the buyer's or supplier's organization. The transaction provides three options: 1) to order a financial institution to make payment to a carrier on behalf of a buyer or supplier; 2) to report the completion of payment to a carrier by a financial institution; and 3) for a buyer or supplier to advise the carrier on the application of a payment made with the payment order or by some other means.

Implementation of the **Payment Order/Remittance Advice (820)** impacts the area of accounts receivable and the application systems that support this function. The carrier needs to initiate the necessary controls and reporting structure into the accounts receivable reconciliation process.

Payment Order/Remittance Advice (820) Benefits

- Increases efficiency by reducing the time needed for payment functions
- Provides increased cost savings through reduced manual functions

Inventory Inquiry/Advice (846)

The **Inventory Inquiry/Advice (846)** is used by the third party to notify the depositor of inventory on hand.

In addition to current inventory levels, the **Inventory Inquiry/Advice (846)** can be used also by the third party to notify different locations inside an enterprise of their respective inventory positions.

Inventory Inquiry/Advice (846) Benefits

- Synchronizes inventory levels between the third party and the depositor
- Substantially reduces paper flow

Routing and Carrier Instruction (853)

The **Routing and Carrier Instruction (853)** allows the buyer to accurately convey detailed routing and carrier information in a timely manner and eliminate the publication of detailed routing guides. For each origin/destination pair, the buyer sends detailed routing/carrier information to be used for various weight breaks. The supplier can then integrate this information directly into their shipping and routing systems and automatically select the best routing at the time of shipment generation. This transaction is used as the default routing guide only. When routing instructions are supplied on an order, the routing guide instructions are overridden.

Routing and Carrier Instruction (853) Benefits

- Improves operating efficiencies through reduced data entry
- Improves accuracy of data
- Substantially reduces paper flow
- Reduces publication and mailing costs
- Provides the buyer with positive control over the creation and delivery of routing guides

Ship Notice/Manifest (856)

The data in this transaction contains all items pertinent to shipment of product such as, bill of lading number, shipment date, number of containers, and container identification numbers. The primary advantage of automating this function is that this information may be integrated into the various systems without multiple data entry operations. The information is useful in merchandise tracking, delivery appointment scheduling and providing automatic container identification at point of receipt (using bar codes). At point of receipt, merchandise may be checked in at multiple levels. At the shipment level, the total number of containers can be verified against the **Ship Notice/Manifest (856)** as to quantity. Detail carton verification can take place since carton contents are transmitted along with the container identification.

When the supplier ships to a distribution center, the buyer can utilize the carton identification for cross docking. This implies that scanning equipment is in place to accomplish this task. In addition, the data provided within the **Ship Notice/Manifest (856)** is used as verification of the carton label. This enables an automatic update of receiving systems as well as appropriate merchandise tracking and financial applications. Furthermore, checking of carton

content is possible on a random basis. This lot testing procedure can detect possible merchandise discrepancies at the distribution center rather than at store level.

The key to implementing this transaction lies with the timing of transmission. It is designed to convey shipment detail prior to physical delivery of the product.

Ship Notice/Manifest (856) Benefits

- Eliminates the need for paper-based communications
- Ensures accuracy of communication between product shipped and product received
- Reduces off-loading time at receiving dock
- Reduces check-in time from receipt to selling floor
- Provides a cross-reference to the **Transportation Carrier Shipment Status Message (214)** or the **Motor Carrier Package Status Message (240)** data

Receiving Advice/Acceptance Certificate (861)

The **Receiving Advice/Acceptance Certificate (861)** may be used to report receipt of shipments in a vendor managed stock replenishment program or in a third party receiving environment.

When used in a vendor managed stock replenishment scenario, the **Receiving Advice/Acceptance Certificate (861)** is used to report receipt of shipments by the retailer to the supplier in a vendor managed stock replenishment program. The received shipments are identified by the container ID number or vendor shipment number. This notification will provide an exact receipt date to the vendor which is input to the replenishment system to relieve the in-transit position.

In a third party receiving scenario, the **Receiving Advice/Acceptance Certificate (861)** is used to report the receipt and condition of goods. The goods being received are identified by either the carton identification or trade item identification number. Product identification numbers are used only when carton identification is not available or not used.

Receiving Advice/Acceptance Certificate (861) Benefits

- Allows quick and accurate transfer of receipt data
- Provides the ability to relieve in-transit quantities on a timely basis
- Identifies product condition
- Allows for receipt by either carton or item
- Provides visibility of inventory levels at the third party warehouse
- Eliminates paper

Warehouse Shipping Order (940)

The **Warehouse Shipping Order (940)** is used by the depositor (owner of the goods) to provide shipping information to a third party warehouse. The depositor can advise the third party to make a shipment, confirm a shipment, modify, or cancel a previously transmitted **Warehouse Shipping Order (940)**. The information includes the products to be shipped and the destinations that they are to be sent to.

The **Warehouse Shipping Order (940)** uses one of two distinct methods to communicate shipping instructions to a third party warehouse. The first method, "Item Warehouse Shipping Order", conveys instructions to ship the same product to multiple locations. The second, "Carton Warehouse Shipping Order", conveys instructions to ship specific cartons to a single location. The cartons (and the carton content) are identified by their container serial numbers.

Warehouse Shipping Order (940) Benefits

- Provides accurate data to the third party warehouse
- Improves operating efficiencies through reduced data entry
- Substantially reduces paper flow

Warehouse Inventory Adjustment Advice (947)

The **Warehouse Inventory Adjustment Advice (947)** is used by a third party warehouse to notify the depositor (owner of goods) of quantity or status changes to inventory. Product inventory adjustments are reported at the line item level to increase or decrease the amount of product in inventory.

This transaction set is used to report quantity changes, convey product availability, specify and recoup product damage, and indicate problems in locating product. These adjustments may be for several reasons which include damage in facility, quality issues, product expiration, product recall, and inspection by customs. These adjustments may be temporary or permanent.

Warehouse Inventory Adjustment Advice (947) Benefits

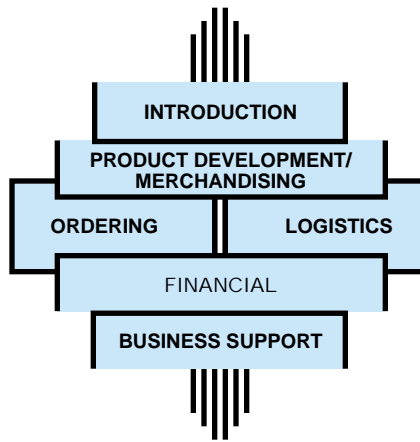
- Provides accurate data to the depositor
- Substantially reduces paper flow
- Communicates inventory changes to the depositor
- Re-sync total after a physical inventory is taken

Response to a Load Tender (990)

When the **Motor Carrier Load Tender (204)** is used as a load tender by truckload carriers, the response is transmitted in this transaction set. The **Response to a Load Tender (990)** is used by a motor carrier to accept, conditionally accept, or decline a load tender.

Response to a Load Tender (990) Benefits

- Allows for better shipment pick up planning
- Allows for automation of the load tendering process
- Reduces telephone calls



FINANCIAL

Business Processes

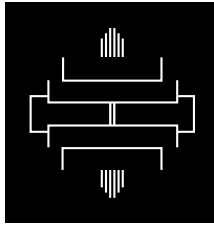
Accounts Payable
 Accounts Receivable
 Audit Tracking
 Cash Management
 Credit Checking
 Credit/Debit Processing
 Invoice Generation
 Treasury Cash Management
 Commission Reporting

Transaction Relationships

Product Payment and
 Reconciliation
 Returns Authorization
 Commission Reporting
 and Payment
 Evaluated Receipts
 Settlement (ERS)

EDI Transactions

810 Invoice
 812 Credit/Debit Adjustment
 818 Commission Sales Report
 820 Payment Order/Remittance Advice
 824 Application Advice
 831 Application Control Totals
 856 Ship Notice/Manifest
 882 Direct Store Delivery Summary



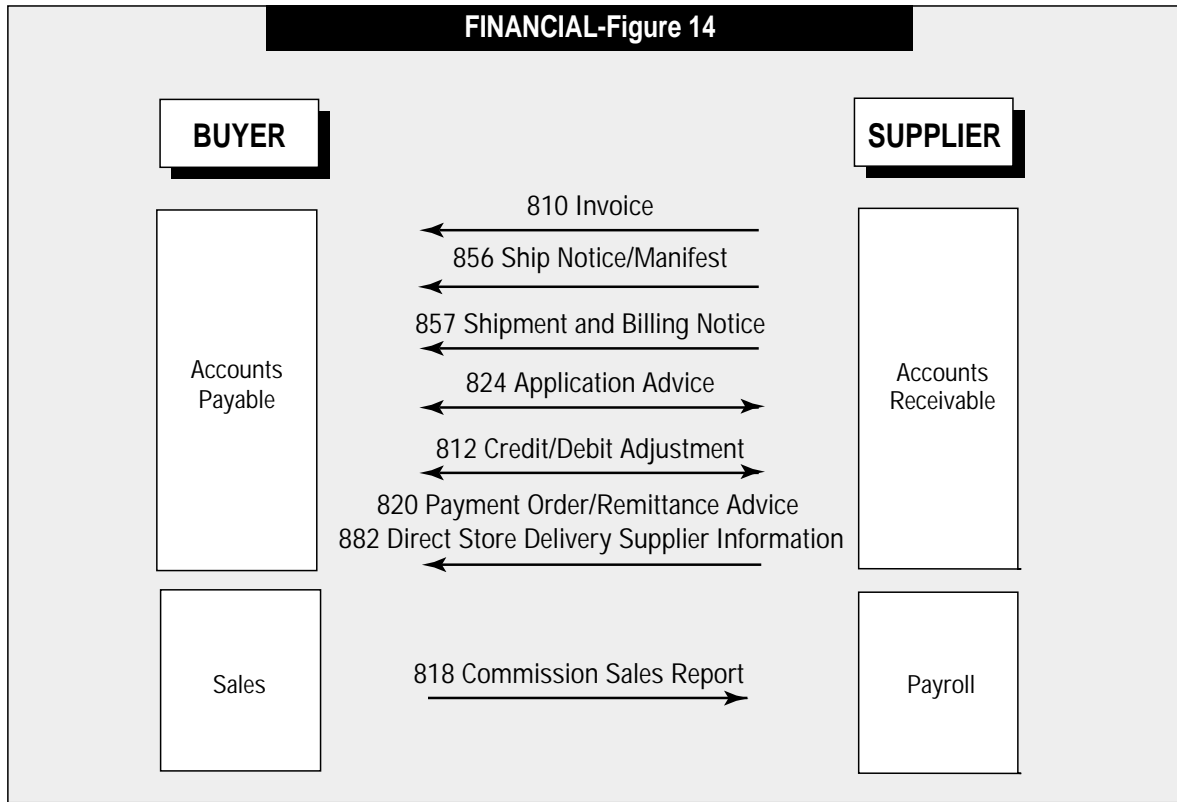
FINANCIAL

The **Financial** process encompass invoicing, reconciling of purchase orders to invoices, resolution of discrepancies for goods and services, and payment.

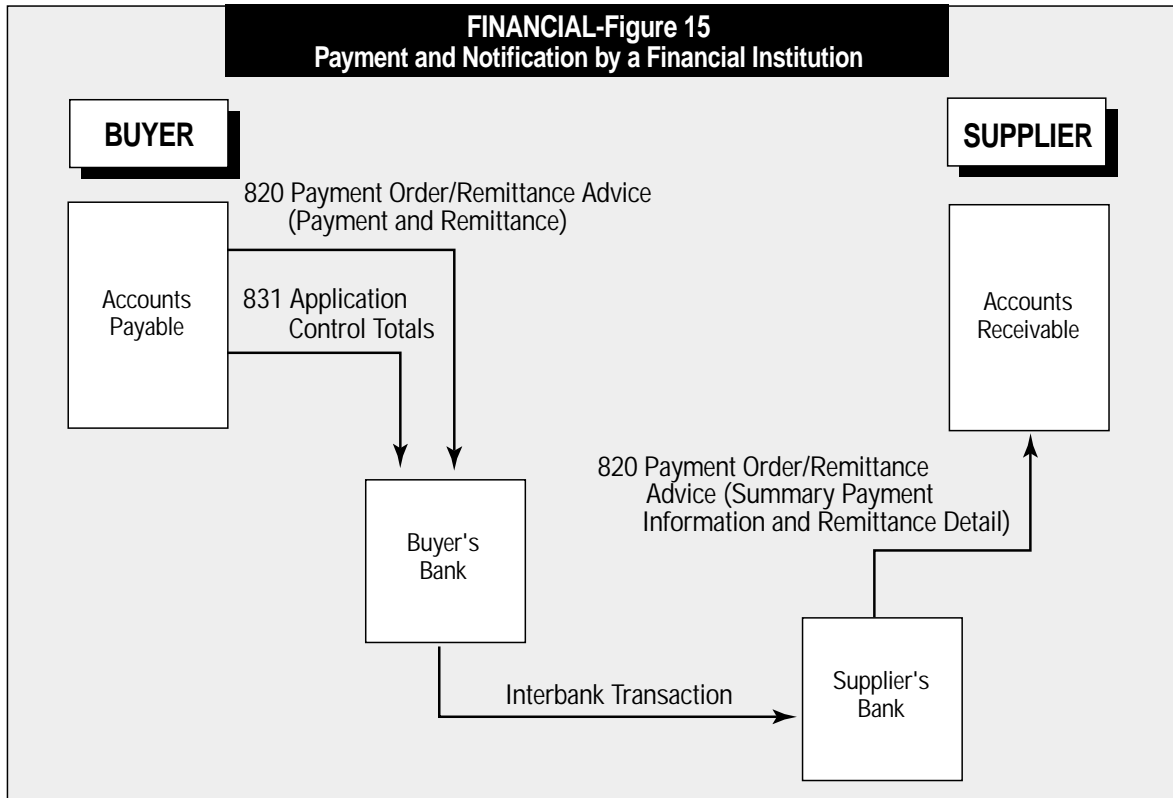
BUSINESS PROCESSES

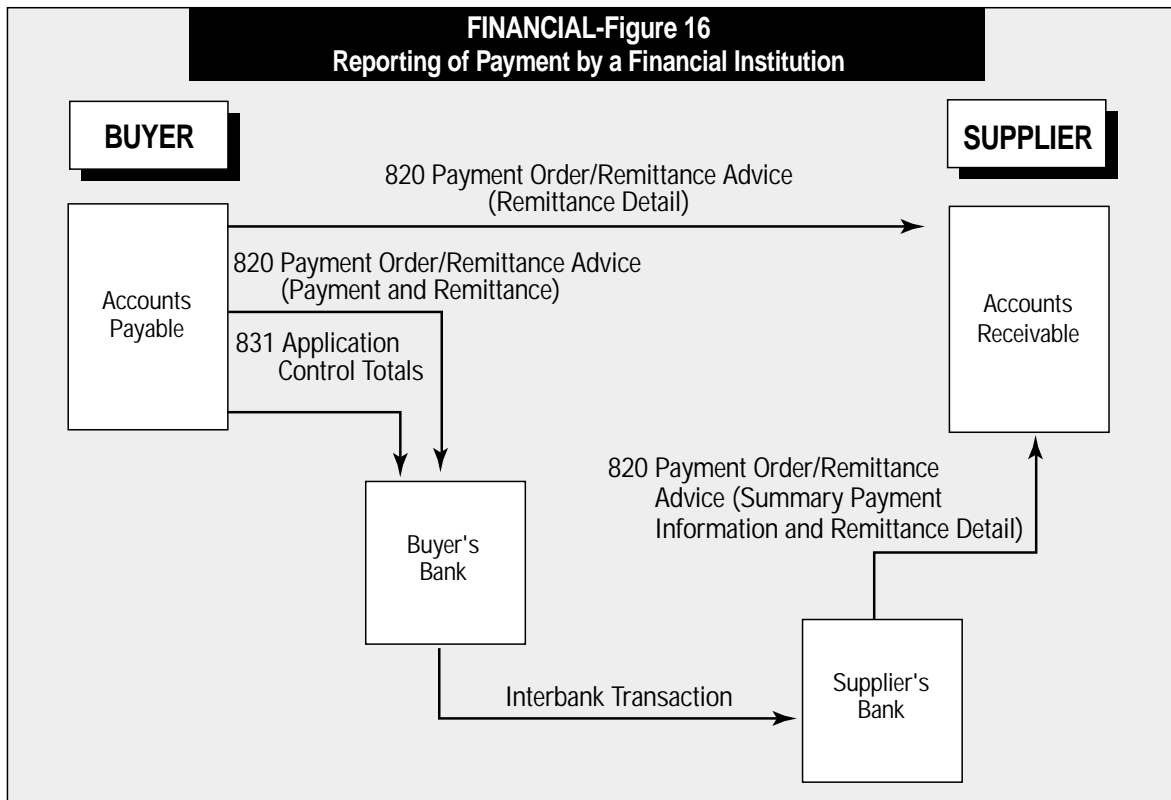
Accounts Payable	Payments to suppliers or third parties, including validation of received products or services.
Accounts Receivable	Receipt of payments on accounts and reconciling payments to invoices owed (including bank deposit processes).
Audit Tracking	A formal tracking process where product movement is recorded in a log or journal.
Cash Management	Analyzing dollar movements (payments, invoices and investment) and shifting account balances to acquire the best available income.
Credit Checking	Performed by the supplier to insure a buyer's ability to pay. When executing this process, several documents of information are exchanged with outside sources.
Credit/Debit Processing	The application of allowances to accounts where money was previously recorded by invoicing, e.g., dollar values for returned merchandise.
Invoice Generation	A supplier initiated process of producing a detailed list of products or services provided, together with the charges and terms.
Treasury Cash Management	The process of managing the cash flow of an organization, including assessing bank accounts and transferring funds to support daily activities.
Commission Reporting	The process of determining what portion of an associate's salary is incurred by the buyer and what is incurred by the supplier as a result of a consumer purchase.

FINANCIAL-Figure 14



FINANCIAL-Figure 15
Payment and Notification by a Financial Institution





TRANSACTION RELATIONSHIPS

The primary financial transaction set used from supplier to buyer is the **Invoice (810)**. Additional transactions used include the **Payment Order/Remittance Advice (820)**, that can be sent from the buyer to supplier with information ranging from notification of imminent payment to actually initiating the transfer of funds from the buyer's bank to the supplier's account. The **Payment Order/Remittance Advice (820)** can be the response to an **Invoice (810)**, or a **Ship Notice/Manifest (856)** (the latter if an Evaluated Receipts Settlement (ERS) arrangement exists between buyer and supplier). The financial institution may require the **Application Control Totals (831)** to be used as a supplemental transaction set in conjunction with the **Payment Order/Remittance Advice (820)**.

The **Commission Sales Report (818)** allows a buyer to report sales by person/location, within a store, for commission purposes. In these relationships, both the buyer and supplier contribute to the sales associates' compensation.

The **Credit/Debit Adjustment (812)** may be used by both the supplier and the buyer to communicate financial adjustment information.

The **Direct Store Delivery Summary Information (882)** may be sent by the supplier to the buyer to request payment for goods that were re-stocked by the supplier.

The **Application Control Totals (831)** is sent by a bank, to the remitter of funds, to confirm the amounts received.

The receiver of a transaction set may generate an **Application Advice (824)** to communicate any errors encountered within the receiving partner's financial application systems.

TRANSACTION DESCRIPTIONS

Invoice (810)

The **Invoice (810)** is generated by the supplier to bill the buyer for products and services provided.

The **Invoice (810)** allows a buyer to record payment information and automatically update applicable financial systems. The data contained in the transaction provides automated cross-referencing of purchase order and receiving data. If a consolidated invoice is used, receiving and reconciliation must support multiple invoices being combined into one **Invoice (810)**. This process occurs without manual intervention, thus eliminating further key entry.

Invoice (810) Benefits

- Increases operating efficiencies by reducing the need for manual data entry
- Allows for automated reconciliation
- Improves the claim process due to timely information exchange
- Allows for automated payment authorization process

Credit/Debit Adjustment (812)

The **Credit/Debit Adjustment (812)** identifies and contains the details and amounts covering exceptions, adjustments, credits or debits for goods and services. This transaction is used in conjunction with the other financial transactions to help record and track activities that are occurring within the accounts payable/receivable department. It is not intended to be used to transfer funds. However, it can be used as a billing transaction for goods or services in the form of a billback. The **Credit/Debit Adjustment (812)** is multidirectional between trading partners.

The flow of this transaction is generally after goods and services have been invoiced using an **Invoice (810)** and before the receipt of the **Payment Order/Remittance Advice (820)**. The **Credit/Debit Adjustment (812)** provides the receiver with reference information relating to a previous invoice, or purchasing agreement, to facilitate the tracking in financial accounting.

Credit/Debit Adjustment (812) Benefits

- Tracking vehicle for adjustments, billback, credit and debits
- Allows for early identification of financial implications
- Used to detail description of accounting transactions
- Used with other financial transactions to complete the accounting cycle

Commission Sales Report (818)

The **Commission Sales Report (818)** provides a method for the buyer to communicate sales information by employee and selling location, to the supplier, for sales commission purposes. In this relationship, the buyer and the supplier contribute to the total compensation due the selling associate. The supplier needs to develop a system to handle the variable components of a sales transaction in which commissions are included. In order to reimburse the buyer's organization for their (the supplier) portion of employee compensation, the application needs to recognize multiple levels and identification of selling location (i.e., store, department, counter) for each buying organization.

Commission Sales Report (818) Benefits

- Utilizes sales data for compensation calculations
- Automates manual process of commission calculations

Payment Order/Remittance Advice (820)

The **Payment Order/Remittance Advice (820)** is used to communicate remittance information or to initiate an electronic funds transfer (EFT) or both. Typically it is used by the buyer (payor) to notify the seller (payee) of payment of an invoice or invoices.

Payment Order/Remittance Advice (820) Benefits

- Increases efficiency by reducing the time needed for payment functions
- Provides increased cost savings through reduced manpower

Application Advice (824)

The **Application Advice (824)** has two uses within VICS EDI. The first involves the reporting of errors (i.e. incorrect unit cost, invalid combination, etc.). The transaction needs to report all applicable errors encountered for a transaction set and it is recommended that a unique interchange file be generated for each transaction type being reported (i.e., one interchange for invoices, a second interchange for ship notices, etc.). The **Application Advice (824)** should not be used in place of a transaction set designed as a specific response to another transaction set, e.g., the **Purchase Order Acknowledgment (855)** is the response to the **Purchase Order (850)**.

This transaction eliminates the need to communicate application errors by phone, fax, or mailed paper reports. It allows the originator of the transaction set to correct inconsistencies in a timely manner, minimizing the impact on time sensitive applications.

The second use of the **Application Advice (824)** involves buyers, suppliers, and financial institutions. The **Application Advice (824)** is the vehicle used by a financial institution to report acceptance and/or discrepancies to either the sender or receiver of the **Payment Order/Remittance Advice (820)**. In this application, as well as others, the **Application Advice (824)** may be used to communicate a 'zero' error condition as a result of application edits on the original transaction set.

Application Advice (824) Benefits

- Automated means to communicate errors in transactions which do not have a designated response document
- Eliminates need for problem determination/resolution by phone, fax, or mailed reports
- Strengthens the relationship between trading partners by resolving inconsistencies as they occur, rather than after time has elapsed

Application Control Totals (831)

The **Application Control Totals (831)** may be used with the **Payment Order/Remittance Advice (820)** to serve as a balancing mechanism for financial institutions. The totals passed in the **Application Control Totals (831)** can include totals, monetary totals or quantity totals.

Application Control Totals (831) Benefits

- Used by financial institutions to automate the verification of the number of Payment Order/Remittance Advice (820) transactions or the dollar totals contained within the 820s.

Ship Notice/Manifest (856)

In an **Evaluated Receipt Settlement (ERS)** environment, the **Ship Notice/Manifest (856)** is used in lieu of the **Invoice (810)**. The data in the **Ship Notice/Manifest (856)** contains all items pertinent to shipment of product such as bill of lading number, shipment date, number of containers, container identification numbers and container contents. Financial information has been conveyed and verified at point of purchasing. At point of receipt, container details are verified, purchase order details are reconciled, and payment is authorized.

Ship Notice/Manifest (856) Benefits

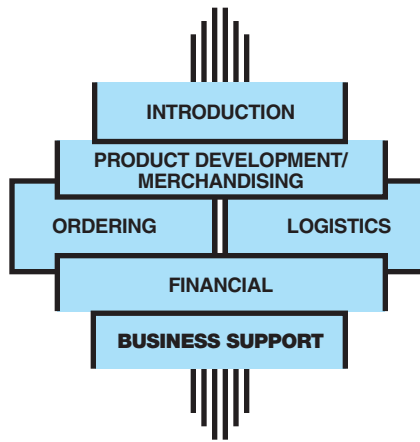
- Eliminates the need for paper-based communications
- Ensures accuracy of communication between product shipped and product received
- Reduces off-loading time at receiving dock
- Reduces check-in time from receipt to selling floor

Direct Store Delivery Summary Information (882)

Within the general merchandise and grocery industries direct store delivery (DSD) is a common method of replenishment. In this model, replenishment is governed by a pre-arranged vendor agreement that eliminates the purchase order and requires the supplier to re-stock products at the store level. Once replenishment has occurred, the supplier transmits the **Direct Store Delivery Summary Information (882)** to the buyer, requesting payment.

Direct Store Delivery Summary Information (882) Benefits

- Improves operating efficiencies through the elimination of manual data entry
- Improves accuracy of data
- Allows for automated payment authorization process



BUSINESS SUPPORT

Business Processes

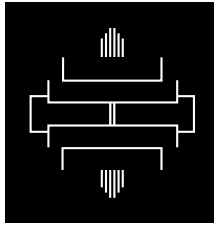
EDI Administration

Transaction Relationships

Partner Maintenance
Controlling the Environment

EDI Transactions

- 816** Organizational Relationships
- 824** Application Advice
- 864** Text Message
- 997** Functional Acknowledgment



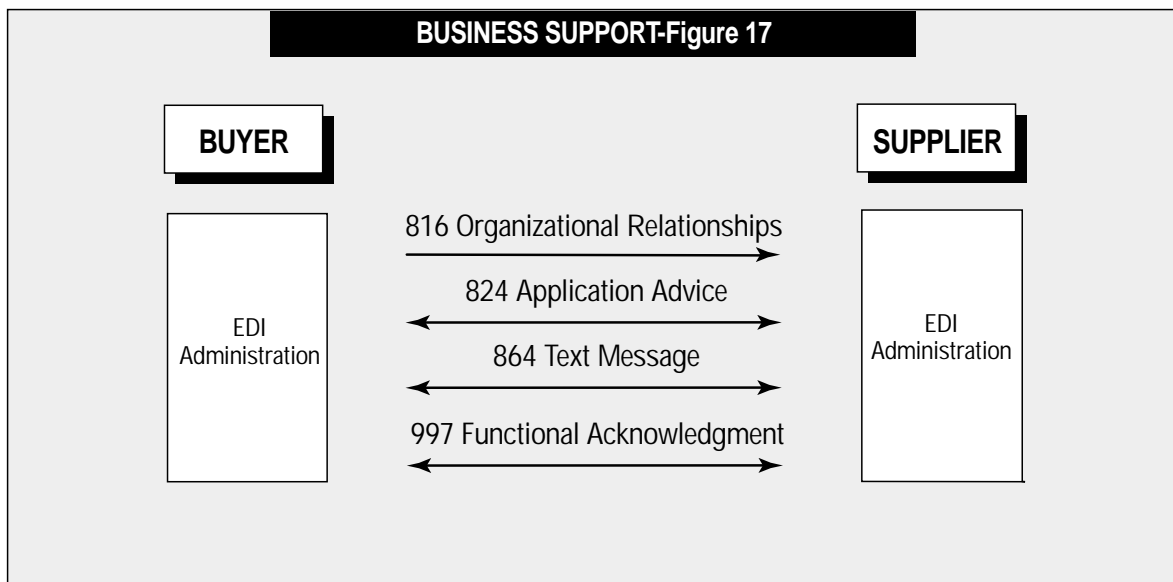
BUSINESS SUPPORT

Business Support is the administration and control of the EDI environment.

BUSINESS PROCESSES

EDI Administration

Establishing and maintaining internal business processes to enable EDI associations with trading partners. It is also the process of monitoring and insuring the integrity of EDI data exchanged with trading partners.



TRANSACTION RELATIONSHIPS

The Business Support function can involve several transactions which aid in the transfer of general business information between buyer and supplier, as well as guaranteeing the integrity of the flow of EDI information.

The buyer can send the **Organizational Relationships (816)** to the supplier to provide information regarding the buyer's company and its stores, warehouses and other locations.

The **Text Message (864)** can be used to send general reports between buyer and supplier in the event that an existing transaction set cannot serve the need.

The receiver of a transaction set may generate an **Application Advice (824)** to communicate any errors encountered within the receiving partner's application systems. This transaction is designed to provide instantaneous acceptance information above and beyond the compliance checking provided in the **Functional Acknowledgment (997)**. Information that is syntactically correct with regard to the standards does not insure compliance with the

receiving application. The **Application Advice (824)** provides a vehicle for communicating the results of application edits in a timely and accurate fashion. The types of errors to be reported and the associated message text are trading partner specific issues to be mutually agreed upon during transaction development.

The final transaction used by the Business Support function is the **Functional Acknowledgment (997)**. This is a special purpose transaction which is intended to verify the successful receipt of EDI transactions exchanged between trading partners. The **Functional Acknowledgment (997)** is transmitted back to a trading partner as a response to a previously received EDI document.

The **Functional Acknowledgment (997)** identifies the specific transaction it is verifying, and allows the sender to indicate whether that transaction was syntactically correct or incorrect. For example, a supplier would send a **Functional Acknowledgment (997)** upon receipt of a **Purchase Order (850)** to indicate whether the **Purchase Order (850)** is syntactically correct or incorrect. In most implementations, the **Functional Acknowledgment (997)** is automatically created by the trading partner's translation software. Failure to receive a **Functional Acknowledgment (997)** in a timely manner, can indicate a problem or failure at some point along the communications path, and normally requires further research.

A syntactically correct EDI transaction does not guarantee that the transaction was processed by the receiver. Proper processing of an EDI transaction by a trading partner can only be verified by carefully coordinated testing procedures conducted as part of the initial implementation with that partner.

TRANSACTION DESCRIPTIONS

Organizational Relationships (816)

The **Organizational Relationships (816)** transaction is used to 1) convey location address information for a company; 2) maintain location address information through periodic updates; and 3) convey location relationships, (e.g., the relationship between a buying location and its related bill to, ship to and mark for locations). The use of this transaction eliminates the need to send address information on purchase orders and other documents.

Organizational Relationships (816) Benefits

- Eliminates the need to send address information on purchase orders and other documents
- Provides advance notification to the supplier of changes in location information
- Eliminates the manual process of sending updates to suppliers, and ensures updates reach supplier on a timely basis
- Promotes the use of code values for location identification within other EDI documents, thus increasing the accuracy and usability of those documents

Application Advice (824)

The **Application Advice (824)** transaction is used to report errors (e.g., incorrect unit cost, invalid combination, etc.). The transaction needs to report all applicable errors encountered for a transaction set and it is recommended that a unique interchange file be generated for each transaction type being reported (i.e., one interchange for invoices, a second interchange for ship notices, etc.). The **Application Advice (824)** should not be used in place of a transaction set designed as a specific response to another transaction set, e.g., the **Response to Request for Quotation (843)** is the response to the **Request for Quotation (840)**. This transaction eliminates the need to communicate application errors by

phone, fax, or mailed paper reports. It allows the originator of the transaction set to correct inconsistencies in a timely manner, minimizing the impact on time sensitive applications.

Application Advice (824) Benefits

- Automated means to communicate errors in transactions which do not have a designated response document
- Eliminates need for problem determination/resolution by phone, fax, or mailed reports
- Strengthens the trading partner relationship by resolving inconsistencies as they occur, rather than after time has elapsed

Text Message (864)

The **Text Message (864)** provides a vehicle for transmitting text messages to trading partners. Use of the **Text Message (864)** for free format messages is not encouraged, nor is it meant to serve as a replacement for third-party e-mail services currently available. The structure of the **Text Message (864)** does not support the addressing mechanisms contained in third-party e-mail systems, and any partners implementing the **Text Message (864)** for report transfers must arrange for proper delivery of the transaction to the intended final recipients.

Text Message (864) Benefits

- Provides the ability to transfer information in a human readable format

Functional Acknowledgment (997)

The **Functional Acknowledgment (997)** is used to indicate the results of a syntactical analysis of functional groups and their transaction sets by EDI translation software. **Functional Acknowledgments (997)** are automatically generated by EDI translation software for transmission back to the sending party to confirm the delivery of the transaction and any formatting errors or loss of data. Transaction sets with errors may be accepted with error or rejected. Rejected transaction sets must be corrected and retransmitted by the sending party. The **Functional Acknowledgment (997)** does not confirm that the receiver's application system was able to process the transaction received.

Functional Acknowledgment (997) Benefits

- Verifies receipt of specific transactions transmitted



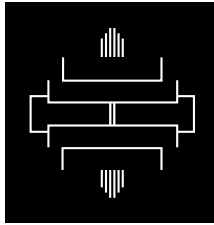
IMPLEMENTATION GUIDELINES

CONTENTS

This chapter explains the relationship and function of VICS EDI in bridging the information gap between retailers, suppliers and involved third parties.

The subjects presented in this chapter include:

- Processing Concepts and Alternatives
- Translation Software
- Cost Considerations
- Organizing the Project
- Implementation Planning
- Establishing An Implementation Schedule
- Interfacing With Internal Applications
- Initial Implementation and Start-Up
- Post-Implementation Considerations



IMPLEMENTATION GUIDELINES

PROCESSING CONCEPTS AND ALTERNATIVES

Electronic Data Interchange (EDI) is the exchange of business data from one computer to another computer using a public standard format. It replaces the traditional processes of preparing data in paper form and sending it by mail or by facsimile.

The **Voluntary Interindustry Commerce Standard (VICS) EDI** is the EDI standard used and maintained by the retail industry. Use of EDI is not restricted to any particular computer, software, or communications equipment. VICS EDI bridges the information gap between companies with different computer configurations. VICS EDI is also independent of a company's internal application systems. It interfaces with application systems rather than being integrated with them.

Implementation of VICS EDI requires decisions concerning the choice of computer and communications equipment, the acquisition of translation software, and the development of programs to bridge between internal applications and VICS EDI. This section describes available alternatives and the factors to consider in making these decisions.

BASIC PROCESSING

Before making equipment and software decisions, it is important to understand how VICS EDI operates. VICS EDI supports the transmission of data from one company to another in a single direction, e.g., a retailer generates a purchase order and transmits it to a supplier; the supplier receives the purchase order and returns a confirmation of receipt. Both transmissions travel in a single direction - from the retailer to the supplier, then from the supplier back to the retailer.

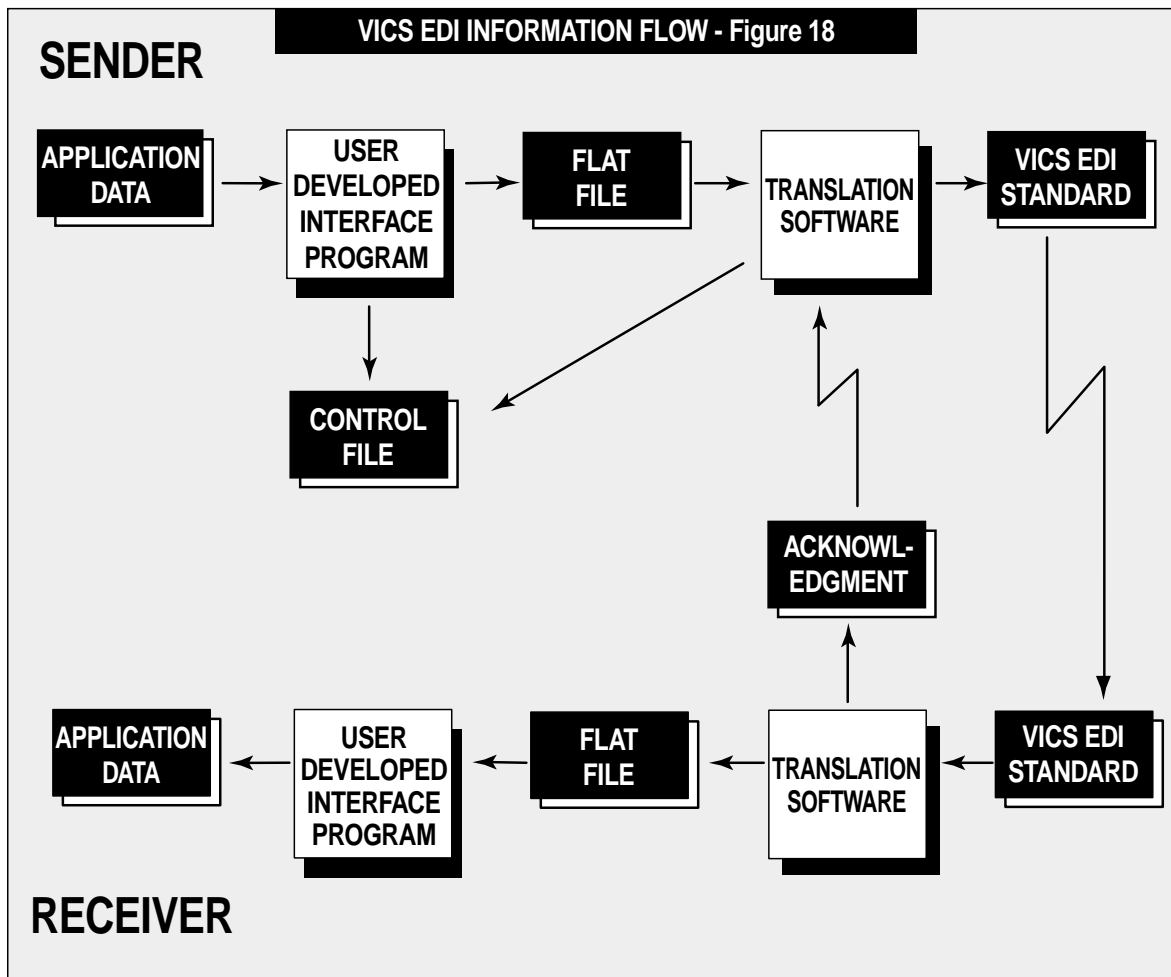
Figure 18 illustrates this process in further detail.

In our examples the retailer extracts data from internal application files, and then builds a sequential or flat file containing the information needed to produce a purchase order.

Translation software uses the flat file to generate a VICS EDI purchase order. During this step, most translation software performs editing and validation functions to make sure that:

- data elements required by the standard are present,
- data is properly formatted and,
- relationships between data elements are valid.

When errors are detected, diagnostic messages will describe the errors encountered. Errors are usually corrected by editing the data itself or by making corrections to the extraction process, or both. After the transaction set has been generated in VICS EDI format, it is transmitted to the supplier, in this example, using one of many communications processes (direct phone link, Value-Added Network (VAN), etc.).



At the receiving end, this process is reversed. The incoming VICS EDI data is input to translation software that performs three functions:

- the data is checked for accuracy and completeness in terms of compliance with the VICS EDI standard,
- the VICS EDI data is translated into a flat file for entry into the supplier's order entry system in our example and,
- the translation software generates an acknowledgment in VICS EDI format for return transmission to the retailer.

If the supplier's translation software detects any errors in the initial transmission from the retailer, they can be noted in the acknowledgment. Acknowledgments are formatted, communicated and processed as all other VICS EDI transactions, but they themselves are not acknowledged.

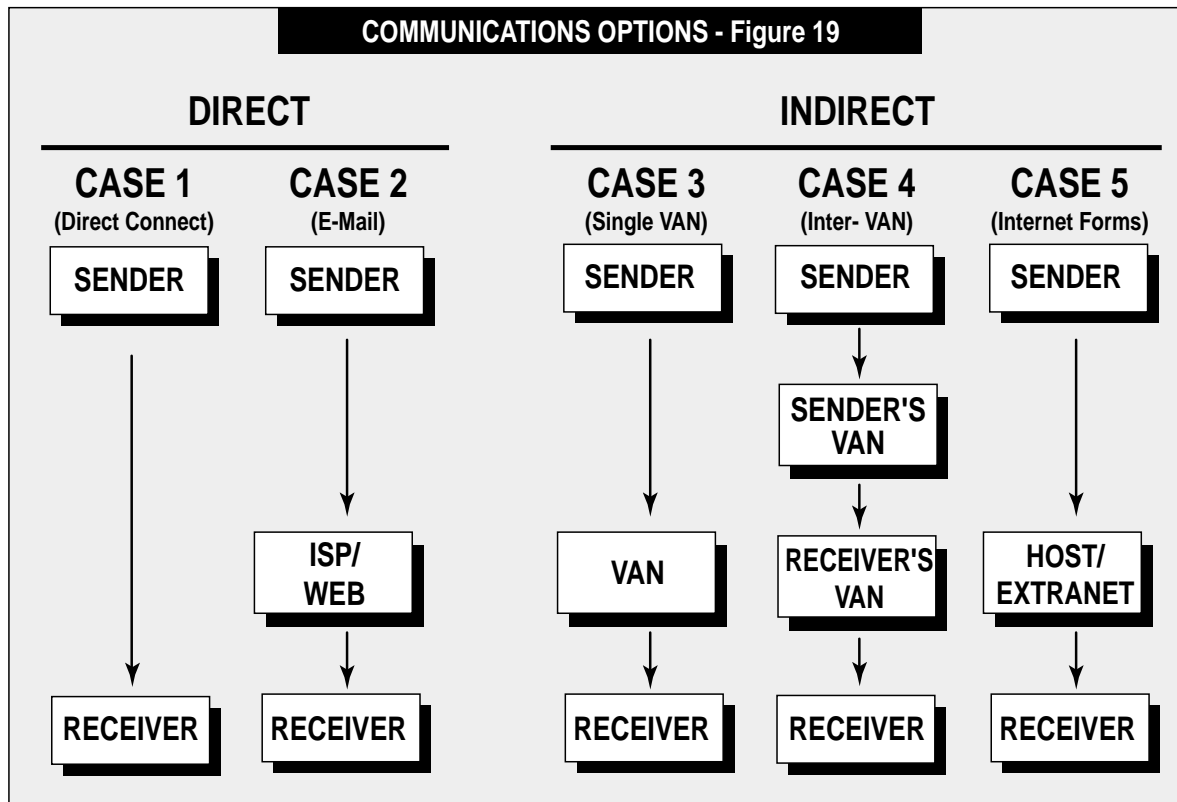
COMPUTER EQUIPMENT

VICS EDI can be implemented using mainframe computers, mid-range computers (e.g., AS400) or personal computers (PCs) — or any combination of these. For example, some companies install VICS EDI translation software on the mainframe host computer they use to run their internal application systems, and they send and receive VICS EDI data using the host computer itself. On the other hand, some companies use their host computer to interface with their applications system, but upload and download flat files to a PC or a LAN server for translation and communication functions. Translation software requirements do not

dictate the equipment used for VICS EDI processing, since such software is available for all types of commonly used computer systems.

COMMUNICATIONS

VICS EDI data may be communicated between parties directly, or indirectly using third-party communications networks. Based on internal cost/benefit analysis, companies must determine which communications option to adopt - or to employ a combination of direct and indirect communication methods. Figure 19 illustrates the basic communications options available.



Direct Communication Methods:

- Case 1: Sender and receiver communicate directly with each other; each controls its own communications system.
- Case 2: Sender and receiver communicate directly with each other via email messages using "attachments" (i.e., documents attached to the email message). An Internet Service Provider (ISP)/Web acts as the interface mechanism. The sender and receiver both control their own communications system to and from the ISP.

Indirect Communication Methods:

- In Case 3: Both sender and receiver use the same third-party VAN. VANs provide mailbox services to their clients; typically, such services involve a monthly mailbox fee, as well as usage fees. These fees cover communications and client support, communications equipment, and systems personnel to maintain the network.
- Case 4: Each party uses their own preferred third-party VAN. When the sender and receiver use different VANs, there must be an "Interconnect" agreement between the two VANs in order for the transmission to move between networks. Most major VANs currently have these arrangements in place.

- Case 5: The sender and receiver communicate via an extranet maintained by either the buyer or seller, or via a third-party hosted Internet website. The sender and receiver both control their own communications system to and from the extranet or hosted website.

COMMUNICATIONS USING VANS

Companies may select a third-party VAN, as shown in Cases 3 and 4, for various reasons:

- Accelerate initiation of VICS EDI
- Minimize in-house equipment and personnel costs
- Effectively control the timing of transmissions
- Take advantage of additional services provided by a third-party VAN

Services provided by VANs might include translation within the network, archiving and retrieving of data, time-based transmissions to lower costs, summary tracking reports, and carbon copy facilities to send data to multiple destinations. Alternatively, companies may decide to communicate directly for cost, timing, and control reasons.

The Uniform Code Council, Inc. (UCC) maintains a directory of third-party VANs and service providers for companies doing business in a VICS EDI standards-based environment. This directory and other related documents are available from the UCC and are listed in the Appendix under “Key Supporting Documents.”

COMMUNICATIONS VIA THE INTERNET

Internet tools may be used by companies to facilitate EDI. Exchanging business information via the Internet is currently most commonly accomplished through the use of forms-based EDI or email attachments.

EMAIL ATTACHMENT METHOD

As shown in Case 2, the Internet can be used to transmit standard EDI transactions as email message attachments. Unlike forms-based EDI, this method assumes both partners have computer systems able to receive and process standard, EDI file attachments.

The primary benefit of this method is reduced EDI transmission costs, as transmission via a VAN is replaced by the use of email. The Uniform Code Council has adopted standards for transmitting EDI transactions as email attachments. To use the email attachment method, both trading partners require translation software, data recovery methods, compatible encryption technology, and a secure method of data transport (SMTP protocol).

The following example illustrates a basic transaction cycle using EDI sent as an email attachment:

1. The sending trading partner encrypts a standard, EDI transaction set and sends the data to its trading partner as an email attachment.
2. The receiving trading partner receives and decrypts the email attachment.
3. The decrypted data is then fed into and processed by a standard EDI translator program.

INTERNET FORMS-BASED EDI

Typically, “hub” companies initiate forms-based EDI to facilitate EDI with smaller trading partners. As shown in Case 5, forms-based EDI applications are either hosted by a third-party service provider or offered by a trading partner via an extranet.

To use forms-based EDI, smaller trading partners do not require traditional EDI systems or support. Generally, only an Internet-connected computer and browser software are needed.

The following example illustrates a basic transaction cycle using Internet forms-based EDI:

1. The initiating company, using traditional EDI, transmits an 850 Purchase Order to a third party Internet forms-based EDI provider.
2. The third party provider loads the purchase order information to their website.
3. The initiating company's trading partner (e.g., the ultimate receiver) accesses the website and views the purchase order data. The trading partner prints or downloads/imports the data to process the order.
4. Upon shipping of product to its customer, the smaller trading partner keys information needed to create an 856 Ship Notice/Manifest and an 810 Invoice on the third party web form. This information is fed to the third party's systems.
5. The third-party provider creates an 856 Ship Notice/Manifest and 810 Invoice and transmits the EDI documents to the initiating company.
6. The initiating company receives the 856 Ship Notice/Manifest and 810 Invoice using their standard EDI processing method.

TRANSLATION SOFTWARE

VICS EDI requires the use of software to translate the sender's internal data into the VICS EDI format. Additionally, this software performs editing and control functions. The role of translation software is summarized as follows:

For Outgoing Data

- Converts proprietary data to the VICS EDI format
- Generates required control segments and transmission envelopes
- Verifies that data meets VICS EDI specifications based on the version of the standard being used
- Performs code and qualifier conversions from internal designations to those defined for use within VICS EDI

For Incoming Data

- Reformats VICS EDI data into internally accessible formats
- Validates transmission, functional group, and transaction set controls included in the VICS EDI structure
- Performs compliance checks on data received based on the version of the standard transmitted
- Converts standard codes and qualifiers into meaningful information
- Generates a Functional Acknowledgment (997) for transmission back to sender

Translation capabilities can be provided in a number of ways: A commercial translation package can be purchased or leased; software can be developed in-house; or translation can be done off-premises by a VAN or service bureau.

COMMERCIAL TRANSLATION PACKAGES

The majority of companies using VICS EDI purchase or lease commercial translation packages. Commercial translation packages are available for a variety of computer configurations, from mainframe to PC. Implementation objectives, timing, and cost play an important role in determining how translation facilities are provided. The UCC maintains a directory of VICS EDI translation software providers.

TURNKEY APPLICATION SOFTWARE

For smaller companies, application software that is bundled with translation capability and access to a VAN may be available. In this situation, the third-party service bureau provides many or all of the functions of an internal systems staff. They provide the linkages from the application system to the VICS EDI standard, and they keep the software current with the published standard. They may also set up and maintain a company's electronic mailbox, and they may work directly with new trading partners to implement VICS EDI. The UCC maintains a listing of these providers; it is available on request.

THIRD-PARTY TRANSLATION SERVICES

Some companies elect to perform translation entirely with a third-party service provider. In this scenario, the company sends data to the provider in non-VICS EDI format (generally the format of the internal application which produced the data). The third party translates the data into VICS EDI format and transmits it to the trading partner. Subsequently, when data is received by the third party from the trading partner, it is translated from VICS EDI format into the company's internal application format. The third party then places this received data in the company's electronic mailbox.

IN-HOUSE DEVELOPMENT

Translation software maintenance and support are more costly and complex than an initial look at the standard and its requirements might suggest. Time has shown that companies quickly abandon the notion of developing translation software themselves, unless they have other business objectives to sustain the development effort.

TRANSLATION SOFTWARE SELECTION CRITERIA

Important considerations for the selection of commercial translation software are listed below.

Basic Translation Capability:

- VICS EDI transaction sets supported
- Support multiple versions of the standard
- Mapping facilities that minimize program development
- Interchange enveloping
- Control number generation and verification
- Compliance checking
- Code and qualifier conversion
- Acknowledgment generation
- Interface to third-party networks
- Installation and maintenance
- Degree of customization required
- Ability to interface with user application systems
- Adaptability to existing computer systems
- Effort required to add a new trading partner
- Effort required to implement a new transaction set or another standard
- Effort and timing required to upgrade to new versions of the standard
- Ability to accommodate interim approved standard revisions (for companies participating in pilot implementations)

Special Features and Services:

- Control and audit reporting
- Preparation of paper documents (if needed)
- Backup and restore capabilities
- Error handling procedures
- Event-driven EDI

Supplier Support:

- Availability of new standard versions
- Telephone hot-line assistance
- Training
- Implementation assistance
- User group sponsorship

Costs:

- Purchase and license fees
- Maintenance charges
- Training
- Consulting

COST CONSIDERATIONS

INITIAL IMPLEMENTATION COSTS

The direct costs associated with implementing VICS EDI are similar to those involved in installing a new or upgraded internal applications system. This section outlines cost factors in the areas of computer equipment, software, personnel and training.

COMPUTER EQUIPMENT

VICS EDI is virtually hardware independent. It can be implemented on equipment ranging from large mainframe computers to microcomputers to PCs. If VICS EDI is implemented on a company's host computer, additional computer equipment is needed only if the existing configuration does not have the capacity to run the translation software.

If VICS EDI is implemented using a front-end processor to the host computer, then minicomputer or microcomputer hardware is required. For a front-end configuration, software and hardware must be in place on both the host and the front-end computers in order to upload and download flat files.

SOFTWARE

There are three alternatives for translation software; it can be purchased or licensed from an outside supplier; it can be developed in-house; or it can be contracted to a third-party network or service bureau. The cost of developing translation software in-house must be calculated using a company's normal estimating tools and procedures. The cost of commercially available translation software will vary by the scale of the machine on which it operates and by the optional features selected. The cost of network translation usually entails an initial setup charge and usage charges for the translation service.

COMMUNICATIONS

VICS EDI communications can be accomplished directly through one or more VANs, via email attachments, or using Internet-based forms. For direct communications, money must be budgeted for modems, telephone lines, computer ports, and long-distance telephone

charges. In addition, money must be budgeted for the development of communications software or for the purchase or license of a commercially available communications package supporting VICS EDI. For a VAN, a single modem, telephone line, and computer port are required to communicate with a VAN. VANs usually provide toll-free service to their clients or provide local access points as part of their service. VANs will provide software to communicate with them, but they may charge a purchase or license fee. Care must be taken to accurately estimate the volume of VICS EDI data that will be exchanged with trading partners, so that ongoing communications costs can be anticipated and properly budgeted.

PERSONNEL

Implementation of a VICS EDI program cuts across many different functional areas of a company. To be successful, it is imperative that the coordinated efforts and commitments of multifunctional teams be established. Successful implementation may change the demands on internal personnel resources. Some functional areas may experience a reduction in needed personnel while other areas may require an increase. Some non-systems resources are identified in the following "Implementation Planning" section. Once a plan has been initiated, the work of systems resources include installation of translation software, mapping application system data files to or from the standard, programming interface or bridge programs, and preparation of communication software and procedures. Some companies accomplish these tasks using in-house personnel, while others may select independent consulting resources. To estimate staffing requirements, other VICS EDI users may be contacted to share their experience.

TRAINING

Training expenses required will depend on the technical background of the staff and the degree to which outside resources are utilized. Several firms provide EDI training programs, and many of the translation software and VAN providers offer training, either as part of their basic services or for an additional fee.

OPERATING COSTS

TECHNICAL AND OPERATIONAL SUPPORT

New versions of VICS EDI are published annually. Each new version may require changes to both the translation software and to interface programs. In addition, as a company adds new transaction sets, application systems will need to be modified to process the new information.

Therefore, it is necessary for companies to commit systems resources to VICS EDI on an ongoing basis. The extent of this commitment will vary, depending on each company's technical approach, and the addition of new trading partners and transaction sets.

EQUIPMENT AND COMMUNICATIONS

Depending on the initial approach taken to implement VICS EDI, changes may be required in computer and communication facilities to handle increased volumes, new trading partners, and additional transaction sets.

ORGANIZING THE PROJECT

Perhaps the most important step in making a decision to implement VICS EDI is to secure high-level management commitment to the effort. VICS EDI cannot be implemented through the efforts of a single business function. Many functions must work together to achieve a successful implementation. Therefore, it is important that top management support the VICS EDI effort, and that they communicate their support to the rest of the organization.

GENERAL GUIDELINES

Although the systems area is a key component in implementing VICS EDI, implementation should be user-driven and directed. Important business and resource decisions in other areas of the organization will impact the implementation effort. VICS EDI should not be undertaken simply as an information systems activity.

Top management must be involved to ensure adequate support is provided throughout the organization during the implementation. Each company must determine the appropriate level of management participation and which individuals will have decision-making responsibility and authority.

In addition to assembling an effective project organization, successful VICS EDI implementation requires the development and execution of a basic project plan. Regardless of company size or type, there are some basic steps that should be followed to ensure a successful outcome.

PROJECT ORGANIZATION

Management participation can be achieved in a number of ways, ranging from the involvement of a single member of top management to the creation of a formal steering committee. If the steering committee approach is used, membership might include representatives from sales/marketing, accounting, purchasing, operations/logistics, legal, distribution, customer service, and systems.

The steering committee fulfills the following functions:

- Shapes EDI strategy of the company.
- Empowers users in the EDI process.
- Creates a process for dealing with internal requests.
- Ensures continuity.
- Balances the goals of new development and ongoing operations.

The project should be undertaken as a team effort. The structure of the VICS EDI project team will be determined by both the size and type of the company as well as the resources needed for each individual project.

EDI COORDINATOR

To be successful in implementing EDI projects, a company should select an appropriate EDI Coordinator. This person should possess a broad business background and understanding of the company's business processes. Primary duties of the EDI Coordinator would be the responsibility of overseeing the successful implementation and maintenance of a company's EDI efforts as well as interfacing with, handling all correspondence with, and educating the company's trading partners and internal resources.

PROJECT REPORTING

The VICS EDI project plan must provide for the timely reporting of activity and progress. While the manner in which reporting is accomplished will differ from company to company, project team meetings should be scheduled at regular intervals to maintain project momentum and cooperation, and also to monitor progress with respect to predetermined timelines.

EDUCATION

Since changes will undoubtedly occur in internal business systems and procedures with the implementation of VICS EDI, the project team should provide for education and training at various levels of the organization. Special consideration should be given to the training of the actual users of the system or systems supporting VICS EDI. Since VICS EDI tends to be cross-functional, care should be taken to make sure that all company areas affected by VICS EDI are adequately trained and briefed. Any training that is done using external resources should be augmented by an internally developed and conducted training program tailored to the specific needs of the company or functional area.

There are many EDI seminars and conferences held monthly throughout the country. Register and attend an EDI conference that is targeted to the retail industry. Contact the UCC for a schedule of the seminars and conferences they provide. You can also contact your translation software or VAN service provider for a list of seminars they hold pertaining to EDI.

IMPLEMENTATION PLANNING

Detailed implementation requirements will vary from one company to another. However, based on the experience of many companies, there are a number of design and implementation elements that are essential to achieving a successful VICS EDI implementation.

BUSINESS OBJECTIVES AND DESIGN

Since VICS EDI is primarily a business strategy rather than a computer system, it is important that company objectives and expectations be clearly identified, and that the impact of VICS EDI on existing business policies and procedures throughout the company be determined and agreed upon. Companies with many divisions might want to consider focusing on EDI initiatives that will enable them to design one EDI system that will serve many different applications, while other companies might feel it necessary to tailor their EDI system in the direction of key trading partners. Some companies will include the development of company objectives and a VICS EDI business design as part of their cost/benefit justification study. Others will perform this basic task early in the VICS EDI implementation process.

REVIEWING SYSTEMS AND PROCEDURES

A complete analysis of current operational systems should be performed. Processes for creating business information should be documented, and the flow of information should be identified. Internal policies and procedures affecting the use of business information should be included in the analysis. This might include the distribution of business documents, filing and matching requirements, retention rules, etc.

Using this information, the project team can determine how VICS EDI should be integrated into existing systems, and whether any current policies or procedures must be changed. The results of this review will also permit the development of a preliminary estimate of the effort required to achieve VICS EDI integration.

REENGINEERING FOR EDI

Companies implementing EDI will have the ability to automate processes currently done manually. If these processes are inefficient, they will still be inefficient with EDI. Companies desiring to get the maximum benefit from EDI must re-examine and reengineer those processes to eliminate inefficiencies and improve their ability to provide a seamless interface with trading partners. There are a number of redesign goals in the reengineering process. They include:

- Work Simplification - Tasks should be simple to the point that little can go wrong.
- Automation - Manual process may be better handled through automation.
- Concurrent Processing - Processes that occur serially might be handled in parallel.
- Minimizing Buffers - Buffers are only needed when processes are inefficiently coupled.
- Integrating Activities - It is sometimes possible to consolidate or combine activities.
- Single Contact Point - Entry into a process should be controlled by a single “gatekeeper”.
- Process Variations - Within a process, variations may exist to accommodate different inputs.
- Results Measurements - Results must be measurable to allow for monitoring benefits.

IDENTIFYING TRADING PARTNERS

In order to achieve cost savings and operating efficiencies, a company must convert a significant percentage of its transaction volumes to VICS EDI. Many companies develop a plan for using VICS EDI with a number of their buyers or suppliers during the initial implementation process. Once a list of potential trading partners has been developed, primary candidates can be identified based on such criteria as ranking by dollar and/or transaction volume, VICS EDI capabilities, readiness, etc. Selecting an initial partner and extension to additional partners are discussed later in this document.

PARTNER PLANNING

An initial step many organizations take when considering EDI implementations is to conduct a survey of buyers or suppliers to determine the EDI capabilities and plans of the EDI target base. After the results of the surveys are compiled, some form of analysis is performed to determine which of the EDI-ready target trading partners the organization would like to pursue during the initial roll-out.

Once the target group of trading partners is determined, the organization should, on an individual trading partner basis, involve both groups of executive management. Executive management of both organizations should be in agreement to sponsor the project between the two companies. If management is communicating the critical need of the usage of EDI between the two companies, an implementation will have focus within an organization. Management will determine what each partner is trying to obtain from the partnership, sponsor the project, and maintain the focus of the EDI implementation.

As part of the partner planning exercise, some areas which should be documented may include:

- VANs to be involved with the implementation, or if no VANs are involved, communications protocols to be employed.
- Details of optional segments and elements to be used, assuming all VICS EDI guidelines for required segments and elements are to be followed.
- Timing of EDI communications sessions. Is once a day enough or does this application have “event driven” requirements?
- Communication identifiers, passwords, and VICS EDI versions all need to be communicated and agreed upon.

Ongoing status meetings during the implementation will be very important. Maintaining a perpetual dialog is required not only to improve overall communications between the trading partners, but also to manage expectations and ensure that actions taken during the project have positive benefits for both parties.

EDI PROGRAM POLICIES AND PROCEDURES

The development of EDI Policies and Procedures may be an important first step for EDI project teams or the team’s management, whether that management is an individual or an EDI Steering Committee. Some examples of potential subject areas for EDI Policies and Procedures include:

Value-Added Network Cost Sharing

In optimal situations, determination as to how trading partners will pay for the inbound and outbound components of EDI transactions.

EDI Document Review

In the EDI environment, will documents require queuing for human review or exception processing prior to sending those documents to trading partners (i.e., purchase orders, invoices shipping notification)? Will queuing for human review or exception processing be required prior to inbound processing by internal applications systems (i.e., buyer’s orders, remittance advice for suppliers)?

EDI Document Archiving

For the target EDI transaction, what are the archive requirements? Archive requirements could come from several sources: internal operations requirements, internal audit, external audit, legal, Internal Revenue Service, or government regulations. Will the archiving requirements dictate that transaction detail or summary level information be retained?

Functional Acknowledgment Utilization

When using VICS EDI, functional acknowledgments are required.

CONTINGENCY PLANNING

An organization must plan for any disaster that would adversely affect the organization’s EDI systems. Hardware, software, and information (data) must be considered in the contingency planning process.

Hardware Contingency Planning

Management should take steps to ensure that any hardware failure will not adversely affect the organization's EDI processing, for any extended period. Backup hardware (commonly called "hot sites"), and/or replacement components necessary to assure continued EDI processing, must be maintained and be available continuously.

Software Contingency Planning

Software used for EDI is subject to damage or corruption due to power failures, faulty hardware, and internal misuse. Management should initiate steps to make sure that the software is consistently "backed up" to avoid EDI downtime. This "back up" procedure should also assure that any new versions installed do not deter normal EDI processing while the new version of software is being tested.

Information (Data) Contingency Planning

Finally, and most importantly, the EDI information (data) electronically transmitted to the organization from their trading partner becomes invaluable. Many paper documents are taken out of the information exchange cycle between companies when EDI is implemented. Not only does this "data" become the lifeline of the organization, but many times it becomes the audit trail to be used in the organization's standard accounting practices.

Once implemented, EDI transmitted information (data) becomes the link between EDI trading partners, and management should take care to maintain the integrity of this information.

AUDIT AND CONTROL, LEGAL AND ACCOUNTING ISSUES

One area where functional management may wish to become significantly involved is with issues revolving around audit and control. Even with high volume EDI transactions, functional management may wish to have:

- Inquiries showing volumes of transactions sent or received;
- Inquiries showing invalid transactions that could not be processed by receiving application systems;
- Audit reports verifying number of transactions processed by sending or receiving systems as compared to transactions processed by EDI translation software;
- Archive capabilities for selected EDI documents over a specified period of time for certain EDI transactions, at either a detail or summary level.

As a general rule, archive EDI documents for the same retention periods as their paper document counterparts. There are also Internal Revenue Service procedures which require certain EDI data to be kept for seven years. The EDI system theoretically will be subject to audit by internal and external auditors, as well as the IRS. The EDI system should provide validation, audit trails, control, and transaction logging. It is important that all legal, accounting, and financial communications be determined and agreed to by both parties implementing EDI. Without paper, trading partner agreements are being utilized to a limited degree in EDI relationships to replace or supplement the legal requirements carried on paper document.

ESTABLISHING AN IMPLEMENTATION SCHEDULE

After all major decisions have been made in terms of the VICS EDI business design and equipment and software considerations, an implementation schedule can be prepared. Identify the capabilities that need to be developed and list the tasks necessary to accomplish the implementation. For each task listed, assign responsibility and set a completion date. Finally, select a trading partner.

SELECTING TRADING PARTNERS

The criteria for determining an initial trading partner will vary from company to company. In many cases, this decision is an integral part of the decision to implement VICS EDI. Business considerations, such as competitive pressures and business relationships between companies often impact a company's decision to implement VICS EDI. However, an initial trading partner should be a company with which good business relationships exist, and with which the development team is comfortable working. It is highly recommended that an initial trading partner be a company already experienced with VICS EDI. This experience will make testing and implementation less complicated and troublesome.

Once the initial trading partner has been selected, implementation is coordinated with this partner. This can best be achieved by face-to-face meetings, to ensure a mutual understanding of the information being passed to each other and how that information will be used by each other. These meetings may occur a number of times during implementation to share progress reports and reexamine business issues. If both partners are experienced EDI users the exchange of mapping requirements may be sufficient.

OBTAINING CONTACT INFORMATION

It is important to exchange contact information when a new VICS EDI partnership is established. Ideally, each partner should provide a primary and a backup contact person, in order to minimize the time to resolve a problem. Some companies may have multiple contacts, depending on the structure of their VICS EDI implementation. For example, there might be one contact in the programming area, another in the communications area, and another in the user department.

EXCHANGING COMMUNICATIONS INFORMATION

The following information should be exchanged between trading partners during the implementation planning stage:

- If a VAN is not being used, computer equipment involved (brand, model, and operating system) and modem telephone number
- If a VAN is being used, VAN to be used
- Communications identification (obtained from the UCC)
- Communications passwords (if required)
- Identifications for all company entities
- Addresses of multiple receiving locations (if applicable)
- Daily timing for transmission and receipt of data
- VICS EDI version to be implemented
- Date to start testing
- Implementation date

IDENTIFYING DATA TO BE EXCHANGED

New trading partners should review transaction set data to ensure mutual agreement and understanding of the data to be exchanged. The published VICS EDI manual defines the technical aspects of data which can be exchanged. Certain data is required. Other portions are optional based on the ability of the sending party to create the information. Other parts are conditional based on the technical or business context in which the information is being exchanged.

TRADE ITEM IDENTIFICATION

Trade Item identification is a key component of almost every VICS EDI transaction set. Within VICS EDI, products are identified using the (UC-12, EANUCC-13 and EAN.UCC-14) Global Trade Item Number (GTIN).

The key advantage of using one or more of these trade item identification structures is that they all provide a scannable symbol. Implementing scanning processes throughout the product life cycle, and integrating these processes with supplier and buyer computer systems, facilitates product movement and information exchange.

Prior to initiating any exchange of trade item information, new trading partners should review their respective item, price, and promotion databases to ensure they are in complete agreement. In exceptional cases, where a product does not have a GTIN, trading partners must reach agreement on the definition and use of alternative trade item identification codes and numbers.

UCC-12

The UCC-12 (U.P.C.) is a standardized numeric code and barcode symbology that uniquely identifies a trade item at its lowest level. For example, in the hardlines industry, each size and model of a television is coded with a different UCC-12. In the softlines industry, each size and color of a particular style of shirt is coded with a different UCC-12. Furthermore, a 3 pack of undershirts (sold as a consumer unit) has a different UCC-12 than an individual undershirt of the same color and size. Additionally, a vendor pre-defined assortment could be assigned a UCC-12 to facilitate ordering.

The UCC-12 is a fixed length 12-digit number composed of three parts:

- A manufacturer's ID number - this number is assigned to the supplier by the Uniform Code Council, Inc. (UCC)
- A unique product identifier or item number - this number is assigned by the supplier and does not contain any real information; typically, they are simply assigned sequentially by the supplier
- A modulo-10 check character

For more information about U.P.C. assignment, please refer to the *Trade Item Identification & Communication Guidelines*, available from the UCC.

For detailed information on printing and scanning the U.P.C. bar code symbol, refer to the *U.P.C. Symbol Specification Manual*, also available from the UCC.

EAN.UCC-13

The EAN.UCC-13 is very similar to the UCC-12, in that it uniquely identifies a trade item at its lowest level; it also uses the same barcode symbology. Administered by EAN International, the EAN.UCC-13 is a fixed length 13-digit number composed of the following:

- Company prefix - assigned by one of the EAN International numbering organizations. The first 2 or 3 digits identifies the EAN numbering organization that defined the company prefix.
- Serial identification - assigned by the supplier
- A modulo-10 check character.

For more information about the EAN you may contact the UCC.

EAN.UCC-14

The EAN.UCC-14 is a unique trade item identification number, applied at package, case and pallet level to identify units where attributes such as product description, size and weight are fixed. Packaging indicators may be added when specific attributes vary from unit to unit. The EAN.UCC-14 is used to mark items that will be scanned at point-of-use or in a distribution environment.

For technical information regarding the EAN.UCC-14, consult the *Application Standard for Shipping Container Codes*, available from the UCC.

INTERFACING WITH INTERNAL SYSTEMS AND APPLICATIONS

In addition to translation software, a company's EDI capabilities should provide automated integration of inbound and outbound transactions. Quality data will then be provided, which will ensure a tighter union between trading partners because of the smooth flow of information. Companies must develop computer programs to interface VICS EDI with their internal application systems. The number of these interface or bridge programs will vary, depending on the requirements of the translation software, the complexity of the internal systems and applications, and the number of transaction sets to be exchanged. At a minimum, one interface or bridge program is required for each transaction set to be exchanged. For sending data, one program is required to create a flat file for input to the translation software. For receiving data, another program is required to process the flat file created by the translation software into the application system.

SYSTEMS IMPLICATIONS OF TRANSACTION IMPLEMENTATIONS

Associated Data (102)

This transaction set is used in conjunction with the **Price/Sales Catalog (832)** to transmit a multi-media object. An associated object reference ID must be assigned to each **Associated Data (102)** and referenced in the **Price/Sales Catalog (832)** to link the multi-media object attributes. Only one multi-media object may be transmitted in a single **Associated Data (102)**.

Transportation Appointment Schedule Information (163)

The supplier's or buyer's systems must have an automated appointment system in order to utilize the **Transportation Appointment Schedule Information (163)**. The carrier should also have an automated dispatch system. Additional links are needed by the supplier into their production systems and by the buyer into their ordering/receipt system. Links into the carrier's equipment utilization are also suggested.

Return Merchandise Authorization and Notification (180)

Both the supplier's and buyer's inventory systems need to be modified to track the physical quantity to be returned, actual goods returned and its associated return merchandise number. Additional system links to the financial system are needed to tie the **Return Merchandise Authorization and Notification (180)** issued by the supplier to the **Credit/Debit Adjustment (812)** to be issued by the buyer at time of return of product.

Motor Carrier Load Tender (204)

This transaction can be used in two ways. If used as a shipment tender, it allows the shipper to offer a shipment to a truckload carrier. It may be used also to provide complete shipment details once the shipment has been tendered. The truckload carrier responds to the tender with a **Response to a Load Tender (990)**.

Motor Carrier Freight Details and Invoice (210), Consolidators Freight Bill and Invoice (223) or Motor Carrier Summary Freight Bill Manifest (224)

These transactions are used by the carrier to provide details of shipping costs or to bill for those costs. When receiving the **Motor Carrier Freight Details and Invoice (210)**, **Consolidators Freight Bill and Invoice (223)** or **Motor Carrier Summary Freight Bill Manifest (224)** many of the issues are identical to those pertaining to the **Invoice (810)** document since both transactions impact the receiver's accounts payable systems.

Motor Carrier Bill of Lading (211)

The shipper's system must be able to provide a complete and accurate description of the shipments as the **Motor Carrier Bill of Lading (211)** is a replacement for the legal bill of lading document. Particular care should be given to accurate purchase order numbers, carton count, and pallet information. The **Motor Carrier Bill of Lading (211)** will be integrated into the carrier's shipment status and billing system, and therefore any data errors from the supplier will be transmitted directly to the buyer.

Motor Carrier Delivery Trailer Manifest (212)

This transaction set is utilized by LTL carriers to provide a receiver (usually a distribution center) with the information concerning all shipments in a single trailer destined for one location. The **Motor Carrier Delivery Trailer Manifest (212)** usually replaces the individual **Motor Carrier Shipment Status Messages (214)** prior to delivery of the shipment. The receiver must be able to integrate this with their receiving system.

Motor Carrier Shipment Status Inquiry (213), Transportation Carrier Shipment Status Message (214) and Motor Carrier Package Status Message (240)

This set of transactions allows shipper and consignees to be kept aware of the status of their shipments. They can be used in conjunction with each other, where the **Motor Carrier Shipment Status Inquiry (213)** requests status information from the carrier and the **Transportation Carrier Shipment Status Message (214)** and the **Motor Carrier Package Status Message (240)** would represent the carrier's response to that request.

Depending on the agreement between trading partners, the **Transportation Carrier Shipment Status Message (214)** or **Motor Carrier Package Status Message (240)** document can be sent by the carrier independent of the **Motor Carrier Shipment Status Inquiry (213)**. In this scenario, the **Transportation Carrier Shipment Status Message (214)** or **Motor Carrier Package Status Message (240)** is sent by the carrier when selected status changes occur, or at scheduled intervals regardless of status changes. Proper use and analysis of this transaction allows shippers and consignees to evaluate carrier performance.

The shipper should have the **Transportation Carrier Shipment Status Message (214)** and **Motor Carrier Package Status Message (240)** integrated with their order tracking system to provide maximum benefit. The consignee (usually the buyer) should have the shipment status message integrated with their purchase order management and receiving systems.

Motor Carrier Pick-up Manifest (215)

The **Motor Carrier Pick-up Manifest (215)** replaces the paper manifest for small package carriers. Integration by the shipper into their manufacturing systems and labeling systems is key to the successful implementation of the **Motor Carrier Pick-up Manifest (215)**. The carrier uses the data to automatically route the shipment through their system using the bar codes on the labels.

Motor Carrier Shipment Pick-up Notification (216)

The **Motor Carrier Shipment Pick-up Notification (216)** replaces the traditional phone call from the shipper to the carrier. Careful attention should be paid to the communication methods used for the **Motor Carrier Pick-up Notification (216)**.

Purchase Order Shipment Management Document (250)

The **Purchase Order Shipment Management Document (250)** aids the buyer in managing the purchase order as the carrier assumes control of the product. The purchase order information provided to the carrier must be accurate and current. Responsibility of all parties must be clearly defined and appropriate action detailed prior to implementation.

When used by the carrier to sort and segregate freight, the carrier must be able to integrate this data with their shipment handling systems at the destination terminal.

Request for Routing Instructions (753)

The **Request for Routing Instructions (753)** is used by the supplier to request specific routing instructions from the buyer when standard routing guidelines are not available. The

Routing Instructions (754) is sent by the buyer in response to the **Request for Routing Instructions (753)**.

Invoice (810)

Electronic invoicing is usually requested by the buying organization shortly after the implementation of electronic purchase orders. Since each buying organization will have specific requirements that must be met for this transaction, the buyer should provide a copy of their implementation guide to the supplier for this transaction.

Electronic invoicing is an extract process. The assumption is that the process for automatically generating invoices on paper is in fact an automated procedure. This being the case, the implementation of an EDI invoice becomes a matter of comparing what your current system produces versus what is required by the buyer's implementation guide. Once the differences are identified, this information becomes the basis for designing the invoice bridge system. It should be noted that the current invoice system has to be aware of those buyers requiring an electronic invoice and those that require a paper invoice.

As in most supplier EDI implementations, care should be taken to design the invoice bridge with multiple buyers in mind; an extract should not be designed for each buying organization. It should be noted that it is possible for a buyer's implementation of the electronic invoice to require information that previously was not required. These differences may necessitate the extraction of additional information from the purchase order file or perhaps another file.

The majority of the impact to a supplier's organization will center around normal control procedures which for the most part are manual in nature. Additional system features may be required of your existing invoice system in order to view invoices that exist only in an electronic medium, as well as, to possibly correct errors caused by shipping discrepancies. When developing any additional system requirements, the organization should remember that through the use of a consolidated invoice, a supplier may "batch" several invoices together into one **Invoice (810)** to support a single or multiple purchase order for the buyer. Care should be taken to separate invoices and perform the same system processing (receiving and reconciliation functions) for all included invoices. Aside from traditional reporting requirements necessary for control, the enterprise must protect the audit requirements of this document.

Credit/Debit Adjustment (812)

This bi-directional transaction allows both buyers/suppliers to electronically transact and track financial activity within the payables/receivables departments. This is the tracking vehicle for adjustments, billbacks, credits and debits, and is used in conjunction with the **Invoice (810)** and the **Payment Order/Remittance Advice (820)** to complete the accounting cycle.

Organizational Relationships (816)

The **Organizational Relationships (816)** is used to 1) convey location address information for a company and its related operating entities; 2) maintain location address information through periodic updates; and 3) convey location and/or logical relationships. The implementation of this transaction requires the buyer to provide the supplier with location address information for all additions, revisions and deletions within the buyer's organization. The supplier uses the information to cross-reference location numbers sent on EDI documents to actual address locations. Two hierarchical structures have been defined for use within VICS EDI, one for location address and one for location relationships.

Commission Sales Report (818)

The implementation of the **Commission Sales Report (818)** carries with it a challenge for the buyers' systems. While most buying organizations are stratified (i.e., departments within categories), the need to identify locations within these layers and the personnel assigned to them adds another level of complexity. Sales capture needs further examination to determine if the capability exists to structure and capture the detail required for commission reporting.

The supplier needs to remain abreast of any changes in the status of the buying location inventory, personnel turnover, and advertised events. The commission rates may vary by product and the sales associate may sell a variety of products during the course of the pay period. The supplier would need a system that manages the multitude of scenarios that could occur and reimburse the buyer for their portion of the sales associates' compensation.

Payment Order/Remittance Advice (820)

The **Payment Order/Remittance Advice (820)** allows for the electronic payment of invoices sent to the buyer's organization. The transaction provides three options: 1) to order a financial institution to make payment to a supplier on behalf of the buyer; 2) to report the completion of payment to a supplier by a financial institution; and 3) for the buyer to advise the supplier on the application of a payment made with the payment order or by some other means. Each of these three functions will impact an organization differently.

The first function: There are two parties involved, the buyer and the supplier. In-house systems in many buyer organizations can readily access this information. The information regarding application of funds, generally under the supervision of the accounts payable department, is referenced frequently as vendors inquire about allocation of funds remitted. Account adjusters perform the task of certifying invoices for payment and handling questions from their account base.

If this information is managed by a financial system, it can be easily reformatted to an EDI transaction and transmitted between parties. Since buyer specific identification codes are generally maintained in-house, a cross reference table should be in place to standardize such codes (Note: Buyer assigned codes should be converted to a Global Location Number (GLN); or DUNS or DUNS + 4). Implementation at this level reduces the manpower required to perform day-to-day fact finding functions that are related to remittances.

The second function: This function involves a financial institution and the supplier. The buyer provides the remittance information to the financial institution so it may be relayed to the supplier once payment is rendered. The transfer of this data may be made using an EDI transmission or other established formats. The financial institution must be EDI capable and maintain trading partner relationships with both the suppliers and the buyers.

The third function: This function automates the remittance process and combines the first two functions. Pertinent financial information is available on the buyer's internal system to format the document. Systems development should include provisions for currency conversion (if international), Global Location Number (GLN); or DUNS or DUNS + 4, financial institution identifications and other pertinent data. Data and network security assume increased importance. The data received by the financial institution is used to automatically make payment to the supplier. Therefore, significant timing issues arise when funds are transferred in this manner. Corporate EDI policy and systems should be in place to safeguard against misappropriated information. Implementation of the **Payment Order/Remittance Advice (820)** impacts the area of accounts receivable and the applications systems that support this function. The supplier needs to initiate the necessary controls and reporting structure into the accounts receivable reconciliation process.

Application Advice (824)

The **Application Advice (824)** is issued to communicate errors resulting from application system edit routines invoked by the receiver of the transaction set. Significant time can be saved in the error determination/resolution process if this information is communicated electronically at the time an error is encountered.

A successful implementation of the **Application Advice (824)** needs to take into account the time sensitivity of the receiving application and the availability of required EDI control information. The scope of the edits performed has a direct effect on the complexity and feasibility of the project.

Note: This transaction is used for those transactions which do not have a specially designated response document, e.g., the **Request for Quotation (840)** and the **Response to Request for Quotation (843)**. Also, the **Application Advice (824)** should not be used as a reply to itself. The rationale is the same as that used for **Functional Acknowledgments (997)**.

Planning Schedule With Release Capability (830)

This transaction allows the buyer to provide anticipated or forecasted demands for merchandise to the supplier. This transaction communicates when products are needed, not when they will be sold.

The buyer must have a fairly automated method of controlling and anticipating future stocking levels. The supplier has to have the ability to process and apply the forecasted data to the appropriate applications such as, manufacturing, production and control, ship floor, customer service and accounting.

This transaction is constructed in a manner which will allow its use as a simplistic forecasting tool or, in a sophisticated implementation, to depict requirements by specific periods with the buyer's authorization to the supplier to commit resources and material to manufacture the merchandise.

Application Control Totals (831)

The **Application Control Totals (831)** may be used in conjunction with the **Payment Order/Remittance Advise (820)**. Payees send relevant totals regarding payment information to their financial institution. By including the **Application Control Totals (831)**, the financial institution can automate the payment release process by being assured all 820s were accounted for in the transmission.

Price/Sales Catalog (832)

The **Price/Sales Catalog (832)** transaction is used for the exchange of trade item information between supplier and buyer. This exchange may take place directly with the buying organization or through the services of a third party.

The intent of this transaction is to provide the buyer with up-to-date information concerning the availability of the trade item and to provide a standardized method of identifying the trade item. The standard method for trade item identification within the retail industry is UCC-12. It is highly recommended that prior to undertaking the assignment of UCC-12 codes, a copy of the Trade Item Identification and Communication and the National Retail Federation Standard Color and Size Code Handbook be obtained and understood.

All suppliers routinely add or discontinue products. Utilization of the **Price/Sales Catalog (832)** provides established procedures for how this information is communicated to the electronic catalog.

Most suppliers have a system that maintains trade item information. However, most of the effort expended in creating a **Price/Sales Catalog (832)** will be in establishing the correct UCC-12 codes for the trade items and creating the procedures to maintain the catalog.

Inventory Inquiry/Advice (846)

The intent of this transaction is for the supplier or third party facility to communicate inventory levels to the buyer. There are significant advantages to be realized by both parties depending on the scope of the implementation.

From the buyer's perspective, this transaction is viewed as a notification of the supplier's inventory position. From this information, significant savings can be passed on from the supplier to the buyer in the form of special buys of supplier overstocks and close-outs. From a supplier's perspective, the transaction provides a means of communicating special situations that arise regarding their inventory position.

For third party facilities, the transaction is used to communicate inventory levels to the depository (owner of the goods).

Purchase Order (850)

All the customary information included on a paper purchase order can be included in an EDI purchase order, including terms, shipping instructions and other related information. Buyers try to establish defaults for the many variable items on their purchase orders, so only the minimum ordering information is transmitted on each EDI purchase order.

Within VICS EDI, two distinct methods for ordering goods have been defined. The first, a basic purchase order, is the ordering of goods separately for each ship-to location, i.e., one ship-to location per purchase order. The second, a spreadsheet purchase order, is utilized to order the same item for multiple locations, i.e., a specific quantity of one trade item is distributed to a variety of locations. The actual quantity for each location may not be the same. When using the spreadsheet purchase order, a basic order may need to be created within the supplier's application, to allow for the picking and packing of product by location.

The assumption that electronic purchase orders will automatically flow from the translation process into the order process is predicated on the ability to automate all of the current manual functions performed by the order entry staff, e.g., credit checking, account type classification and buyer sortation.

Product Activity Data (852)

This transaction provides a method for determining rate of re-supply and automation of the replenishment cycle. This transaction is used by the buyer to report inventory movement through sales activities and transfer of inventories while providing the capability to report current inventory counts.

The primary purpose of implementing this document is to move to automated replenishment of the buyer's inventory. In order to accomplish this objective, systems must be in place to monitor the stocking levels of the buyer, apply the net result of processing the information from the **Product Activity Data (852)** and then make decisions based on the results when applied to the model stock.

These calculations may result in the generation of a reverse purchase order. This information will be sent to the buyer using a **Purchase Order Acknowledgment (855)** to inform the buyer of trade items ordered and scheduled to ship on their behalf.

Routing and Carrier Instructions (853)

To further aid in automating the supplier's routing and shipping systems, this transaction provides the buyer with the capability to transmit detailed routing and carrier information pertinent to a route. For each origin/destination pair, the buyer specifies the carrier or delivery service to be used when the supplier is shipping from point 'A' (ship from) to point 'B' (ship to) for a specified weight range. The supplier can then maintain an electronic routing system which weighs each shipment and selects the correct carrier based upon the weight break for the origin/destination points. Without electronic routing, the supplier can view the guide for manual carrier selection.

Please note that these routing guidelines are the default routing to be used and are always superseded by any routing information that accompanies a buyer's purchase order.

Purchase Order Acknowledgment (855)

This transaction was originally designed to serve as a response and confirmation of a **Purchase Order (850)**. However, with the advent of automatic replenishment systems and the necessary documents to implement them, this transaction also serves as a vehicle for notifying a buyer of a supplier's intent to replenish the buyer's inventory that was initiated by model stock calculations derived from the supplier's receipt of the **Product Activity Data (852)**.

When used in this manner, also referred to as a reverse purchase order, this document acts as a notification of intent to commit inventory at the supplier's location and to ship it to the buyer's designated location.

When implementing this document, it is necessary to determine how and when the **Purchase Order Acknowledgment (855)** is "accepted" by the buyer.

Ship Notice/Manifest (856)

This transaction may replace the need for a shipment manifest from either the transportation company involved or the supplier. The **Ship Notice/Manifest (856)** contains all pertinent shipment data which can include container serial numbers and detailed container information. The advantages to the buyer are found in the degree of automation used in handling this transaction. If all containers are serialized and their contents are known to the receiving system, the buyer's receiving department can scan these containers and automatically route them to a door location in the warehouse for shipment to a store location. This same function can provide the data for updating inventory files and model stock systems.

When a third party facility is used, the shipper of the goods sends the **Ship Notice/Manifest (856)** to the buyer and the third party facility. Once the buyer has authorized the third party facility to ship the goods, the third party sends this transaction to the buyer.

When using this transaction to automate the receiving process, the **Ship Notice/Manifest (856)** must arrive prior to the physical shipment. When the buyer is in close proximity to the shipping point, it is prudent for both parties to investigate the ability to transmit this transaction as it is created, or receive it upon transmission. This process is referred to as event driven EDI.

From a functional perspective, the implementation of the **Ship Notice/Manifest (856)** may require changes in the procedures and work flow in the supplier's packing and distribution departments. Due to the hierarchical structure of this document, consult the *VICS EDI Ship/Notice Manifest Guidelines (856)* for further clarification.

Implementation of the SSCC and the generation of the shipping container label may require additional hardware and software. The SSCC provides a unique identifier for each shipping container transported between the supplier and the buyer. When used in conjunction with the **Ship Notice/Manifest (856)** and U.P.C. item identification, the SSCC supports the functional areas of inventory management, logistics, and finance. For further details, consult the *Application Standard for Shipping Container Codes*, available from the UCC.

Purchase Order Change Request - Buyer Initiated (860)

This transaction set is used to change the contents of a previously transmitted purchase order. The specifications for this document stipulate that a buyer may only change information that is not considered "key data". It is assumed the supplier will make the requested changes to the purchase order, therefore, a **Purchase Order Acknowledgment (855)** is not required. It is also important that if buyers are involved in a quick response implementation, the use of this transaction is extremely limited if not precluded.

Edits used in the automated processing of purchase orders should also be applied against the process of the purchase order change. It would be prudent on the part of the supplier to append audit information to the original purchase order to provide for future information regarding the date and nature of the change.

This transaction can prove to be difficult to implement in systems where the supplier may "split" the original purchase order into multiple purchase orders in order to route the demand for certain items to another manufacturing or distribution location. Care must also be exercised to insure that changes to the purchase order are properly communicated to other interested parties such as, manufacturing, shop floor, customer service and to the account representative.

Receiving Advice/Acceptance Certificate (861)

The **Receiving Advice/Acceptance Certificate (861)** provides the supplier with actual receiving information. This information is used as input to their model stock inventory replenishment systems to relieve in-transit quantities and update perpetual inventory quantities maintained on behalf of their customers, i.e., the buying party.

For third party receiving, the third party facility uses this transaction to report receipts to the depositor (owner of the goods). The third party reports both the receipt and condition of goods using either the carton number or trade item identification number, but not both due to document structure.

Text Message (864)

The **Text Message (864)** provides the capability to transmit human-readable text. It is not intended for use as a replacement for an existing EDI document, such as, canceling or modifying a purchase order. This document is not intended to be utilized as a substitution for e-mail.

The use of this document may substantially expand the distribution workload of the receiver. It is important that specific internal routing information is communicated to expedite delivery to the proper party. The **Text Message (864)** should not be used to communicate “urgent” business information.

Order Status Inquiry (869)

This transaction is used by buying organizations to request the status of a purchase order in the supplier’s system. The information requested is used by the buyer to determine if the order will be shipped complete; determine expected date of arrival; pre-stage operations in the warehouse that may have to be performed upon arrival of the order; or, perhaps order merchandise from another supplier if the order will be shipped short.

Information specified in the **Order Status Inquiry (869)** can pertain to the entire purchase order, specific line items or selected products and services. The nature of this transaction requires that a response be time sensitive.

Order Status Report (870)

The purpose of this transaction set is to respond to an **Order Status Inquiry (869)** transaction sent by the buyer or it can be systematically generated by the supplier based on predefined conditions between trading partners. This transaction can be used to report the current status of an entire purchase order or selected line items on a purchase order. The report format allows for the inclusion of reasons relative to the status.

Direct Store Delivery Summary Information (882)

The **Direct Store Delivery Summary Information (882)** is used by the supplier to invoice the buyer for goods that were replenished directly by the supplier. In this scenario the buyer’s system must be able to process invoices that do not have a corresponding purchase order.

Promotion Announcement (889)

Along with the trade item setup information provided in the **Price/Sales Catalog (832)**, a supplier can send the **Promotion Announcement (889)** to announce a promotion to the retailer. This may include special prices being offered during a specific time period that could have conditions and restrictions associated with the promotion.

Warehouse Shipping Order (940)

The **Warehouse Shipping Order (940)** is used by the depositor (owner of the goods) to provide shipping information to a third party warehouse. The **Warehouse Shipping Order (940)** assumes the third party warehouse maintains most of the general data about the sender and the sender’s locations (stores and distribution centers) within their systems. This

data includes ship to, mark for, terms, etc., for each of the sender's locations. Therefore, for each ship-to location, the third party warehouse knows where to send the goods, and what terms are to be applied. The sender only needs to inform the third party warehouse of the ship-to location, when delivery is expected, and what goods to ship.

Warehouse Inventory Adjustment Advice (947)

The **Warehouse Inventory Adjustment Advice (947)** is used by the third party warehouse to notify the depositor (owner of the goods) of quantity or status changes to inventory. Product inventory adjustments are reported at the trade item level to increase or decrease the amount of product in inventory.

This transaction set is used to report quantity changes, convey product availability, specify and recoup product damage and indicate problems in locating product. These adjustments may be for several reasons including damage in facility, quality issues, product expiration, product recall, and inspection by customs officials. The adjustments may be temporary or permanent.

Warehouse Inventory Adjustment Advice (947) Benefits

- Provides accurate data to the depositor
- Communicates inventory changes
- Substantially reduces paper flow
- Re-synchronizes totals after a physical inventory is conducted

Response to a Load Tender (990)

Carriers may send this transaction in response to a **Motor Carrier Load Tender (204)**, when that transaction is used as a shipment tender. If the carrier is accepting the tender, they may also use this transaction to provide any conditions of acceptance. If the tender is being declined, this transaction is used to let the receiver know the reasons for declining.

Functional Acknowledgment (997)

This transaction set is bi-directional. The **Functional Acknowledgment (997)** identifies the specific transaction it is verifying, and allows the sender to indicate whether that transaction was syntactically correct or incorrect. For example, a supplier would send a **Functional Acknowledgment (997)** upon receipt of a **Purchase Order (850)** to indicate whether the **Purchase Order (850)** is syntactically correct or incorrect. In most implementations, the **Functional Acknowledgment (997)** is automatically created by the trading partner's translation software. Failure to receive a **Functional Acknowledgment (997)** in a timely manner can indicate a problem or failure at some point along the communications path, and normally requires further research.

IMPLICATIONS OF INTERNAL APPLICATIONS

Internal software applications vary significantly from company to company, therefore specific interface guidelines cannot be given. However, interface or bridge programs must be developed at both ends of an information exchange in order to provide data to an application or to extract data from an application. To develop the requirements for an interface or bridge program, companies must compare the data available in their internal systems with the data defined in the transactions to be used. This procedure is known as data mapping. The primary step in data mapping is to determine if internal systems and data files contain the

information required to format a valid VICS EDI transaction. If any mandatory data fields are not available, it will be necessary to modify internal application systems to provide that data. Likewise, it may be necessary to build cross-reference facilities in order to translate from internal application codes to those used by VICS EDI.

Testing

Once all pre-implementation tasks have been completed, it is necessary to test prior to actual startup or when changing application systems. Testing between trading partners should validate the internal software readiness, effectiveness of EDI communications links, and the exchange of test transactions to verify data completeness, accuracy and usability.

Interface Software Testing

The time and effort involved in testing will depend on the number of programs required to interface with the translation software, and whether the translation software is developed internally, purchased or leased from a commercial software publisher, or provided by a third party network. Software that is developed internally must be fully tested using customary testing tools and techniques. For commercially obtained translation software, the software vendor usually provides some support in the installation and testing of the software, but specific testing with the interface software is an internal responsibility. For situations in which the third-party network provides translation services, internal staff must work with the third-party network to validate the accuracy of translation to or from internal formats.

Communications Testing

Whether a third-party VAN or a direct connection is used, there are certain test procedures to follow to ensure accurate and complete transmission, and to validate pickup and delivery procedures and timing. Trading partners, and when appropriate, third-party service providers, should work directly with their clients to plan, schedule and perform the required testing. Transmission of EDI data should be monitored on a regular basis to verify the effectiveness of the communication links with trading partners.

System Testing With Partner

A complete system test with a company's initial trading partner verifies the completeness and accuracy of the exchange of data. It determines compliance with any unique conditions that have been mutually agreed upon by the partners.

From a technical standpoint, the purpose of the complete system test is to verify the following capabilities:

- The ability to send and receive transmissions to and from the trading partner
- The translation of documents to and from VICS EDI formats
- The ability to process the output from the translation process
- The generation of the acknowledgment
- The integrity of the data received from the EDI transaction sets
- The appropriate generation and reconciliation of functional acknowledgment

Some VICS EDI companies have found it useful to meet with their initial trading partner prior to system testing. Such meetings typically include representatives from merchandising/sales, accounting, customer service, data processing, and other functions

involved in the VICS EDI project effort. This meeting can assure that all aspects of the test are covered. Other VICS EDI companies have found it sufficient to plan the testing by telephone, rather than with an actual meeting. After initial implementation, and when expanding to additional trading partners, many companies adopt this less formal approach.

INITIAL IMPLEMENTATION AND START-UP

Once all testing procedures and internal education have been completed, actual startup can take place. Initial implementation almost always involves parallel processing. This means that paper documents, facsimilies, or other manual methods of information exchange are used as a backup to the VICS EDI transmissions, which function as the actual business transactions.

When companies are satisfied with both the timing and the accuracy of the VICS EDI data, and when the personnel involved are comfortable working in a paperless environment, implementation can proceed to true production status. This implies that manual methods of information exchange are no longer used, and that full reliance is placed on the VICS EDI exchanges. The transition time from a parallel mode to a production mode varies widely, ranging from a matter of a few days to several months. The timing typically depends on the quality and completeness of the pre-implementation effort, and the extent to which product files have been synchronized prior to beginning parallel operation.

While the length of time required to achieve production status may vary from user to user, it is important to establish a specific target date to “go live” with new trading partners. Lack of such a timetable can result in a lengthy period of parallel processing, which delays the realization of benefits and hurts the credibility of a company's VICS EDI program.

POST-IMPLEMENTATION CONSIDERATIONS

Once initial implementation has been successfully achieved, there are three major ongoing considerations.

1. Expanding VICS EDI usage to additional trading partners
2. Enlarging VICS EDI processing by implementing additional transaction sets
3. Keeping systems current with changes in the standard and with its use in the industry

The deciding issue is what makes the most business sense for the company

EXPANSION TO ADDITIONAL PARTNERS

The speed at which expansion to additional partners can be achieved depends on how well internal systems have been set up to handle trading partner requirements. If few or no system changes are required to add a new trading partner, startup can occur quickly. If major system changes are required to add a new partner, startup will take much longer. When surveying trading partner requirements and capabilities in the early stages of the project, the VICS EDI development team needs to examine processing variations. As much as possible, initial procedures should be established which can subsequently accommodate different business relationships. While VICS EDI allows companies to communicate data, it does not standardize internal operations and applications, nor does it standardize specific business relationships between companies.

Since many companies survey current trading partners as part of their VICS EDI implementation plan, expansion to additional partners flows from their initial plan. In order to select trading partners purposefully, this initial plan should factor in high volume trading

partners which would allow the company to achieve break-even with the fewest number of partners. It should also select as potential partners companies that have an established track record in EDI to enable a smooth transition. EDI User Group meetings and seminars sponsored by the UCC, as well as other industry forums, may be used to network with potential trading partners.

EXPANSION TO ADDITIONAL TRANSACTIONS

When companies first implement VICS EDI, they typically spend a period of time expanding processing to new trading partners, gaining significant experience in the process. At some point, however, companies develop additional transaction sets to reap the benefits from these new information exchanges.

Expansion to new transaction sets requires many of the same steps as an initial VICS EDI implementation. However, since a partner base and the VICS EDI infrastructure already exist, the process is somewhat simplified. Companies should consider the following, whether expanding EDI transaction sets or adding partners to existing sets.

- Survey your existing and potential trading partners to find out which transaction sets they can use. (Surveys should be conducted regularly since trading partners' capabilities are constantly changing.)
- Attend EDI User Group meetings and seminars to determine industry directions and trends.

KEEPING CURRENT WITH THE STANDARD

EDI systems are not classic data processing systems that become relatively stable once they have been fully integrated and tuned. The VICS EDI environment is dynamic. EDI systems continue to change and evolve: new trading partners are added, internal systems, which interface with VICS EDI are enhanced, and the standard matures. The nature of VICS EDI requires ongoing involvement by most of the initial project team. Some key areas for companies to consider are the following:

Changes to the Standard

The Standards Management Process (SMP) has responsibility for both maintaining VICS EDI as a useful and viable business tool, and for keeping the standard responsive to technological and business changes. In that role, it is the clearinghouse of all additions and changes to the published message and communication standard. Companies can submit standard change requests to the SMP change management system through the UCC. Such requests usually are made when trading partners encounter a business need that is not handled by the existing standard. Standard changes can range from simple code changes to the creation of new transaction sets.

Moving to New Versions of the Standard

New versions of the standard are published every May, for implementation in November of that year. These new versions contain the evolving standards which are necessary to provide enhanced functionality or address specific business needs. At the implementation date, VICS EDI participants may send either the old or new version of the standard, but they must be able to receive both the old and the new versions. By convention, the old version of the standard is dropped twelve months after the new standard becomes effective. This

allows companies a transition period to become fully operational with the new standard. Exchanges of versions of the standard outside this convention are considered proprietary. It is vital to the continuing viability of VICS EDI that all companies comply with this version implementation timing convention.

Existing Partner Communications

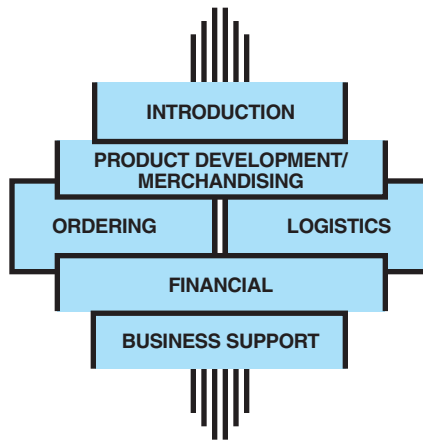
Implementation of VICS EDI with a trading partner does not eliminate the need for continued contact with your trading partner. It is important to monitor each partner's plans and status relative to version change timing in order to avoid confusion and errors when a new version is implemented. In addition, if new version changes materially affect the current exchange of data, it is important to initiate partner-to-partner communications and technical systems planning as early as possible. Ongoing contact with trading partners should also include inquiry into the implementation of new transactions sets.

Uniform Code Council Sponsored Meetings

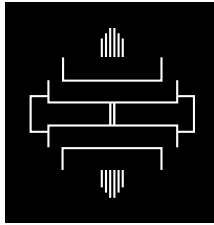
The UCC has established a global leadership role in the education and dissemination of information dealing with EDI, and is committed to keeping professionals abreast of all the latest innovations in electronic commerce technology.

The UCC UConnect Conference has been designed to reach the entire supply chain, and cover advanced subject matters pertaining to implementation of standards of the EAN.UCC system. Attendees will learn how to reap the exponential benefits of integrating EC and AIDC within their business processes. It also serves as an excellent opportunity for users to renew contracts with existing trading partners and establish new trading partnerships. One of the many benefits of being a member of the UCC is the discounted prices for UCC products and services, including our UConnect Conference.

For additional information, please contact the Uniform Code Council at (937) 435-3870 or visit our Web Site at <http://www.uc-council.org>.



IMPORT



IMPORT

BUSINESS FLOW FOR NORTH AMERICAN BUSINESS PARTNERS

INTRODUCTION

This guideline was developed through the efforts of the VICS EDI Import Working Task Group. The task group was composed of retailers, importers, consolidators, de-consolidators and manufacturers. This guideline represents the high-level perspective (process and transaction set usage) for importation only. The specific data requirements for some documents referenced in this section are still a work in process.

The import process typically includes the responsibilities of the procurement, shipping, and receiving of merchandise. The business flow described in this section provides a guideline for the communication of import information between business partners based in the United States, Canada and Mexico.

The business flow provides a framework for describing the import process and recommends specific transaction set usage, which encompasses the international movement of goods to the point of domestic landing.

At this time, the activities of transportation carriers, customs and financial parties are not addressed.

A glossary of common importing terms is included in these guidelines.

PARTNER DEFINITIONS

Supplier/Manufacturer	Entity which fulfills the purchase order, hereafter referred to as supplier.
Agent/Broker	Third-party entity designated as the authorized representative of either the Importer or the supplier involved in the procurement process, hereafter referred to as agent.
Retailer/Importer	Entity which originates the purchase order, hereafter referred to as importer.
Consolidator/ Deconsolidator	Third-party entity designated as the authorized representative of either an importer or a supplier involved in the shipping and receiving process.

PROCESS DEFINITIONS

Procurement	Used by an importer and/or an agent for the acquisition of needed products or services by the importer.
Shipping	All activities related to the transportation of goods from a supplier to the point of domestic landing.
Receiving	Receipt of goods at the point of domestic landing.

PROCUREMENT BUSINESS PROCESS

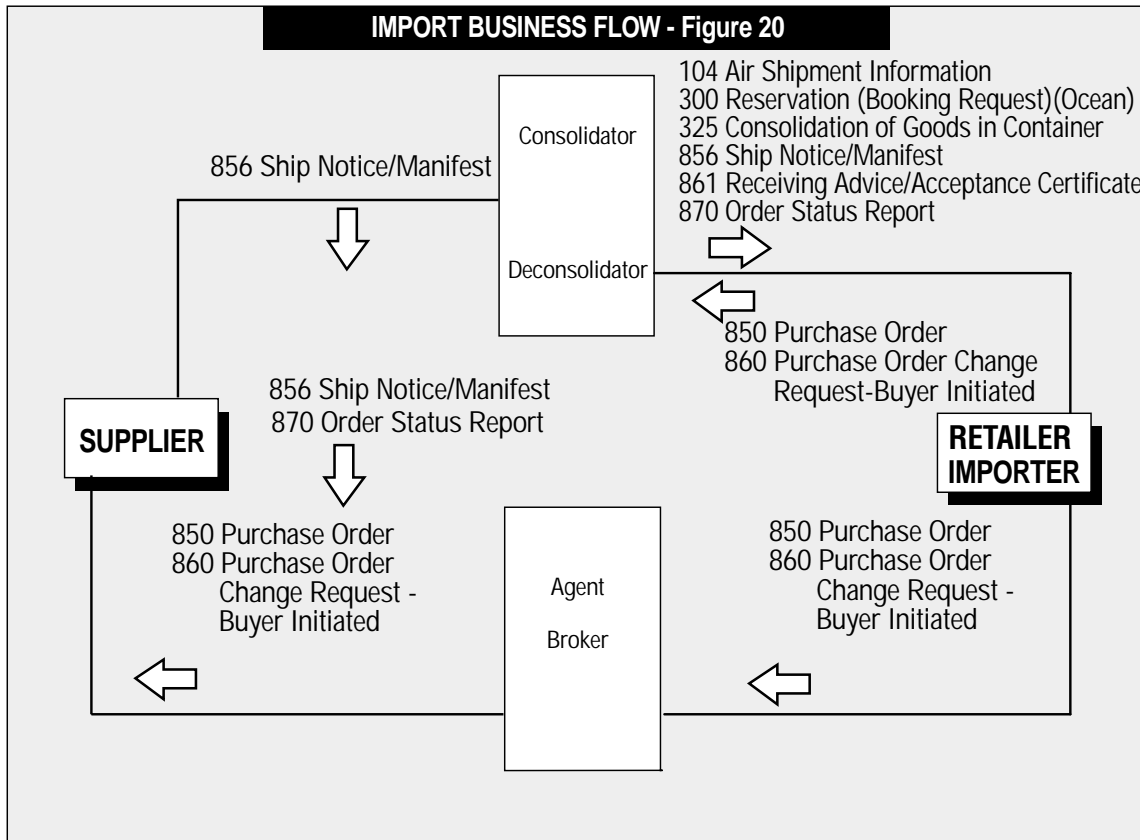
Procurement is the acquisition of needed products or services by the importer. This includes the notification of peripheral parties involved in the process. The business events included with the procurement are:

Purchase Order	Used by an importer to notify a broker, manufacturer or supplier of the final quantities, items, and other details of the goods to be purchased. This may include the communication of packing requirements.
Change Management	Used by an importer to notify a broker, manufacturer, or supplier of any changes required to the purchase order.

SHIPMENT BUSINESS PROCESS

Shipment is the planning, preparation and actual movement of goods from origin to final destination. The business events included with shipment are:

Proposed Shipment Advice	Used by a consolidator to notify an importer of a proposed shipment.
Shipment Booking	Reserving space with a carrier for shipment, which may include shipping instructions.
Cargo Receipt Advice	Used by a consolidator/de-consolidator to notify an importer of receipt of goods.
Pre-shipment advice	Used by a consolidator to notify an importer and/or agent of preshipment information. This may or may not include detailed container and item information.
Shipment/Manifest Advice	Process of notifying consolidator/de-consolidator, importer, or agent of actual details of the shipment in-transit.



TRANSACTION RELATIONSHIPS

The importer originates the **Purchase Order (850)** and sends it to the supplier, agent, broker, consolidator, or de-consolidator to provide item detail information of goods being purchased. The **Purchase Order (850)** may be used to communicate customs requirements (Harmonized Tariff Schedule) and document requirements (i.e., country of origin, child labor, prison labor, endangered species, etc.). After the **Purchase Order (850)**, the **Purchase Order Change Request - Buyer Initiated (860)** can be used to communicate changes to the importer, and to provide the trade items, quantities, distribution, dates, and detailed packaging information.

The supplier or consolidator uses the **Order Status Report (870)** to notify the importer of proposed shipment information, rates, weights and other shipment specific details. Once the importer has authorized the shipment, the consolidator can use the **Reservation (Booking Request) (300)** or **Air Shipment Information (104)** to reserve space for the shipment with the carrier, and communicate that reservation to the importer.

After the supplier turns over goods to the consolidator, carrier or pier, the **Receiving Advice/Acceptance Certificate (861)** is used to notify the importer of cargo receipt at the consolidator/third-party location. Prior to the actual shipment, the consolidator/de-consolidator communicates pre-shipment information with specific cargo details to the importer using the **Order Status Report (870)**.

During this process there are some customs activities and final loading/sealing of the container/truck. The **Ship Notice/Manifest (856)** or **Consolidation of Goods in Container (325)** can be used as a shipment advice from the consolidator to the importer, retailer, de-consolidator, or other identified parties once the goods have been shipped.

TRANSACTION DESCRIPTIONS

Air Shipment Information (104)

The **Air Shipment Information (104)** is used to provide the sender with the capability to transmit detailed bill of lading and rating information pertinent to an air carrier shipment. The booking activity may also be used to inform pertinent parties. Implementation guidelines for this transaction set are not published in the *VICS EDI Retail Industry Conventions and Implementation Guidelines for EDI*.

Air Shipment Information (104) Benefits

- Reduced data entry
- Provides timely air shipment information

Reservation (Booking Request) (Ocean) (300)

The **Reservation (Booking Request) (Ocean) (300)** is used to provide the sender with the capability to reserve space, containers and equipment for transport by an ocean vessel. The booking request may also be used to inform pertinent parties. Implementation guidelines for this transaction set are published in the *Ocean Transportation Industry Guide to Electronic Data Interchange*, and are available from Information Systems Agreement (ISA).

Reservation (Booking Request) (Ocean) (300) Benefits

- Detailed shipment information for an ocean vessel
- Reduced data entry
- Provides timely communication of vessel reservation information

Consolidation of Goods in Container (325)

The **Consolidation of Goods in Container (325)** is used to provide information related to the goods loaded into a container. It is sent by a consolidator to all parties needing container information. Implementation guidelines for this transaction set are published in the *Ocean Transportation Industry Guide to Electronic Data Interchange*, and are available from Information Systems Agreement (ISA).

Consolidation of Goods in Container (325) Benefits

- Detailed item level information within a container
- Ability to report on multiple bills of lading

Purchase Order (850)

The **Purchase Order (850)** is used in the acquisition of needed products or services. There can only be one iteration of the purchase order in the import environment. However, the blanket and release purchase order model is still applicable for the imports environment.

Purchase Order (850) Benefits

- Provides an automated validation tool for international consolidators/de-consolidators

Ship Notice/Manifest (856)

The **Ship Notice/Manifest (856)** is used to provide information on the goods shipped. It is sent by a consolidator to all parties needing shipment information.

Ship Notice/Manifest (856) Benefits

- Detailed trade item level information for a shipment
- Supports multi-modal shipments

Purchase Order Change Request - Buyer Initiated (860)

The **Purchase Order Change Request - Buyer Initiated (860)** is used to request a change to a previous transmitted purchase order. The purchase order change should be received within the previously agreed upon time frame to allow the receiver to react to the change.

Purchase Order Change Request - Buyer Initiated (860) Benefits

- Synchronizes the purchase order within the buyer's and supplier's systems. This reduces the need for financial adjustments during invoice reconciliation and enables the **Ship Notice/Manifest (856)** to be used for purchase order quantity matching.

Receiving Advice/Acceptance Certificate (861)

The **Receiving Advice/Acceptance Certificate (861)** is used as a turnover document after the supplier delivers goods to the consolidator, carrier, or pier. This also is used to communicate the cargo receipt.

Receiving Advice/Acceptance Certificate (861) Benefits

- Provides status information for goods movement
- Allows for foreign pre-shipment consolidation
- Allows for the building of shipment data history

Order Status Report (870)

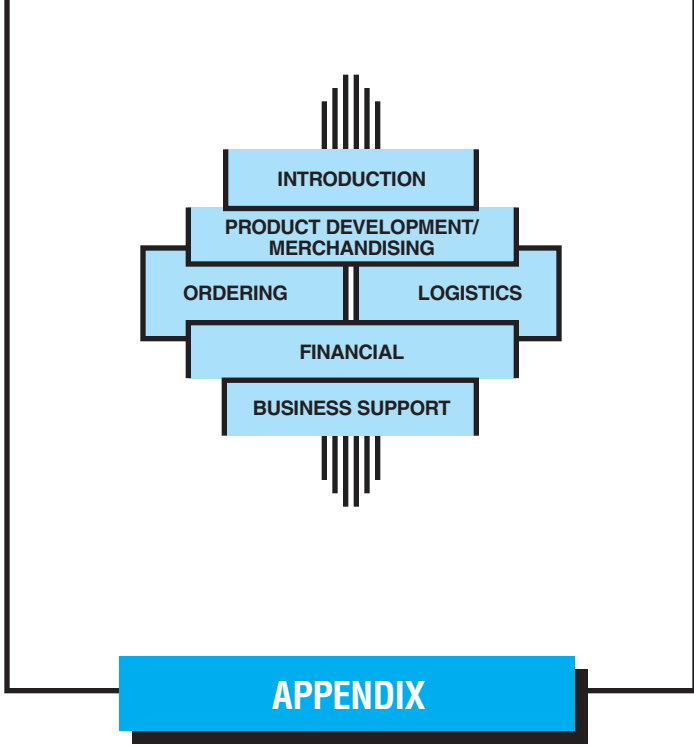
The **Order Status Report (870)** is used to update the supplier's projected shipment or delivery information. The document is intended to be used as a proposed and pre-shipment advice before the order becomes an actual shipment.

Order Status Report (870) Benefits

- Provides projected shipment information before the order is actually shipped
- The importer can use this information for exception and change management

SUMMARY

These guidelines address the high-level needs of importers as defined herein. Additional information is available in the VICS EDI. Business partners trading outside the model can obtain additional guidance by contacting the UCC.



KEY SUPPORTING DOCUMENTS

Uniform Code Council, Inc., EDI Manuals and Related Publications

Application Standard for Shipping Container Codes

Financial EDI Guidelines

Quality Specification for the U.P.C. Printed Symbol ANSI/UCC5-2000; Quality Trade Item Identification and Communications Guidelines

(for General Merchandise and Apparel)

UCC-12 (U.P.C.) Guidelines

Guidelines for Supply Chain Identification

Apparel Guidelines: Format and Symbol Placement

UCC Symbol Placement Guidelines

ANSI/UCC1: Symbol Specification Manual

VICS EDI 856 Ship/Notice Manifest Guideline

VICS EDI Business Examples

VICS EDI Retail Industry Conventions and Implementation Guidelines for EDI

Other Related Publications

Motor Carrier Industry Guide to Electronic Data Interchange Implementation and Conventions

National Retail Federation Standard Color and Size Code Handbook

Ocean Transportation Industry Guide to Electronic Data Interchange

Note: Contact any of the associations on the following page for information on ordering these and other publications.

TRADE ASSOCIATIONS

American Trucking Associations/Management Systems Council
2200 Mill Road
Alexandria, VA 22314-4677
(703) 838-1721
(703) 836-0751 fax
<http://www.truckline.com/>

Information Systems Agreement (ISA)
2340 Marinship Way
Sausalito, CA 94965
(415) 289-0387
(415) 289-0385 fax
<http://www.isaweb.com/isa/>

National Retail Federation
325 7th Street, NW
Suite 1000
Washington, DC 20004
(202) 783-7971
(800) 673-4692
(202) 737-2849 fax
<http://www.nrf.com>

Uniform Code Council, Inc.
Princeton Pike Corporate Center
1009 Lenox Drive, Suite 202
Lawrenceville, NJ 08648
(609) 620-0200
(609) 620-1200
<http://www.uc-council.org>

Uniform Code Council
7887 Washington Village Drive, Suite 300
Dayton, OH 45459-8605
(937) 435-3870
(937) 435-7317

VICS
1009 Lenox Drive, Suite 202
Lawrenceville, NJ 08648-2313
(609) 620-0200
(609) 620-1200 fax
<http://www.vics.org>

GLOSSARY

-A-

Accredited Standards Committee, X12 (ASC X12)

Accredited Standards Committee X12. ASC X12 is responsible for developing American National Standards for EDI.

ANSI

American National Standards Institute

American Trucking Associations (ATA)

An industry organization, made of member transportation companies, that forwards the interests of these organizations as well as establishing the conventions between them. This includes EDI standards. Each of these standards must have been developed by an ANSI accredited committee and must be revisited by that committee within 5 years for update.

ANSI Standard

A document authorized by ANSI that has been approved through the consensus process of public announcement and renew.

Application Acknowledgment

A transaction set whose purpose is to respond to a transaction set which has been received and processed in an application program. The Purchase Order Acknowledgment Transaction Set (855) is an example of an application acknowledgment, used to respond to the Purchase Order Transaction Set (850). The Purchase Order Acknowledgment Transaction Set presents information, such as, whether the receiver can fulfill the order within the time frame established on the Purchase Order Transaction Set.

Authentication

A mechanism that allows the receiver of an electronic transmission to verify the sender and the integrity of the content of the transmission through the use of an electronic “key” or algorithm, which is shared by the trading partners. This is sometimes referred to as an electronic signature.

-B-

Batch EDI

A pre-scheduled transmission or receipt of EDI data.

Broker

A sales and marketing organization that directly represents a manufacturer's products to distributors providing services normally completed by the manufacturer's sales force.

Buyer

Defined as any entity which purchases goods or services, primarily a retailer.

-C-

Carrier

Any entity responsible for physically transporting goods from the supplier to the buyer.

Collaborative, Planning, Forecasting, and Replenishment (CPFR)

Collaborative Planning, Forecasting, and Replenishment (CPFR[®]) is a business model that allows activities among trading partners within the supply chain to be streamlined and integrated resulting in accurately-derived customer demand. CPFR[®] is a dynamic, non-traditional approach to supply-chain management that centers on the sharing of planning activities and data among trading partners. In the retail environment, CPFR[®]

activities include joint product/sales forecasting, as well as point-of-sale data sharing. Architectural implementations of this model, including company-to-company, hub-and-spoke and third-party intervention, allow flexibility and can be adapted to meet the specific needs of trading partner relationships. Typically, all parties involved in a CPFR initiative develop a comprehensive, front-end agreement to establish the goals and practices of participating trading partners.

Communication Protocol

Rules or specifications allowing computers to communicate with each other.

Communication System

Computer programs and hardware which transmit information electronically.

Compliance Checking

A checking process that is used to ensure that EC transmission complies with ANSI ASC X12 syntax rules.

Composite Data Element

One or more component data elements delimited by sub element separators.

Consignee

Defined as any entity to whom goods have been delivered, assigned, or entrusted to.

Cross Dock

A warehouse distribution practice where received finished goods are immediately transferred, upon receipt, on an outbound shipment to the next distribution point, normally the store. These goods are identified through advance shipment notification and specific product labeling and will not be transferred into the receiver's warehouse inventory.

Customer

An individual or firm who is purchasing the goods or services.

-D-

Data Element

The basic units of information in the EDI standards, containing a set of values that represent a singular fact. They may be single character codes, literal descriptions, or numeric values.

Data Element Length

This is the range, minimum to maximum, of the number of character positions available to represent the value of a data element. A data element may be of variable length with range from minimum to maximum, or it may be of fixed length in which the minimum is equal to the maximum.

Data Element Reference Number

Reference number assigned to each data element as a unique identifier.

Data Element Requirement Designator

A code defining the need for a data element value to appear in the segment if the segment is transmitted. The codes are mandatory (M), optional (O), or conditional (C).

Data Element Separator

A unique character preceding each data element that is used to delimit data elements within a segment.

Data Element Type

A data element may be one of seven types: numeric, decimal, identifier, string, date, time, or binary.

Data Interchange Standards Association (DISA)

A nonprofit organization funded by ANSI ASC X12 that serves as the Secretariat for X12.

Data Mapping

Relationship between the X12 message syntax and the user's data.

Direct Transmission

The exchange of data from the computer of the sending party directly to the computer of the receiving party. A third party value added service is not used in a direct transmission.

Distributor

A retail sales entity selling finished goods to the consumer, or a wholesale entity selling finished goods to other retailers.

-E-**EANCOM**

The international *EDI* standard provided by *EAN International*, conforming to the UN/EDIFACT standard.

EAN International

EAN International, based in Brussels, Belgium, is an organisation of EAN member.

Electronic Commerce Council of Canada (ECCC)

The member organization that administers the EAN.UCC System in Canada. Organisations that jointly manage the EAN.UCC System with the UCC.

Electronic Data Interchange (EDI)

The computer-to-computer exchange of business information using a public standard, format.

EDIFACT (EDI For Administration, Commerce and Transport)

International EDI Standard, administered in US by DISA.

EDI-to-FAX

Process that can occur between an EDI capable partner and a non-EDI capable partner. EDI transmissions are sent by an EDI partner to a Service Bureau where the document is translated, formatted into an established business form, and then faxed to the receiving partner.

EDI Translation

The conversion of application data to and from the X12 standard format.

EDI Translator

Software that converts application information to and from an EDI transaction format.

E-form (EDI to E-forms)

A predetermined business document that can be sent directly into a PC application allowing the data to be loaded into a business application without manual intervention. In an EDI to E-forms process, EDI transmissions are sent by an EDI partner to a Service Bureau where the document is translated and sent in a predetermined format specified by the EDI partner.

Electronic Commerce

The conduct of business communications and management through electronic methods, such as electronic data interchange and automated data collection systems.

Electronic Funds Transfer (EFT)

A method for payment of monies owed in which the payer orders the bank to electronically debit the payer's account and forward credit information to electronically credit the payee's account.

Electronic Mailbox

A term used to refer to the place where an EDI transmission is stored for pickup or delivery within a third party service provider's system. Trading partners can also maintain mailboxes within their own domain.

Encryption

A process of transforming clear text data (data in its original, unencrypted form) into ciphertext (encrypted output of a cryptographic algorithm) for security or privacy.

Extranet

The portion of a company's internal, networked computer system (or an intranet) that is accessible by authorized business partners.

Evaluated Receipts Settlement (ERS)

Payment for product is based on receipts. The traditional invoice is eliminated (i.e. not sent to the trading partner). In this environment, the payment reference number is often the shipment reference number or the Bill of Lading from the electronic ship notice.

Event Driven EDI

The non-scheduled transmission of an EDI transaction set triggered by the occurrence of a business event.

-G-**Global Commerce Initiative (GCI)**

A group, composed of individuals from global retail and manufacturing companies, whose goal is to promote global supply chain efficiency and effectiveness, and consumer value created through a co-operation between manufacturers and retailers operating at the global level.

Global Location Number (GLN)

GLN is a shorthand term for the EAN-UCC Global Location Number using the EAN/UCC-13 Data Structure to identify physical, functional, or legal entities.

Global Trade Item Number (GTIN)

GTIN is a shorthand term for the EAN.UCC Global Trade Item Number. A GTIN may use the EAN/UCC-8, UCC-12, EAN/UCC-13, or EAN/UCC-14 Data Structure.

-I-**Industrial/Commercial EDI (I/C EDI)**

An EDI implementation guidelines which is used in the industrial/commercial industry by providers and users of raw materials, packaging materials and maintenance-repair-operations (MRO) products. It is a subset of the ANSI ASC X12 national standard.

Industry Implementation Guidelines

Defines how the ASC X12 standards are used by a specific industry.

Interconnect

A communication technique in which the sender's VAN physically connects to the destination VAN associated with the receiver to effect electronic transfer of trading partner data.

-L-

Loop

A group of semantically related segments; these segments may be either bounded or unbounded.

-M-

Mailbox Function

Computer system to deposit EDI documents into and extract from, with each trading partner having a unique address.

Max Use

Specifies the maximum number of times a segment can be used at a given location in a transaction set.

Message

Entire data stream including the outer envelope.

Message Standard or Syntax

Rules for the identification and arrangement of data into specific elements, segments, and transaction sets for electronic transmission.

-N-

Network Central

hub for EDI communications which provides computer power, communications facilities, and interfaces with trading partners.

-P-

Point-of-Sale Data (POS)

Point-of-Sale. Refers to the retail type checkout where EAN.UCC UPC Bar Code Symbols are normally scanned.

-Q-

Qualifier

A data element which identifies or defines a related element, set of elements, or a segment. The qualifier contains a code taken from a list of approved codes.

Quick Response

The ability of a supplier to deliver both the product and the information about the product to a desired location within a time frame as designated by the buyer.

-R-

Real-Time EDI

Interactive processing of EDI transactions between trading partners.

Receiver

The ultimate destination of a shipment is to the receiver - the buyer of the goods. The receiver may be a store, a Distribution Center, or even an end-customer.

Repeating Segment

A segment that may be used more than once at a given location in a transaction set. See Max Use.

Retailer

Business which buys for resale to the ultimate consumer.

-S-

SCC-14

The EAN.UCC Identification Number comprising 14 digits; used to identify trade items and Individual Assets.

Stock Keeping Unit

An individual color flavor, size, or pack of a product that requires a separate ID number to distinguish it from other items' (a measure of an item of merchandise for inventory management). In inventory control and identification systems, it represents the smallest unit for which sales and stock records are maintained.

Security

System screening which denies access to unauthorized users and protects data from unauthorized uses.

Segment

Segments consist of logically related data elements in a defined sequence. A data segment consists of a segment identifier, one or more data elements each preceded by an element separator, and ending with a segment terminator.

Segment Identifier

A unique identifier for a segment composed of a combination of two or three uppercase letters and digits. The segment identifier occupies the first character positions of the segment. The segment identifier is *not* a data element. The segment identifier in EDIFACT is a component data element - part of a composite data element consisting of a segment identifier and an explicit looping designator.

Segment Terminator

A unique character appearing at the end of a segment to indicate the termination of the segment.

Shipper

The party by whom the goods, cargo, or containers are sent. The physical despatch can be done by another party. Synonym: Consignor.

SIL — (see *Standard Interchange Language*)

Standard Carrier Alpha Code (SCAC)

A unique 2 to 4 letter alpha code used as an abbreviation or to identify a particular company for transportation data processing purposes.

Standard Interchange Language

A standard designed to exchange data between computers using different applications. SIL was designed to provide an efficient method for remotely manipulating a database without the need for multiple, proprietary interfaces. SIL is non-proprietary and utilizes a public domain standard.

Sub Element Separator

A unique character used to delimit the component data elements within a composite data element (only used in EDIFACT).

Supplier

Defined as any entity responsible for furnishing the buyer with goods and/or services purchased.

Syntax

The grammar or rules which define the structure of the EDI standards (e.g., the use of loops, qualifiers, etc.).

-T-

Telecommunications

Transmission of data between computer and/or remote devices using telephone lines.

Third Party Receiver

An independent organization that receives, ships, and manages inventory for another organization.

Trading Partner

A party to transactions in the supply chain, such as a supplier (seller) or a customer (buyer).

Transaction Set

A specific structure of electronic data segments, data elements, and codes that communicate information between systems. It replaces documents and other forms of business communications, such as purchase orders, invoices, or warehouse shipping orders. Each transaction set consists of the transaction set header and at least one segment before the transaction set trailer.

Transaction Set Area

Identifies a predefined area within a transaction set (header, detail, summary) containing segments and their various attributes.

Transaction Set Identifier

An identifier that uniquely identifies the transaction set. This identifier is the first data element of the transaction set header segment.

-U-

Uniform Code Council, Inc. (UCC)

The Uniform Code Council (UCC), based in the United States, is a membership organization that jointly manages the EAN.UCC System with EAN International. The UCC also administers the EAN.UCC System in the United States and Canada.

Uniform Communication Standard (UCS)

Food and Beverage Industry Conventions and Implementation Guidelines for EDI.

UCC-12 Identification Number

The EAN.UCC Identification Number comprising 12 digits used to identify trade items, locations, and special applications (e.g. coupons).

-V-

Value-Added-Network (VAN)

An EDI service provider that provides a communication link between companies to enable electronic exchange of business data/documents.

Vendor

Any individual, firm, or corporation from whom purchases are made.

Vendor Managed Inventory (VMI)

A business process wherein the supplier of a product manages the inventory of that product in a distributor's warehouse and replenishes the inventory based on consumption.

Version/Release

Identifies the publication of the standard being used for the generation or the interpretation of data in the X12 standard format. May be found in the Functional Group Header Segment (GS) and in the Interchange Control Header Segment (ISA). See Control Segment.

Voluntary Interindustry Commerce Standard Association (VICS)

A group dedicated to the adoption of bar coding and EDI in the department store/mass merchandise industries.

Voluntary Interindustry Commerce Standard (VICS EDI)

An association of volunteers from the retail industry whose mission is to take a global leadership role in the ongoing improvement of the flow of product and information about the product throughout the entire supply chain in the retail industry.

-X-

X12

The ANSI committee responsible for the development and maintenance of standards for Electronic Data Interchange (EDI).