Electronic Data Interchange (EDI) Overview

EDI: Inter-company computer to computer communication of data for standard business documents in a standard data format.

Benefits of EDI include

- Reduced costs and improved operating efficiency.
- Expediency in data/information communication.
- Minimize paper flows, and inherent costs and administration.
  RCA cut the cost per PO from $50-$75 to $3-$12.
- Minimize data entry redundancy and resulting data entry errors.
  70% of all computer output is re-entered as computer input.
- Lower inventory safety stock is required as a result of shortened order cycles.
  Georgia Power reduced inventory $2 million due to shorter lead times.
- Fewer material returns.
  Hewlett Packard experienced 35-40% reduction in returns with EDI.
- Increased cash flow due to reduced inventory and more timely invoicing and payment.
  Burlington Northern Railroad cut Accounts Payable processing costs 50%.
- Adjustment of payment terms due to EDI savings.
- Improved supplier service levels.
- Reduced lost transactions.
- Reduced billing disputes.
- Improved manufacturing process (JIT/SOA).
- Increased sales efficiency.

Timken’s EDI Objectives

- Timken expects to have all of its major suppliers communicating electronically.
- EDI is applicable/viable to business processes in which a high level of business transactions exists between partners.
- EDI automates time-consuming and costly business-to-business transactions.
- All Timken EDI documents will be communicated in pure ANSI X12 format.
- Where AIAG standards have not been developed, ANSI standards will be used.
- For Suppliers, EDI communication will only be accommodated through approved third party value added networks (VAN). Among other things, VANs provide communications services, store and forward mailboxes, security, and trading partner testing.
- Timken will utilize its VAN. In cases where Timken suppliers have retained other VANs, those VANs must interconnect with a Timken’s VAN.
- All EDI documents will be sent and received each business day.
- All EDI communication processes between Timken and its suppliers are controlled and coordinated through Corporate Purchasing Administration.
- The software and hardware contacts listed in this material are alternatives and suggestions only.

Purchasing Related EDI Communication Transaction Sets

- ANSI X12 820 Electronic Payment
- ANSI X12 850 Purchase Order
- ANSI X12 860 Purchase Order Change
- ANSI X12 855 Purchase Order Acknowledgment
- ANSI X12 865 Purchase Order Change Acknowledgment
- ANSI X12 830 Material Release
- ANSI X12 856 Advance Ship Notice
- ANSI X12 997 Functional Acknowledgment

Updated: 04/2010
Processes

- Throughout the day, electronic documents are created for all domestic plants. Multiple times each day Timken will transmit data to its VAN.
- When the information is received at the VAN, it is separated into pre-assigned mailboxes. Suppliers having multiple locations can have all transmissions sent to one mailbox or individual mailboxes for each of their locations.
- Suppliers may dial their VAN through password security and access their respective mailbox(es) to retrieve their documents.
- Data accumulates in chronological order within the respective supplier’s mailbox. This data is stored until the supplier retrieves the information.
- If for some reason, the data is “lost” during the retrieval process, most VANs can restore this data for up to 72 hours. (see Problem Resolution Procedure)
- Documents will be simultaneously created on paper and electronically for a period mutually agreed upon by Timken and the supplier.
- Functional Acknowledgments (997’s) are mandatory for all electronic documents.

Transmission Costs

Timken Costs: Timken pays the transmission costs for data transmitted between Timken and Timken’s VANs.

Supplier Costs: Each supplier will pay the transmission costs for data transmitted between the VAN and their own company. These charges are dependent upon the VAN vendor being used.

Some initial costs may include the following:

- Computer hardware
- Mainframe
- PC
- Computer software
- Programming to read documents
- Programming to interface your current computer system with information from EDI documents
- Personnel training in the EDI process
- Consulting services to help use EDI documents efficiently in your company

EDI Setup

- Software - See Software Guidelines and Software/Hardware Contacts
- Hardware - See Software/Hardware Contacts
- 3rd party - See Timken Approved Third Party Vendors
- Complete Supplier Add or Supplier Change from as appropriate and complete EDI related information.
- Contact your Timken purchasing agent regarding intent to use EDI.
- For ANSI X12 820 Electronic Payment, sign the Electronic Payment Agreement. For all other ANSI X12 EDI documents, sign the Timken Electronic Data Interchange Agreement.
- Complete the Timken’s EDI Registration Form(s) presented to you.
- Test the EDI transmissions with the third party vendor
- Run transmissions in parallel
- Go to full production mode

Updated: 04/2010
Contact List and Problem Resolution

Business Related Issues: Contact your Timken purchasing agent for questions regarding the business data and purchase orders being sent to you.

Specifications (Systems) Related: Contact Timken’s Information Systems EDI Coordinators for questions regarding Timken EDI specifications.
Christina Meyer 330-471-5603 christina.meyer@timken.com
Rick Petrovich 330-471-4759 rick.petrovich@timken.com

Communication Related: Contact your approved VAN for questions regarding transmissions. Many VANs can restore entire mailboxes, or particular interchanges sent to a mailbox, for approximately 3-5 business days after data is originally received. Contact the EDI software vendor as well if different logon scripts are needed to "re-receive".

Billing Related: Contact your VAN.

EDI Functionality: Contact your EDI software vendor for questions regarding how to create an acknowledgment, how to print/process incoming orders or releases, how to read/decipher the information on the screens.

To obtain copies of these AIAG or ANSI standards please call –
ANSI: EDI Support Services, Inc.
Chardon, OH 44024-0203
P. O. Box 203
800-334-4912; 216-974-7655 (Fax)

AIAG: Automotive Industry Action Group
Suite 200
26200 Lahser Road
Southfield, MI 48034
810-358-3570; 810-358-3253 (Fax)

NOTE: Timken requires its suppliers to return Functional Acknowledgments (transaction set 997) for all interchanges sent to them. If Timken does not receive a 997 for an interchange within one week of its being sent, checkups are automatically sent to the supplier to address.

Timken Approved VANs

Sterling Commerce Network Services
4600 Lakehurst Court
Dublin, OH 43017-0760
P. O. Box 7160
800-876-9627
Contact: Barb Hull 614-793-7134
Communication Problems: 800-678-7719
Billing Problems: 800-876-9627

General Electric Information Services, Inc
5005 Rockside Road, Suite 325
Independence, OH 44131
Contact: Jody Friedmann 216-520-5825
Communication Problems: 800-638-8730
Billing Problems: 800-340-5144

Suppliers may utilize other VANs. However in those cases, the supplier’s VANs must interconnect with a Timken approved VAN.

Updated: 04/2010
Software Guidelines for Selecting EDI Software

The Software should:

- Make it easy to pass the information to your computer or another program without having to re-key the information. This is called uploading and downloading. **WE RECOMMEND BUYING A SOFTWARE PACKAGE WITH THIS OPTION.**
- Provide the capability to create a master file of the part numbers, plan codes, product codes and other related information.
- Provide the ability to add, change and delete items in the files plus validate each item prior to each update.
- Have easy to use screens.
- Provide validation of entered information: allow only numbers to go in number fields, letters in letter fields, and check units of measure and year to date quantities, plus verify dates.
- Accumulate by destination location.
- Provide a list of documents sent and received.
- Receive and print messages sent while it is sending.
- The application software should be soft coded, table driven and accommodate separate formats for different trading partners.
- Allow the use of ANSI X12 EDI Standards.
- Communicate with a third party network

Also discuss with the software company
- Training, documentation, phone assistance and a self-teach package.
- Maintenance, (ex. new software release support, telephone support, table file maintenance support, new application requirements, additional products that can be added later.)
- Warranty period
- Hardware requirements. IBM, Honeywell, Compaq, Exxon, Altos?

EDI Software and Hardware Contracts

**GE Information Services**

5005 Rockside Road, Suite 325
Independence, OH 44131
800-334-5669
Contact: Mr. Jody Friedmann
216-520-5822
EDI Third Party Network, software and consulting services

**Sterling Commerce Network Services –**

4600 Lakehurst Court
Dublin, OH 43017
614-791-6431
Contact: Bruce Falb
EDI Third Party Network, software, education, database services & consulting
http://www.sterlingcommerce.com/

**Inovis (formerly Harbinger)**

1055 Lenox Park Blvd.
Atlanta, GA 30319
Contact: Michael Carter (404) 841-4334 ext. 3035
800-367-4272
EDI Third Party Network, software and consulting services
http://www.inovis.com/harbinger/

Helpful Links

http://www.etfinancial.com/ediglossary.htm
http://www.truecommerce.com/edi-glossary/