



Supply Chain Concept with eCommerce

The Northrop Grumman Industrial Operations commercial business unit is in B to B, Supply Chain Business. We have 150 customers and over 400 trading partners within our e-commerce network throughout North America.

Many companies still rely on printing, mailing, or faxing documents and notifications that could otherwise be transmitted electronically. The volumes of paper circulating are prone to loss, duplication, misinterpretation, a data entry nightmare and tend to be rampant with inaccuracies. In addition, the cost for storing and retrieving this information as well as delays in processing indirectly affect the bottom line. As the number of partners in the supply chain continues to grow so will the complexity of the relationships. The need to link these companies electronically will become a necessity.

But what type of e-communications is best? Most people would agree that email is a low cost and effective means to communicate with your partners. However, email servers have become more of a nuisance as inboxes become clogged with "spam" and other inconsequential messages. Auto faxing may reduce some initial clerical expense, but the recipient of the fax receives no such benefit. The concept of web portals has helped many companies enter the electronic age by entering information directly into their partners system. The disadvantage is that the more people in the supply chain, the more web portals you are forced to maintain. And all of these alternatives to the paper document still require a manual key entry of information into a clients system. This manual effort reduces productivity, contributes to data errors and delays to the product cycle.

The use of Electronic Data Interchange (EDI) communications can provide the missing link to enable the supply chain. The idea is to only manage exceptions between a computer to computer transaction interface. EDI is more commonplace when dealing with the large manufacturers and retailers, but few companies have the resources or know-how to even begin this endeavor. EDI comes in many forms, e.g. X12, EDIFACT, XML, flat file, and translating these formats can be very complex. In addition, the myriad of communication methods including Automobile Network Exchange (ANX), File Transfer Protocol (FTP), and Value-Added Networks (VANs) only complicates the issue and adds to the cost. To avoid devoting an entire department to this single task, outsourcing the EDI services can provide maximum benefits at a minimal cost. Our business unit provides complete EDI mapping for all formats, verify that the specifications are up to date and handle full trouble assistance to the end customer. All of this can be done without major revisions to your existing database structure or system architecture. The increasingly international nature of business, also makes EDI a sensible choice. E-mails and Faxes by their nature are language dependent. EDI by its nature is not.

The key to maximizing the benefits of EDI is to link the information to your current business model. If this is cost prohibitive or impractical, there are Enterprise Resource Planning (ERP) software packages like our OpenTrac Suite of products that incorporate transaction management capabilities that embrace the benefits of EDI. Advance shipping notices (ASNs), receipt, acknowledgments, and production reporting are a few of the most common transactions that are available. Technologically advanced software is internet based, modular in design and transaction driven so all business transactions may be shared with any internal system or external trading partners. Our internet based product provides a new dimension to e-communications as XML formats and web portal data exchanges are advances that make communication capabilities even more viable. Web e-communications can include a data base exchange of information by using Relational Database Management System (RDBMS) to RDBMS or XML/SOAP based Web-Services architecture; Data Exchange through an Applications Programming Interface (API). Web e-communications provide for CAD CAM image transfer as well as text communications. A web environment may provide a seamless transfer of information between trading partners or even vendor services such as an ERP system transferring information to a Logistics system provider to facilitate transportation automation. The web advantage also provides an entry of trading partners to for example correct errors if there is an error with EDI transaction delivery. The idea to manage by exception and requiring the trading partner to correct their own errors is a break through concept over requiring a trading partner to manually input all source document information in a customer's system through a web eform.

In the past only larger organizations with dedicated IT staffs and sophisticated communication networks could undertake this technically advanced approach to manage the supply chain. However our EDI service and web based ERP systems are maintained within an Application Service Provider (ASP) web environment allowing all trading partners to participate. The wide spread adoption of the internet both domestically and internationally makes EDI a feasible technology for companies of any size today. As more industries realize the benefits of computer to computer interface offers, the adoption of such e-communication tools will become more commonplace. Additionally, customers are becoming increasingly demanding regarding the information that they are provided. The sooner you can adapt to these technologies, the quicker you can communicate effectively with your trading partners and eliminate the waste and inaccuracies associated with traditional manual processes. The greatest benefits include; 1) improved employee productivity, 2) improved control over business transactions allowing for lower inventory levels and faster product cycles and 3) improved response time to customers.

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