

# XML – The Pipeline Perspective

## Usage

The use of XML in the pipeline sector will allow customers a new method of sending to, and receiving data from their transportation service provider. XML offers benefits such as the flexibility to integrate with existing systems and re-usability of information.

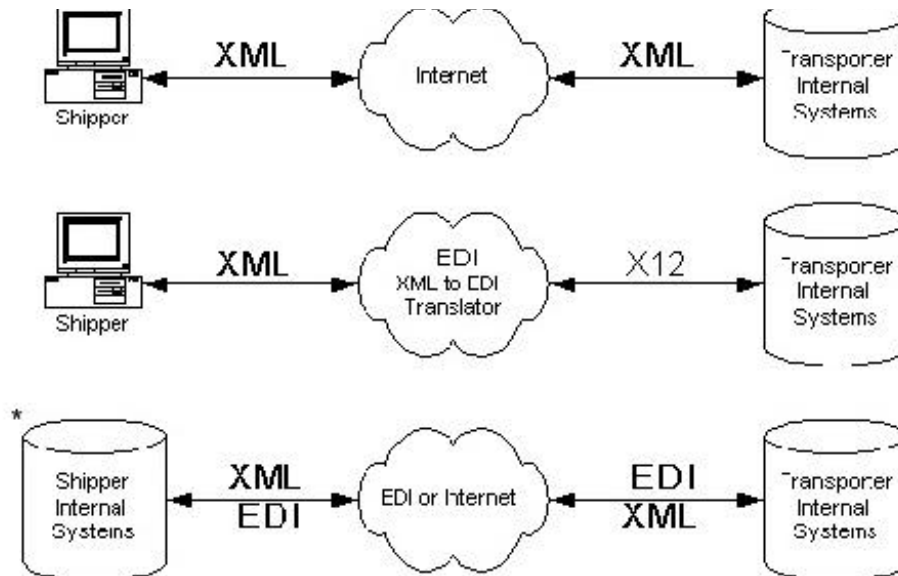
## Implementation

As discussed in other sections of this subcommittee document, XML is a method of “tagging” data to provide meaningful information *about* that data. From these tags, systems can be instructed to process this data on receipt provided that the receiving system is aware of the relevance of the tags. A very basic example of XML tagging of data is offered. In the example, an inventory transfer record is created for a laptop computer (example from Charles F. Goldfarb’s “XML In an Instant”):

### XML Tagged Data

```
<PRODUCT>  
  <MODEL>P266 Laptop</MODEL>  
  <DEALER>Friendly Computer Shop</DEALER>  
  <PRICE>1438</PRICE>  
</PRODUCT>
```

### Possible XML Physical Implementation Methods



\* in this example, either party could initiate and receive in XML or EDI. If the partners are us different technologies, an EDI/XML translator would be required as in the second example

### Integration Flexibility

XML is an extremely flexible language for the transmission of data. XML can be generated and sent directly from a variety of systems including databases, messaging systems, web servers, application servers and custom developed software. Any of these

systems, as well as (in the near future) most standard web browsers can also interpret XML for the storage or presentation of data.

#### ***Internet as Communications Enabler***

Because XML was designed to be an Internet-ready communications language, XML is well suited to extend the capabilities of Web-implemented Customer Activities systems. XML can be used along with HTML to present data to customers in a web browser, format data for reporting and generate XML formatted data for internal systems from customer input through standard web forms.

#### ***Integration with Existing EDI or Flat File Systems***

XML is being adopted by several other industries, and as such the pipeline sector should be prepared that some of their customers may be in a position to implement XML before they would be in a position to implement an EDI infrastructure. The Pipeline industry, however, is more likely to have already implemented an EDI infrastructure, and may not want to spend the time or money developing an XML solution.

To accommodate this possibility, XML can be integrated into existing EDI communications architectures by utilizing an EDI-XML translator. Shippers could send an agreed upon XML formatted document to the Transporter's EDI-XML translator which would then interpret and reformat the document to either the X12 or Flat File format the Transporter's system requires. Market-ready systems such as *GISB Agent* are already available with the ability to provide this service. Other EDI products are bound to follow. Using this path would require the least changes needed by the transportation service provider who already has EDI in place.

For further information on EDI-XML co-existence, please see the white paper "*XML and EDI Peaceful Co-Existence*" at <http://www.xmls.com/library/whitepapers/co-existence.pdf>

#### ***System to System Communications***

Because most database and messaging systems are now being developed to be XML capable, it is possible for systems to be written that would allow direct communication from internal system to internal system. This could require a significant development effort and may be more appropriate for review in the future, however the opportunity is presented in an XML environment.

## ***Issues***

#### ***Redevelopment Effort***

In any event, some amount of redevelopment or "retooling" of existing systems will likely be required to integrate XML into operations, however, because it is possible to implement XML into existing systems, the impact should be lower than if XML had to replace technologies such as EDI.

#### ***Need for Standards***

XML (like EDI) is only effective when an agreed upon format is defined for the transmission of data. A well thought, clearly defined schema would need to be defined which could require considerable effort. Further, there is already movement by groups to begin the definition of such a schema for the Gas sector, which means that there is potential for conflicting schemas if not carefully managed.

#### ***The Growing Number of Interfaces***

X12, Flat File, Customer Activity Screens, now XML. The number of methods the industry needs to support for receiving / transmitting data grows again. Is it in the industry's best interest to support this growing number of technologies? The answer may

simply be that by preparing in advance for these things is simply a requirement of doing business in the day and age of rapid changes in technology. Customer systems for office supply ordering, travel management, and other business to business processes are already being built and adopted using XML based systems. This is bound to have a carry over effect to the core business of our customers.