

InfoTrak

INFORMATION FOR BETTER DECISIONS

X Marks the Spot

As Indiana Jones was looking for the Holy Grail, he knew that finding the Grail would be based on clues, deduction, induction, and luck. He also knew that the Holy Grail was the key—although the audience was never quite sure to what. When Indiana Jones found the X on the floor, he knew he was close.

Despite this really large stretch of the imagination, X, as in XML, does indeed mark the spot. XML does indeed hold the key to what many technologists and users have sought for so long—a capability to exchange data regardless of language, platform, computer, operating system, or whatever. XML is indeed a first step to the Holy Grail of interoperable information; and information is what we all want, need, use, and work with.

So what does that mean to you? Technology is indeed moving forward to solve the single biggest challenge to managers, users, and customers: getting the right information from the right sources at the right time in a readable form. Are we there yet? No, but we're getting closer because of the new solutions and capabilities with the alphabet soup names of XML and SOAP and .NET and many others.

As marketing professionals, we know that information dissemination has taken off in the last fifteen years, largely due to the advent of the Internet. And while we all use the Internet, in one form or another, to communicate, research, promote or transact business, it wasn't too long ago that the Internet was a tool used primarily by a relatively small group—and not, primarily, by marketers. One of the reasons the Internet is now highly popular, is due to the formatting of the content, which allows us to view content the way we are used to—with paragraph breaks, font formatting and graphics.

In 1989, the language of HTML was born. HTML, or *HyperText Markup Language*, “sparked a revolution that turned the Internet from a relatively obscure network of educators, research scientists and government workers into a social, cultural and business phenomenon know as the World Wide Web.” (The XML FAQ—W3C Version 1.5, June 1999). HTML allows data to be displayed in a way that is familiar and easily understandable.

Now, there's another language that's also creating quite a stir. This language is called XML, which stands for *eXtensible Markup Language*. This issue of *InfoTrak* provides some of the basics of both HTML and XML, and how their applications can help facilitate your fulfillment program, through greater accessibility.



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WHAT IS HTML?

HTML is an authoring language used to create web documents. HTML defines the structure and layout of a web document by using a variety of tags and attributes.

HTML is not a programming language (like Java or C++). Rather, it is a formatting language. Where a programming language is used to build the functionality (data and business logic) of a software program, HTML is used to define the way that a web page is presented in the browser.

You use HTML to “mark up” your hypertext (web) content for proper formatting, hence the name *HyperText Markup Language*.

There are only a few simple rules to remember about HTML:

- HTML is simply a system of tags
- Tags are usually paired. For each pairing, there is a “start” tag and “end” tag.
- Tags consist of an open angle bracket (<), the tag name, and a close angle bracket (>). In a pairing, the end tag is usually identical to the start tag with the addition of a slash (/) after the open angle bracket. For example, the start tag for bold is and the corresponding end tag is .
- Some tags may include an “attribute” which is additional information included in the start tag.
- HTML is not case sensitive.
- Spacing is compressed when an HTML document is rendered in the browser. That means if you want to add a line break, you must use the appropriate HTML tag for a line break —
 — because a carriage return will be ignored.
- Tags should never overlap. If you use multiple tags, they should always be nested; in other words, the end tags should close in reverse order of the start tags. The following shows the correct way to nest multiple tags:
<tag1><tag2><tag3> text </tag3></tag2></tag1>

WHAT IS XML?

XML doesn’t do anything, per se. It’s a formatting language (like HTML), created as a simple way to structure and disseminate information.

- XML stands for *eXtensible Markup Language*
- XML is a **markup language** much like HTML
- XML was designed to **describe data**
- XML tags are not predefined in XML. You must **define your own tags**.
- XML uses a DTD (**Document Type Definition**) to describe data
- XML with DTD is designed to be **self-descriptive**

(Definitions are provided by www.w3schools.com. “The World Wide Web Consortium (W3C) develops interoperable technologies [specifications, guidelines, software, and tools] to lead the Web to its full potential as a forum for information, commerce, communication, and collective understanding.”)

HOW DO HTML AND XML DIFFER?

XML, like HTML, uses tags to markup documents. But unlike HTML, which uses predefined tag standards, XML requires the user to create their own tags. According to *Enterprise Applications using XML—Understanding the Business Benefits, by Object Design™*, XML and HTML differ in three major respects:

- It is extensible, meaning that new tag and attribute names for data can be added at will
- It allows business data to be searched. Searching HTML documents provides inaccurate results because no context exists for the data contained in it. XML provides context allowing XML data to be shared more readily over the web
- It is self-describing, meaning that an application can interpret XML data without prior knowledge of its data structure

The online site, www.w3schools.com, further clarifies the differences as:

- XML is not a replacement for HTML.
- XML and HTML were designed with different goals:
 - XML was designed to describe data and to focus on what data is
 - HTML was designed to display data and to focus on how data looks
- HTML is about displaying information, XML is about describing information.
- XML is a “cross-platform, software and hardware independent tool for transmitting information.”

HOW IS XML TRANSPORTED? ENTER: SOAP.

According to the online site, www.w3schools.com “SOAP is an XML-based protocol to let software components and applications communicate using standard Internet HTTP.

- SOAP stands for **Simple Object Access Protocol**
- SOAP is a **communication protocol**
- SOAP is for communication **between applications**
- SOAP is a format for sending messages
- SOAP is designed to communicate via Internet

- SOAP is **platform independent**
- SOAP is **language independent**
- SOAP is **based on XML**
- SOAP is **simple and extensible**
- SOAP will be developed as a **W3C standard**

In the simplest terms XML and SOAP are ways for disparate systems to communicate with one another. “A better way to communicate between applications is to use HTTP (HyperText Transport Protocol), because HTTP is supported by all Internet browsers and servers. SOAP was created to accomplish this. SOAP provides a way to communicate between applications running on different operating systems, with different technologies and different programming languages.” (www.w3schools.com)

WHAT DOES ALL THIS MEAN TO YOUR FULFILLMENT PROGRAM?

“SOAP is a simple solution for interaction of different applications built in different languages and running on different platforms as it uses HTTP as its transport and XML as its payload for sending and receiving messages. It’s a lightweight and a loosely coupled protocol for exchange of information in a decentralized and a distributed environment.” (www.csharpcorner.com/soap/soapIntroduction1.asp)

When it comes to fulfillment, XML and SOAP allow a customer’s systems (like CRM programs) to more easily interface with the fulfillment vendors inventory ordering and management system. In other words, your CRM program, viewable on your desktop computer, can house a button that has “point and click” functionality to transport data (requests for brochures, personalized letters, etc.) directly to your fulfillment vendor’s system—even though the applications are not the same. This smooth transmission of data means less programming time/charge and few points of failure opportunities.

The ability to build a system that allows databases, regardless of their type or construction, to communicate with each other is powerful and provides the basis for true electronic commerce at the business-to-business (B2B) level. XML and SOAP provide a relatively easy to program framework for this database communication and this feature alone allows Comac to solve specific client problems and challenges with custom solutions. This also allows clients to utilize their current Siebel, PeopleSoft, proprietary, or other CRM system to communicate directly with a fulfillment partner’s system. This significantly reduces development and implementation costs for both partners and virtually eliminates training and conversion costs.

Case in point:

One major computer manufacturer and software developer came to Comac determined to use its internal and proprietary marketing dissemination system for ordering and distributing marketing materials. After technical discussions and review of Comac's standard interface documents, the client and Comac's technical teams developed an XML and SOAP solution that provided exactly what the client desired for on-line ordering on their own system and accurate and timely information back from GroupTrak for their reporting and status systems.

Another client has implemented PeopleSoft's CRM system and wanted to better manage their marketing materials inventory. After transferring their business to Comac, we worked with their development team to develop the right solution to meet their needs. Batch transfers of data from the client's PeopleSoft system hourly to Comac met their needs. Concurrently, order status, inventory status, and activity reports were provided back to the client from Comac's database. The system worked flawlessly from the beginning and has helped the client reduce costs significantly.

Typical examples of where XML and SOAP provide integration opportunities include, but are certainly not limited to:

- Arrival shipment notices
- Inventory management especially with respect to quantities, activity, and aging
- Orders placement and status
- Shipment status and information
- Information for client reporting system

The possibilities for information exchange to meet the needs of the partners in a B2B relationship are virtually limitless. Many clients currently using FTP are examining their options to move to SOAP and XML for data transfer. While relatively easy to program in XML and to make the change from FTP to SOAP, there is, nevertheless, a learning curve for the programming team. Implementation of XML is straightforward and the use of SOAP is equally clean.

The opportunity to provide the right solution to each company's users is powerful, especially in that each user can utilize the right set of tools to accomplish their tasks quickly and efficiently.

A corporate user on the corporate network, whether a marketing manager or a call center operator, can use the corporate CRM system to place and track an order, manage inventory, or add users. An XML and SOAP interface to Comac's GroupTrak provides the linkage from the CRM system to the fulfillment facility.

A sales person on the road, a channel partner, a reseller, can use Comac's GroupTrak to order marketing materials. This provides the level of efficiency, security, and access needed by those at remote locations to order and track marketing materials.

For more information, please contact your Comac representative at 1-866-COMAC4U or www.comac.com. 