On-line Collaboration requires a Lingua Franca

There are at least two ways to achieve a world standard. You can either conquer the world with your product, or you can agree on a standard. In 1619 Italy, there were many languages spoken in Mediterranean ports. For communications, a common language consisting of Italian mixed with French, Spanish, Greek, and Arabic was used. That language was called Lingua Franca. When France was the world leader, all diplomats learned French. With the arrival of the British and then the USA as world leaders, diplomats use English as the Lingua Franca.

The greatest thing about the Internet is that it created an open standard for describing how the printed page looks (HTML - HyperText Markup Language). The invention of hyperlinks allowed related documents to be linked together in a 'web' of text information (if you think of the connection as strands of a spider's web).

The last few years have made some technology and business trends clear. On the technology side, the concept of 'n-tier computing' has been made real - mostly because of the technology of the Internet. N-Tier Computing means that different work is being done in physically different places. Information may be stored on one machine, manipulated and crunched on another machine, and displayed to the user on yet another machine (an example of 3-Tier computing). The components can be broken down into as many tiers as necessary, and of course the geographical location of each component is irrelevant.

Simultaneously, businesses have found that if they plug into parts of each others information systems, they can respond more quickly to the needs of their partners and get better service from others. Even though it could cost a fortune for a bumper manufacturer to integrate their systems with the proprietary data systems of each major auto manufacturer - many have done so because the payoff is there.

The intersection of these trends gave birth to the realization that we all need a common language to exchange the underlying business information we need to share. The common language of HTML - the language that defines how pages are graphically displayed - is not up to the task of describing the underlying information. A new common language was needed. That common language is called XML - Extensible Markup Language. It is actually a subset of HTML developed by the W3C (see inset).

W3C is the World Wide Web Consortium, an international consortium of companies involved with the Internet and the Web. The W3C was founded in 1994 by Tim Berners-Lee, the original architect of the World Wide Web. The organization's purpose is to develop open standards so that the Web evolves in a single direction rather than being splintered among competing factions. The W3C is the chief standards body for HTTP and HTML.

To further fine-tune XML for the AEC industry, our industry has formed a committee called AECXML (more information is available on the web at www.aecxml.org). The efforts of this diverse group is to devise information structures within the XML standard to support the specific needs of the industry "to facilitate information exchange of AEC data on the Internet."

We have heard about, and hopefully used, at least one of the 'Project Extranet' tools specifically designed to speed collaboration between AEC firms, Clients and Builders using the Internet. These tools have come a long way in a short time - but they seem to be more intent upon achieving standardization by conquering the world rather than by agreeing on a standard.

I have described before how different trades have different needs in managing the flow of information between themselves and the rest of the project team. Different firms need a different subset of the total amalgam of information representing the project. It is time to adopt N-Tier computing to separate the total sum of project information in a central repository (which should remain common to all team members) from the presentation and manipulation of the information to the users.

If we adopt this method, the project data could be housed by either an independent service provider or by any team member (or any combination of team members). This would eliminate the concern of 'who owns the data' - or would at least make it a decision made by the project team. Of course, the actual geographic location of the machines holding the data is inconsequential in operation - it is transparent to the user.

This move could be beneficial for the Project Extranet vendors as well as to the users. The 'Project Extranet' we see on the screen becomes simply a front end which filters, reports on, and manipulates the underlying, shared information. This would create an explosion of opportunity for the industry.

Project Extranet vendors could then tailor their front-ends to each AEC industry component rather than assembling a 'one size fits none' solution as they now do. The Contractor would probably use one solution, the Subs another, and each Engineering and Design discipline would have their own favorites. Since the data on the back-end is no longer dependent upon the good will and continued existence of the Project Extranet vendor.

If you agree, let the Project Extranet vendors know that their adoption of XML data exchange is vital to you. Tell them that you want to be able to decide who holds the information and that it's time for them to use open standards to share information with other vendors - for the good of themselves as well as the good of our industry.

Let me know what you think - e-mail me at mhogan@id-8.com.

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