

Technical Overview of Web-based Technology

The Web - The Next Generation

The first generation of the Web can be described as **static publishing** -- pages that relied on HTML, static pictures and text. Web navigation is done through scrolling and hyperlinks. The second generation went some way to address the static issue. The Common Gateway Interface (**CGI**) is a mechanism for managing interaction between the Web server software and the browser and it has been around for quite a while. However, CGI has some shortcomings. The major one is that it adds an extra level to our browser-server model of interaction. Also the code that CGI receives and transmits is not easily manipulated by many programming languages, so people have to use a programming language that has good facilities for manipulating text and communicating with other software. The best multi-platform programming for doing this is C, C++ and Perl. While they can adequately do the job, they are very complex to learn.

The new generation consists of dynamic Web sites. They are built with a combination of languages and technologies - you can use any of these alone, or any number of them together and they're all independent (in the sense that you don't have to learn one technology before you can learn another). The technologies are:

- ActiveX controls - created by Visual C++ or Visual Basic (Check your Office software for a listing the Active X controls and you will know how much we know about it.)
- Java (Please don't confuse Java with JavaScript. They are different.)
- Script languages - VBScript and JavaScript/Jscript/ECMAScript
- Active Server Pages (ASP) and Dynamic HTML (While ASP is a server-side technology and DHTML is client-side technology)
- XML (Extensible Markup Language)

Why Using ASP?

Compared with CGI, ASP runs faster and is simpler to learn. ASP is NOT a language such as JAVA. It is not an application such as FrontPage 2000. It is a technology used TOGETHER with HTML to build dynamic Web page. For our needs, it will allow data stored in the database to be displayed or updated via the Web without rewriting the static HTML codes. Each ASP section contains within <% %> delimiters.

What do I Need to Run ASP?

Assume that you already have a Web browser. You really DON'T need a separate machine to run the "Web server". Since most of us do not have Web master's privilege to our university's Web server, we can use our own machine with some Web server software installed. For most of us, the Web server that is the most readily available to us is PWS Version 4x. All the hands-on exercises for this workshop will be based on PWS V4x.