

WAP - THE MODEL

http://www.tutorialspoint.com/wap/the_wap_model.htm

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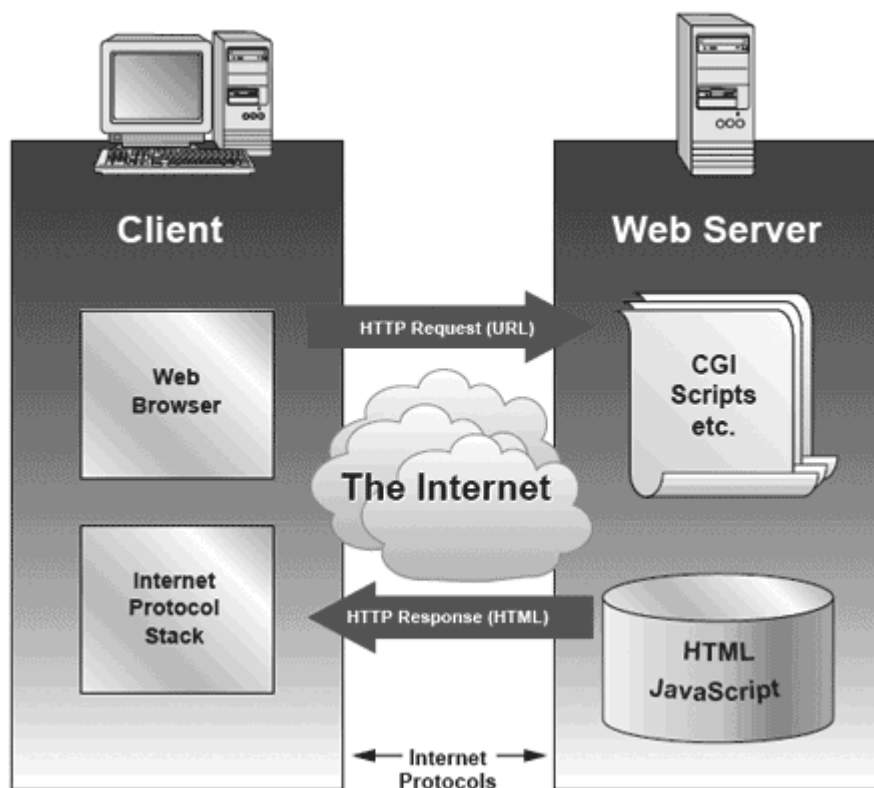
Before we describe WAP model, first we would like you to understand how Standard Internet works.

The Internet Model:

The Internet model makes it possible for a client to reach services on a large number of origin servers, each addressed by a unique Uniform Resource Locator *URL*.

The content stored on the servers is of various formats, but HTML is the predominant. HTML provides the content developer with a means to describe the appearance of a service in a flat document structure. If more advanced features like procedural logic are needed, then scripting languages such as JavaScript or VB Script may be utilised.

The figure below shows how a WWW client request a resource stored on a web server. On the Internet standard communication protocols, like HTTP and Transmission Control Protocol/Internet Protocol *TCP/IP* are used.

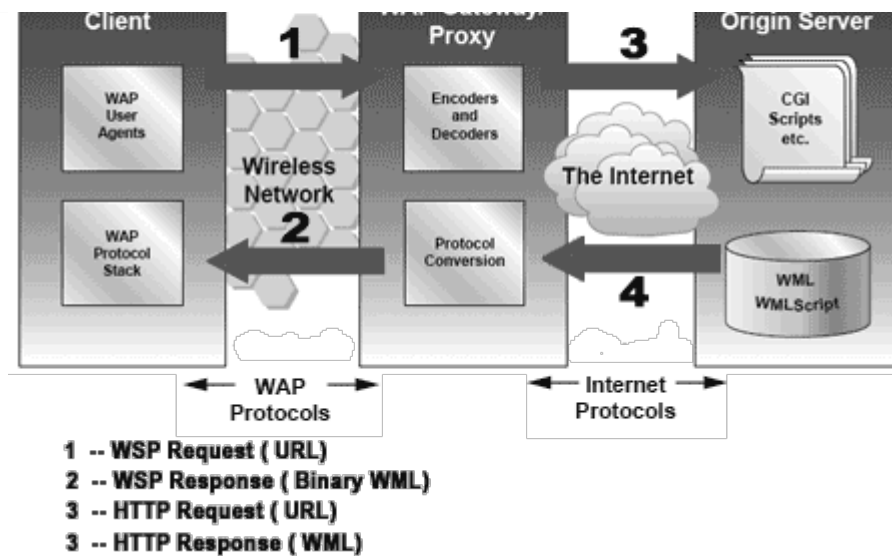


The content available at the web server may be static or dynamic. Static content is produced once and not changed or updated very often; for example, a company presentation. Dynamic content is needed when the information provided by the service changes more often; for example, timetables, news, stock quotes, and account information. Technologies such as Active Server Pages *ASP*, Common Gateway Interface *CGI*, and Servlets allow content to be generated dynamically.

The WAP Model:

The figure below shows the WAP programming model. Note, the similarities with the Internet model. Without the WAP Gateway/Proxy, the two models would have been practically identical.





WAP Gateway/Proxy is the entity that connects the wireless domain with the Internet. You should make a note that the request that is sent from the wireless client to the WAP Gateway/Proxy uses the Wireless Session Protocol *WSP*. In its essence, *WSP* is a binary version of HTTP.

A markup language - the Wireless Markup Language *WML* has been adapted to develop optimized WAP applications. In order to save valuable bandwidth in the wireless network, *WML* can be encoded into a compact binary format. Encoding *WML* is one of the tasks performed by the WAP Gateway/Proxy.

How WAP Model Works?

When it comes to actual use, WAP works like this:

- The user selects an option on their mobile device that has a URL with Wireless Markup language *WML* content assigned to it.
- The phone sends the URL request via the phone network to a WAP gateway using the binary encoded WAP protocol.
- The gateway translates this WAP request into a conventional HTTP request for the specified URL and sends it on to the Internet.
- The appropriate Web server picks up the HTTP request.
- The server processes the request just as it would any other request. If the URL refers to a static *WML* file, the server delivers it. If a CGI script is requested, it is processed and the content returned as usual.
- The Web server adds the HTTP header to the *WML* content and returns it to the gateway.
- The WAP gateway compiles the *WML* into binary form.
- The gateway then sends the *WML* response back to the phone.
- The phone receives the *WML* via the WAP protocol.
- The micro-browser processes the *WML* and displays the content on the screen.

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