



## YUI: An Open-source JavaScript Library

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In developing web interfaces to data management systems, providing a rich suite of interactive functionalities while at the same time maintaining accessibility is often a major factor in design. Limiting applications to server-side processing can result in awkward, loading-time dependent interfaces that discourage use. Incorporating client-side DHTML through JavaScript, even minimally, can substantially enhance a web application's interface. Developers often hesitate, however, in doing so because of bad first case experiences with JavaScript and what seems to be such heterogeneous levels of support for the language across browsers. It has been noted, however, that in actuality "Most cross-browser incompatibilities are based on differences in the underlying Document Object Model (DOM) exposed by the browser, rather than on the language itself" (Powers). This means then that there are still differences that must be acknowledged and addressed. As a result, a number of open-source JavaScript libraries have been developed that provide a stable API-level environment for working with javascript. Well known examples include Mochikit, Dojo, Prototype, and Yahoo's YUI. The last option on this far from exhaustive list is the one that will be discussed here.

The YUI JavaScript library focuses on providing a core set of utilities and controls upon which many of the more advanced features are based. The core components focus on exactly the discouraging issue of cross-browser incompatibility. Even minimal interface enhancements, such as allowing form element addition or removal (perhaps a form for filling in metadata of 1:N cardinality), improve usability, but depending on the design implementation method can break due to differences in DOM support. Graded Browser Support is Yahoo's treatment of JavaScript development's resulting compatibility issues. At the highest level of description, the notion of graded browser support attempts to divide the vast number of browsers into three categories and then base support standards on these categories. The concept of Progressive Enhancement is a key component of graded browser support. Briefly, the idea focuses on providing access to core content while providing progressively more features to browsers that can support them. With this approach, the YUI library can be utilized for levels of interface enhancement from basic cross-browser safe DHTML to more advanced and visually appealing interactivity. Since the library is sorted into components, there is usually a very close correspondence between the amount of code you need to include and the page's scoped functionality.

With open-source code libraries there is no accepted community standard for support or for documentation. One of the most appealing features of using the YUI libraries is the level at which both of these elements are addressed. As far as support goes, there is a great advantage in the fact that the code is developed and maintained by a team of industry professionals. Regarding documentation, the site (<http://developer.yahoo.com/yui/>) includes both a searchable API and usage examples. I've found these examples can expedite implementation of the library's components.

There are quite a few JavaScript libraries available and it's not likely that only one of these will provide a

complete suite for all DHTML development needs. Yahoo's YUI does very well, however, at providing a high level of quality across multiple facets including: features, conceptual outlining/framing, modularity, as well as documentation and support.

References:

Powers, Shelly. (2007). Learning JavaScript. Sepastopol, CA: O'Reilly Media, Inc. Yahoo Developer Network (<http://developer.yahoo.com/yui/>)