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# The Emerging JavaScript Revolution

By **Andrew Binstock,** September 05, 2011

JavaScript's ubiquity, speed, and easy syntax are suddenly making it the default scripting language for a wide range of apps

While JavaScript has always been a widely distributed and frequently used tool, it has never had the success and attention from developers that it enjoys today. Although the language is not particularly attractive (Its original developer, Brendan Eich, claims he had 10 days to develop it), it does have some advanced language features, such as currying and partial functions. And, more importantly, it has universal portability. Every browser with even minor market share today supports JavaScript.

The recent focus on RIA development has taken JavaScript to new places, however. The trend began to emerge, I believe, with the release of the Google Web Toolkit (GWT) in 2006. GWT enabled coders to develop rich applications in Java and have them compiled to JavaScript on the back end. With this step, it suddenly became incumbent on Google to develop a much faster JavaScript engine. This goal was achieved with the release of Google's V8 JavaScript Engine. V8 compiles JavaScript to native code for Windows, Mac OS X, and Linux, thereby providing excellent performance.

In addition, V8, which is open source, can run as a standalone product or be embedded into C++ programs. Its speed and this ability to run outside of the browser have stimulated a wave of interest in the language to explore new options for its use. Perhaps the most famous of these is the open-source node.js project, which is an event-driven I/O, server-side JavaScript execution environment that is rapidly gaining popularity. Even though it was first released in 2009, node.js is already supported as an execution environment on Joyent, CloudFactory, and the Heroku cloud platforms.

The use of JavaScript as an embeddable language outside of the browser context has roots that date back years. Its most well-known early implementation was as Rhino, a scripting engine for Java. With the release of Java 6 five years ago, Rhino became part of the standard Java distribution. In this capacity, however, Rhino has never gained wide acceptance. In part, this is due to its performance, which is currently no match for V8. Nonetheless, some Java apps do use it to give their users a way of scripting apps. The appeal of this use case is that JavaScript is a language whose basics can be learned quickly, so even workers and professionals who are not developers by trade can be productive without having to learn a large syntax or set of libraries. If they are developers, of course, then the full panoply of more advanced features are available for use.

The emergence of a simple language like JavaScript as way do develop applications was first forecast by Jeff Atwood on his famous developer blog, Coding Horror. The prediction, now known as Atwood's Law, states: "any application that can be written in JavaScript, will eventually be written in JavaScript." It looks as though that era has finally begun.