

Abstract

DJS: A Distributed Object Library for Server-WebBrowser Communication

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Using AJAX on the client-side of a web application is becoming a widespread approach for dynamic web application development. However, AJAX programming is difficult because we need to make server-side and browser-side program each other. Additionally, browser-side program is restricted to write in JavaScript. To solve these issues, we propose DJS, a set of Ruby and JavaScript libraries that enables to access browser objects which are published as distributed objects from server-side Ruby programs. The accesses to distributed objects are sent in the form of RPC (remote procedure call). DJS allows developers to write client-side program without JavaScript, but within the server-side Ruby program. Our implementation of DJS uses either long-polling AJAX or WebSocket for establishing and keeping connections between server and clients. Because of many RPCs causes performance issue, asynchronous RPC is used in our implementation. In this presentation, we will describe the design and implementation of DJS. Moreover, we will show the result of experiments with creating several web applications using DJS.

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