

Fundraising Proposal - RubyJS/RWT

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What is RubyJS?

RubyJS¹ is a compiler (written in Ruby) to compile a static subset of Ruby “down to” Javascript. To keep the dynamicity of Ruby on the one hand (e.g. meta-programming) and generate efficient Javascript code on the other hand, the following trick is used: The Ruby code to be compiled is in a first step evaluated inside the Ruby interpreter. This is where all meta-programming goes on². In a second step, the classes are introspected and compiled to Javascript.

For efficiency reasons, the semantics of Ruby and RubyJS code are not 100% compatible, mainly due to differences in the available data types of the runtime environment (Ruby vs. Javascript). For example mutable Ruby strings are mapped to immutable Javascript strings. Other than that, clean and carefully coded Ruby exhibits the same behaviour.

What is RWT?

Ruby Web Toolkit (RWT) is an effort to port Google Web Toolkit (GWT) to RubyJS. Some basic core classes have already been ported (DOM, Event, XMLHttpRequest, UIObject, Widget, Label). It's *not* intended to be a line-by-line port. Ruby and Java are just too different. Instead, Ruby idioms are used whenever possible (this makes the porting somewhat harder). For example browser-specific code is greatly simplified by using Ruby's open classes and an overloaded `require`³.

¹<http://www.ntecs.de/projects/rubyjs>

²E.g. `require`, `attr_accessor`. All code except inside method definitions is evaluated.

³e.g. `DOM.rb` contains both the external interface as well as the default implementation, whereas `DOM.Opera.rb` only

About me

I discovered Ruby in late 1998 and used it extensively ever since. In 2001, I authored/edited Ruby Developers Guide published by Syngress Media. Some of my open source projects since then: Ruby/DBI, XML-RPC for Ruby, Mechanize (screen-scraping), Wee (Seaside-like web framework), RubyJS. I'm computer science student at University of Karlsruhe and self-employed.

Proposal

With your help I'd like to:

- Finish the Ruby/Google Web Toolkit port.
- Improve RubyJS.
- Write interfaces (or integrate) other good stuff like GoogleGears.
- Implement demo applications.
- Port a subset of the test-cases used in JRuby and Rubinius.
- Speak on conferences⁴ about RubyJS/RWT.
- Build community and spread.
- Show off advantages of RubyJS.
- RubyJS/RWT on mobiles (?)

contains the Opera specific overrides

⁴like I did last year at RubyConf: RubyJS talk http://rubyconf2007.confreaks.com/d2t2p3.ruby_to_javascript.html