Why Rust is Awesome

A completely and totally unbiased fact-based presentation on the Rust programming language that was prepared well in advance of tonight.

What is Rust?

- **In my words**: Ruby + Go + C#
- **In Mozilla's words**: *Rust is a curly-brace, block-structured expression language. It visually resembles the C language family, but differs significantly in syntactic and semantic details. Its design is oriented toward concerns of "programming in the large", that is, of creating and maintaining boundaries – both abstract and operational – that preserve large-system integrity, availability and concurrency.*

What is Rust

- You can think of it as a modern incarnation of Erlang if you want
- Developed by Mozilla to power a future version of Firefox

Why should *you* care about Rust?

- Ruby is great ...most of the time
- Ruby is bad at concurrency
- Ruby is bad at performance
- Ruby is bad at (large codebases)*
- Rust is designed to address these issues

Rust vs Go


What is this? There's something wrong with the house!
I don't like change!

Rust vs Go

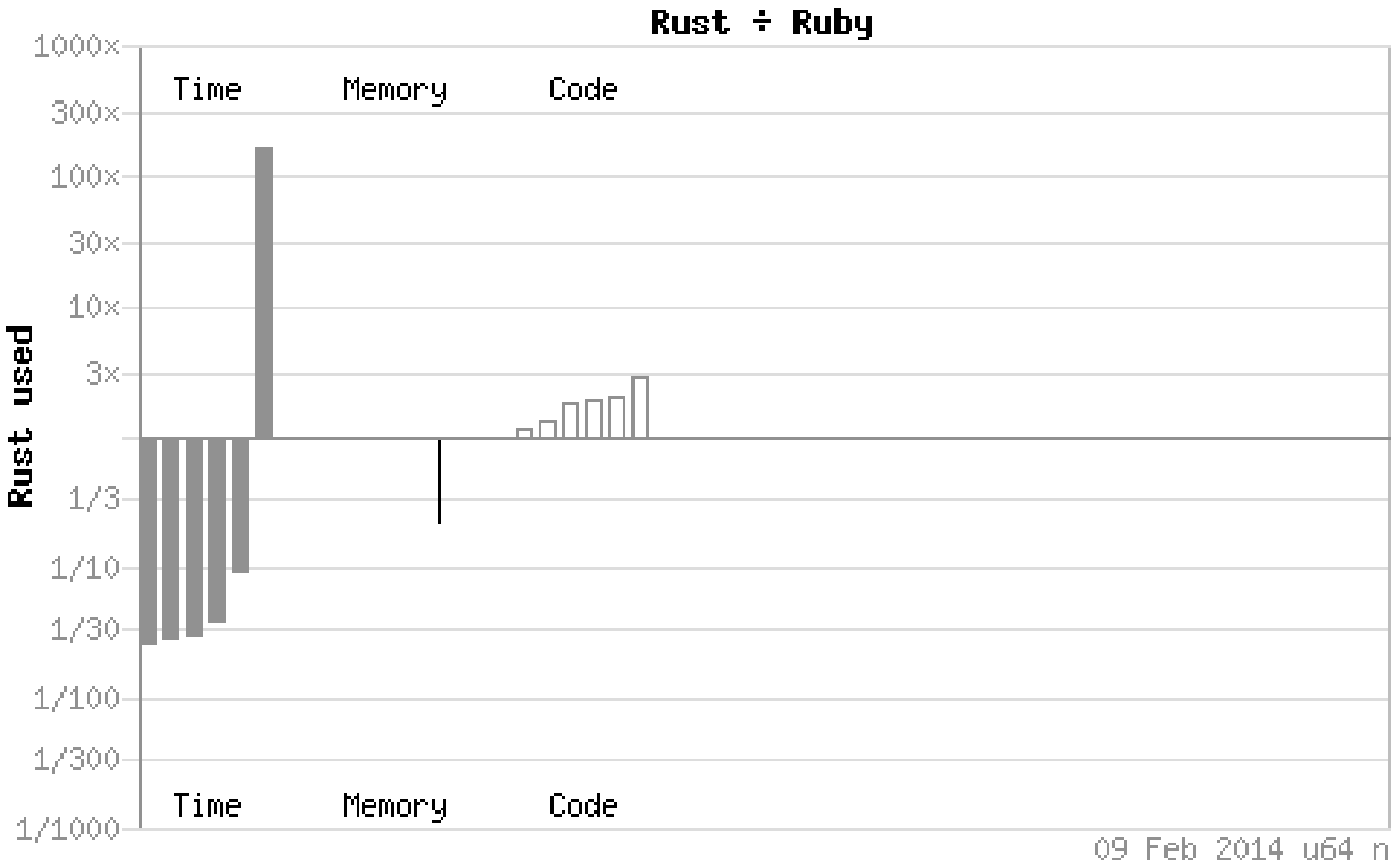
- Rust => Similar to C, doesn't “look” functional
- Go => Lookup “Interfaces” and cringe

Rust vs Ruby

- Similar expressiveness
- More semicolons (;)
- Static typing (with inference)
- Better performance
- Better concurrency
- Better memory efficiency
- No garbage collector

That sounds great, but what does it mean?

Performance



http://go.coda.to/rustperf

Performance

Rust used what fraction? **used** how many times more?			
Benchmark	Time	Memory	Code
fasta	**1/39**		±
mandelbrot	**1/35**		2×
fannkuch-redux	**1/33**		2×
n-body	**1/26**		±
binary-trees	1/11	1/5	2×
pidigits	**165×**		3×

Rust used what fraction? **used** how many times more?							
Time-used	|-	|---	25%	**median**	75%	---|	-|
(Elapsed secs)	**1/39**	**1/39**	**1/35**	**1/29**	1/11	1/5	**165×**

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Why use Rust?

- Performance sensitive applications
- High concurrency applications
- System programming
- Batch jobs that take a long time
- To become a better programmer

Read More

http://www.rustforrubyists.com

http://www.rust-lang.org

No, I don't have rust working on this computer