Rabbit

Here We Go Round the Ruby Toolchains

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RubyWorld Conference 2019

Greeting

Hello, everyone.

Let me introduce myself

I'm
- a Ruby committer
- the current RDoc maintainer
- a member of Ruby core team

Community: Asakusa.rb

Asakusa.rb every Ruby Tuesday

Space Pirates, LLC.

Company: Space Pirates, LLC.

Our business: We steal money via bank from venture companies that commission software development to us.

Company: Space Pirates, LLC.

This company is founded by my friend 2 years ago. Only 5 employees.

Company: Space Pirates, LLC.

…But it supported me as a semi-full time OSS engineer as a Ruby committer.

Company: Space Pirates, LLC.

I stealed many money via bank from the company, and developed Ruby, and won Ruby Prize.

Company: Space Pirates, LLC.

My company is in a crisis situation in terms of management. I'm looking for a job of new technical advisor or developer via Space Pirates, LLC.

My job is a…

Company: Space Pirates, LLC.

Product designer.

Company: Space Pirates, LLC.

- What vision do you want to provide for users?
- When the service will you release?
- How does the value of your service realize?
- blah blah blah

The most important thing of product design is...

Company: Space Pirates, LLC.

User First.

Company: Space Pirates, LLC.

We solve problems by developing software tools.

All tools are for users.

Company: Space Pirates, LLC.

Users can see new features, but they don't always understand the motivations.

Company: Space Pirates, LLC.

The same often applies to developers.

Company: Space Pirates, LLC.

This pattern repeats over and over again in many software projects.

Company: Space Pirates, LLC.

I approach software systems as a product designer.

Hobby: climbing

Hobby: climbing

I'm an alpinist who climbs using the alpine style.

Hobby: climbing

The "alpine style" means to climb to the summits of high mountains, and it started in Europe.

Hobby: climbing

> *More higher, more difficulty.*
> より高く、より困難へ。
>
> *[cited from `Albert F. Mummy(1855 - 1895)']*

Hobby: climbing

At that time, there are so many unexplored summits in the world.

Hobby: climbing

Alpinism began because it provides great adventures into the unknown.

What is the adventure?

Hobby: climbing

All human beings live in structure societies.

Hobby: climbing

And societies expect common sense behaviour.

You should eat meals 3 times a day.
(But early people didn't do like that)

Hobby: climbing

You should wake up at the same time everyday.

(But early people didn't do like that)

Hobby: climbing

You should work for only one company for a long time.

(But only Japanse do like that)

The "rules" of common sense are for maintaining stable societies.

Hobby: climbing

Stable societies are built by "systems" which support humans.

- systems to keep your health
- systems to keep your house
- systems to keep your personal relationships

Hobby: climbing

But, adventure is not.

Hobby: climbing

> *The current Mt. Everest tour mountaineering has become routine. The act was repeated over and over again, and the way it was standardized lost the unknown elements. It was absorbed within the framework of our common sense, and became so mundane that even a TV comedian challenged it. The mountain no longer presents any real adventure.*
>
> *現在のエベレストツアー登山に見られるのはマニュアル化が進んだ非冒険的な姿である。何度も何度も行為がくりかえされ、やり方が定型化したことで未知の要素が失われ、登山と無縁のタレントが挑戦してもとくに違和感をおぼえないほどわれわれの常識の枠内に吸収されてしまった山、それはよくいえばかつての本物の冒険の残映のようなものだ。*

[cited from `『新・冒険論』角幡唯介]

Hobby: climbing

> *The world's highest peak was a symbol of the unknown. It stood outside the systems of society, but was somehow absorbed.*
>
> *ついこの前までシステムの外側にそびえ立っていたはずの、あの未知の象徴たる世界の最高峰は、いつの間にやらわれわれのシステムの内側に吸収されてしまっ（た）*

[cited from `『新・冒険論』角幡唯介]

Hobby: climbing

> *Original adventure (de-system, outside system) is an act of jumping into an unknown and chaotic area, where nobody can tell whether there is any answer in the first place.*
>
> *本来の冒険＝脱システムは、そうしたことを超越した、どのような成果が得られるのか分からない、という以前にそもそも何か答えがあるのかどうかすら分からない、そうした未知で混沌とした領域に飛び出す行為である。*
>
> *[cited from `『新・冒険論』角幡唯介]*

Hobby: climbing

The "de-system" is not "anti-system". "Anti-system" is a part of "system" like anti-social things is a part of social problems.

Hobby: climbing

> *Original adventure (de-system, outside system) is an act of jumping into an unknown and chaotic area...*
>
> *本来の冒険＝脱システムは、（略）未知で混沌とした領域に飛び出す行為である。*
>
> *[cited from `『新・冒険論』角幡唯介]*

Hobby: climbing

Therefore, adventure is, by definition, breaking away from existing systems.

It is work of pioneers.

Hobby: climbing

By the way, I climbed...

Hobby: climbing

In Malaysia, an unknown route (because I can't read Malay), by stream climbing (river climbing), including 100m watarfall in rain forest, in rain season, first ascent, solo.

Hobby: climbing

I tried Pt. Batian of Mt. Kenya(5199m) via the Ice Window route for the first solo ascent, but I failed bacause my crampon broke at about 5000m.

Hobby: climbing

Adventures have insane uncertainties and dangers.

Hobby: climbing

In adventurous acts,

- common sense doesn't apply
- you must push forward in the face of adversity
- you may suffer severe setbacks

Hobby: climbing
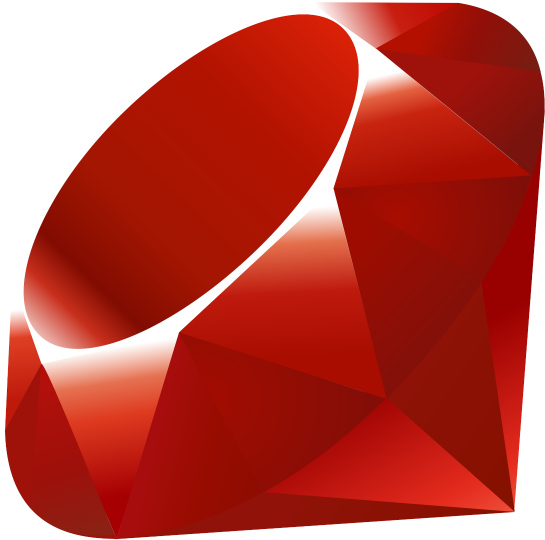
So
- sad
- tired out
- miserable

Hobby: climbing

I think that adventure is the worst thing.

Now then, the greatest adventure of programming is,

Ruby is an adventure

In adventurous acts,

- common sense doesn't apply
- you must push forward in the face of adversity
- you may suffer severe setbacks

Ruby is an adventure

Most programming languages have a syntax which is very easy to parse by computer.

Ruby is an adventure

But Ruby gives preference to code users can read and write, over what computers can parse easily.

Ruby is an adventure

So Ruby's parser has insanely complex mechanisms and it's very hard to implement it.

Ruby is an adventure

Ruby has very complex corner cases like the natural languages of human beings, and this requires us to carefully consider any changes to the Ruby syntax.

Ruby is an adventure

Therefore Ruby's new syntax can break existing code easily.

Ruby is an adventure

> *The criterion of my adventure is to seek the paths of those who have been stopped because it was too dengerous.*
>
> *自分の冒険の規準は、中途ハンパに勉強した人や、中途ハンパな経験しか積んでいない人に「危ないから止めたほうがいい」といわれたときにゴー・サインを出す。*
>
> *[cited from `『2013年植村直己冒険賞を受賞』田中幹也 http://-tanakakanya.com/?p=228']*

Ruby is an adventure

I think that many people said "This syntax...so...it's...you are crazy" to Matz.

Ruby is an adventure

It's a good indicator to explore, because it shows that other people can't see its value, yet...

Ruby is an adventure

You should have faith in your own vision, even if other people don't agree. You should implement it yourself.

Ruby is an adventure

Next, I'll introduce a familiar and small adventure.

My adventure in Ruby

I'm the current maintainer of RDoc which is the standard documentation tool of Ruby.

My adventure in Ruby

Too many people asked me "I always use Google to find Ruby's documentation, you too right?".

My adventure in Ruby

But all documentation for Ruby and gems are installed by default.

My adventure in Ruby

It's like using Google to find and copy emojis even if your smartphone supports emoji input.

My adventure in Ruby

So I started to replace the input methods of IRB to provide interactive documentation.

My adventure in Ruby

It's a huge problem that involves over 30 years of history in the GNU Readline library.

And, at that time, at RubyKaigi 2017, keiju-san who is Ruby's godfather and the author of IRB published the vision for IRB2.

My adventure in Ruby

IRB2 has many ambitious features, including multi-line editing. But it was not working well.

My adventure in Ruby

I was excited because it was difficult, so I was pulled into the adventure.

My adventure in Ruby

Ruby is a very comfortable language for programming...

...and multi-line editing pushes the Ruby user experience to even greater heights.

It also opens up the path for adding interactive documentation to IRB.

My adventure in Ruby

This would be a new vision for RDoc.

My adventure in Ruby

This would provide a great new experience to users.

My adventure in Ruby

I started my adventure, but the way was hellish...

My adventure in Ruby

- The Unicode specification makes handling input complicated.

- Formatting terminal output is made more difficult because of decades of accumulated behaviours and compatibility issues.

- Detecting the complete fragments of Ruby code is non-trivial due to complexily of the Ruby syntax.

My adventure in Ruby

In adventurous acts,

- common sense doesn't apply
- you must push forward in the face of adversity
- you may suffer severe setbacks

My adventure in Ruby

Most people said to me, "What are you doing? What is the point?"

My adventure in Ruby

Some Ruby committers said to me, "Give it a try, however I think it's impossible".

My adventure in Ruby

I understood that this is a great adventure.

This would be well worth trying for me.

My adventure in Ruby

No one else will do it except me.

My adventure in Ruby

And finally, this adventure is almost finished. It will be released with Ruby 2.7, on Christmas day this year.

But, this is a part of my bigger vision for the design of RDoc.

My adventure in Ruby

And the multi-line editor feature is a pioneering work of keiju-san... I just continued from where he stopped.

My adventure in Ruby

There are many other things which I want to try.

My adventure in Ruby

> *Severe winter in Canada is no longer recognised as an adventure, because it was accepted by the masses.*
>
> 大衆に受け入れられてしまったという時点で、厳冬カナダはもはや冒険としては成り立たなくなった。

[cited from `『2013年植村直己冒険賞を受賞』田中幹也 http://-tanakakanya.com/?p=228']

My adventure in Ruby

From the top of this mountain, I can see new ways to improve Ruby's interactive documentation...

My adventure in Ruby

...where,

- common sense doesn't apply
- you must push forward in the face of adversity
- you may suffer severe setbacks