Kids, Ruby, Fun!

Introduction of the Smalruby and the Ruby Programming Shounendan

Kouji Takao and Nobuyuki Honda,
The Ruby Programming Shounendan,
RubyKaigi 2014, 09.19.2014

Ruby プログラミング少年団

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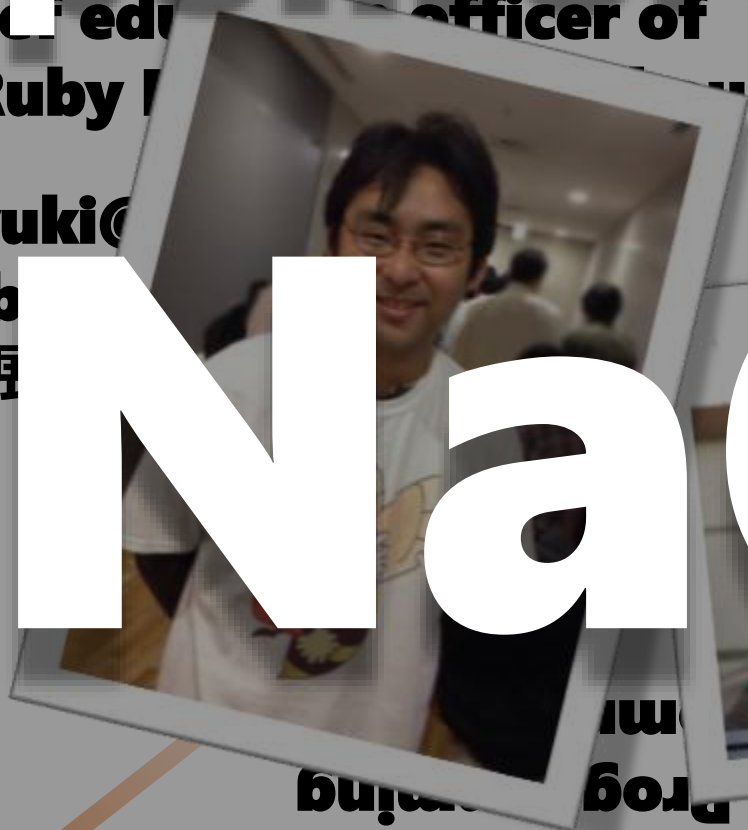
Sponsored by

NaCl



Nobuyuki Hadda

A chief edu… officer of
the Ruby … unendan

nobyuki@…
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Kouji Takao

A leader of the Ruby Prog… ming

NaCl is
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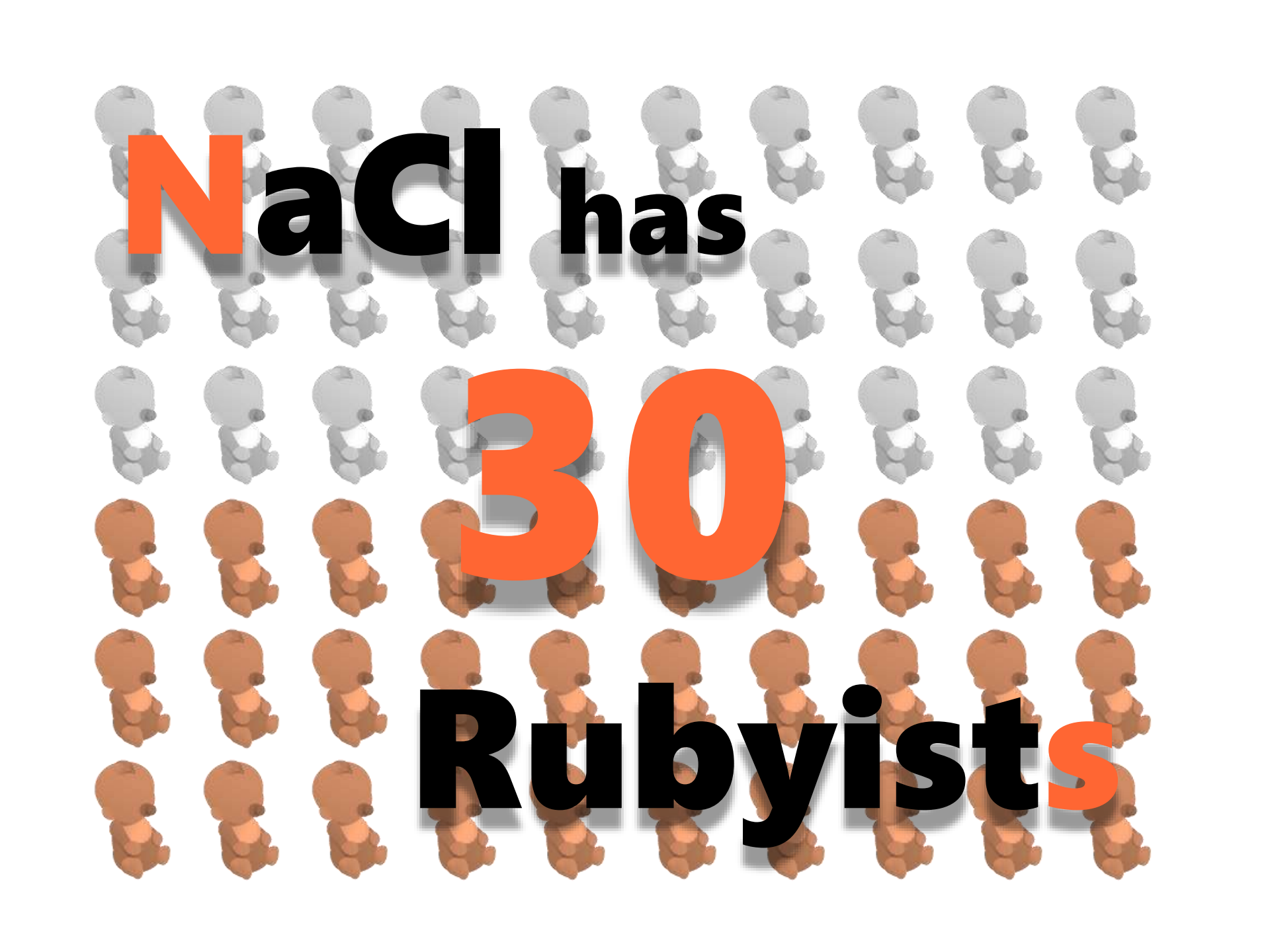
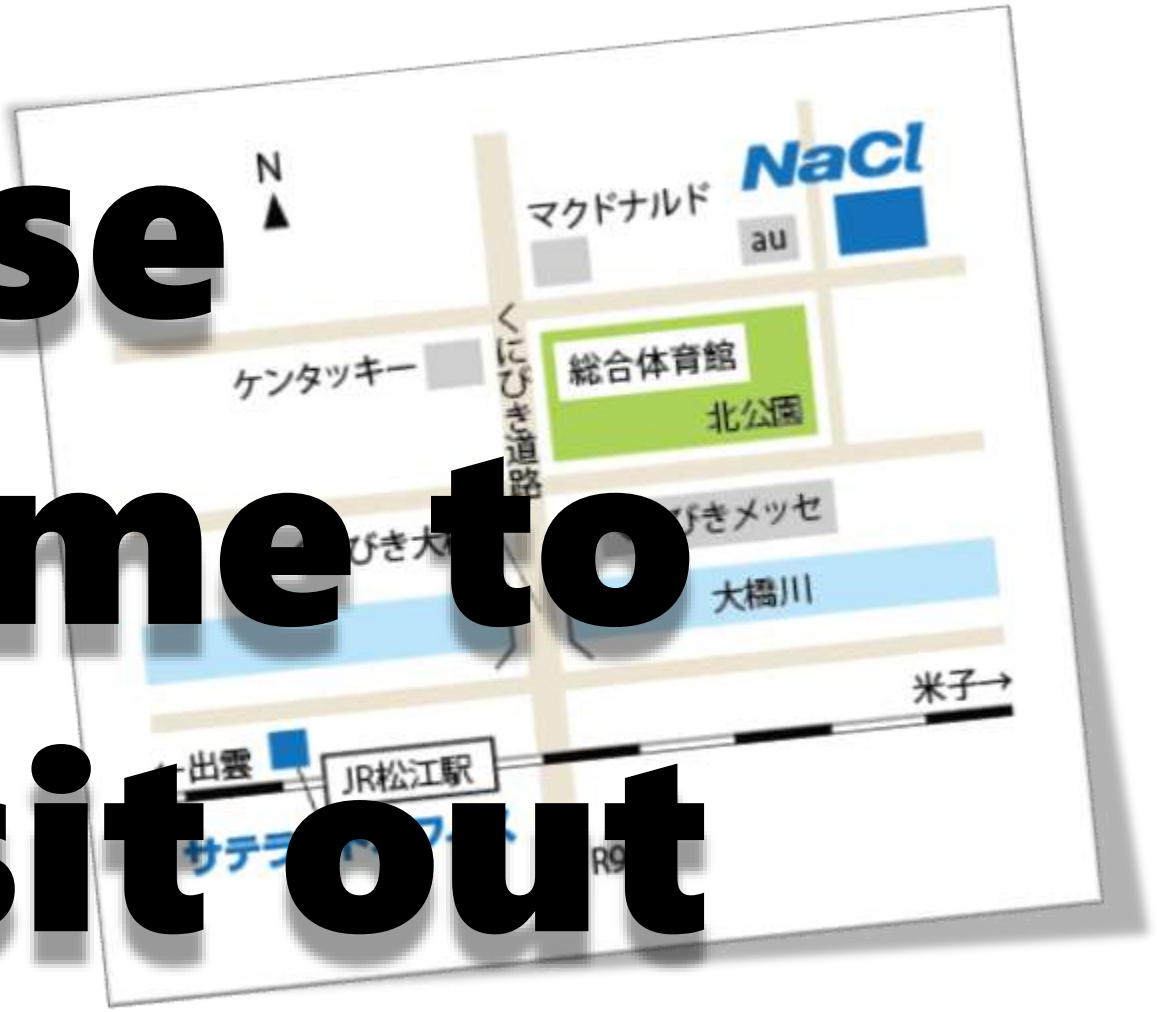

NaCl has
30
Rubyists

NaCl has
6
Commiters

Please come to visit out



NaCl ♪

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Ruby プログラミング少年団

The Ruby Programming Shounendan

Rubyプログラミング少年団

Ruby programming event for kids and parents

1日Rubyプログラミング体験 in 松江

毎月第３日曜日

Introduce Ruby, Once a month

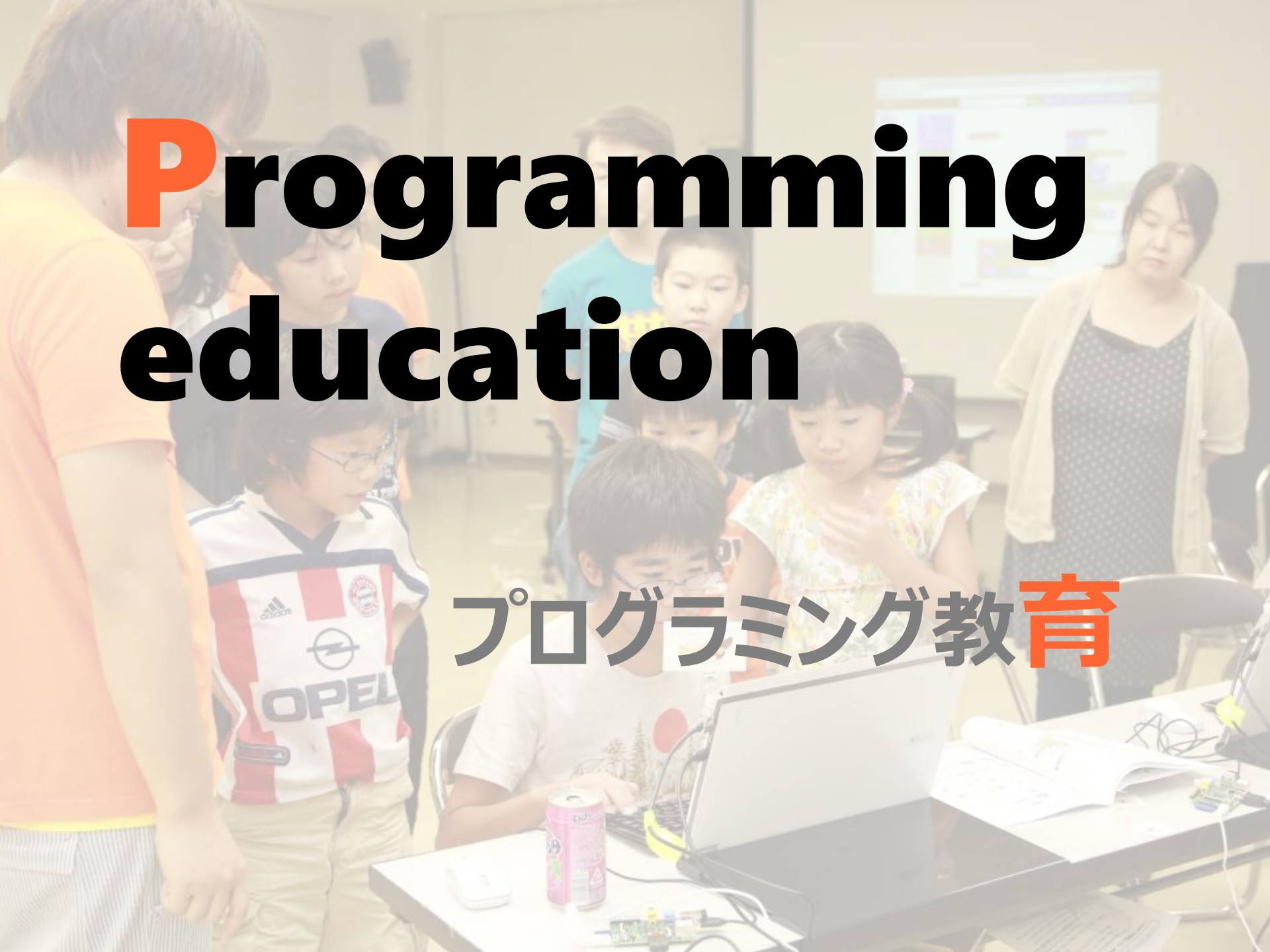
The Ruby Programming Shounendan

Rubyプログラミング少年団

≒

The Boy & Girl Scouts for Ruby programming

Rubyを対象としたスポーツ少年団


Programming
education
プログラミング教育

Overseas countries

海外の状況

U.S.

20,000 Teachers

U.K.

Compulsory education

義務教育

etc...

Japan

日本の状況

Compulsory education

プログラミングが必須化 / 中学校 / 2012年〜

松江市

全市立中でRuby授業

16年度から人材育成とIT振興へ

2014年9月4日付の山陰中央新報より

Japan

日本の状況

1 Computer / 1 Person

生徒1人に1台のコンピュータ / ～2020年

Japan

日本の状況

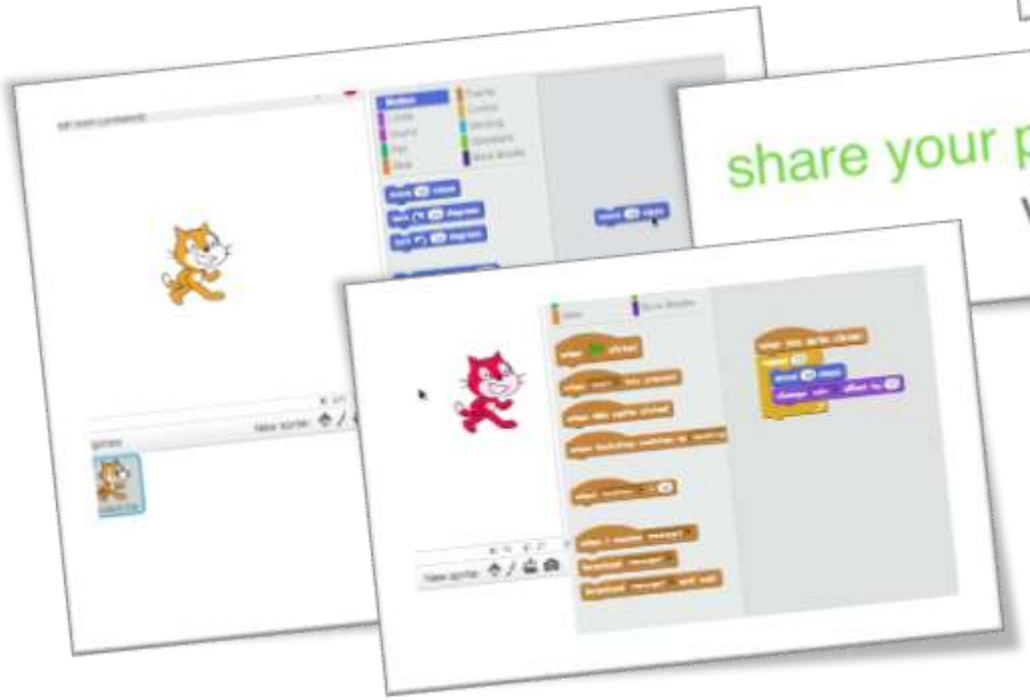
PEG

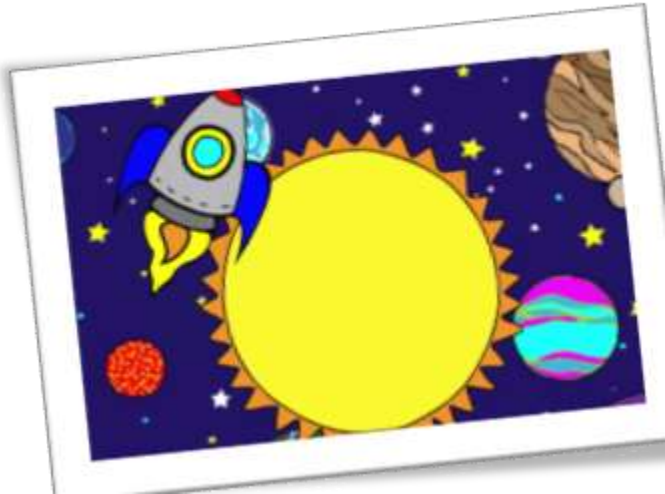
TENTO

Life is Tech!

SCRATCH

by MIT Media Lab





http://vimeo.com/65583694

Ruby is

A Programmer's Best Friend and Kids

But Japanese kids...

Smalruby

スモウルビー

Demo

car1
require "smalruby"
car1 = Character.new(costume: "car
car1.on(:start) do
loop do
move(10)
if reach_wall?
turn
end
end
end

Visual editor

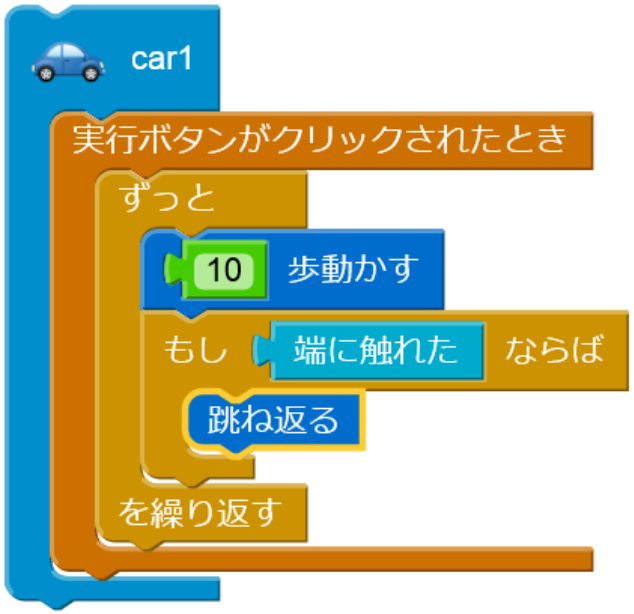
- Rails
- Blockly

Runtime

Windows : DXRuby

Mac,Linux : dxruby_sdl, Ruby/SDL

Instruction Block




```
5  car1.on(:start) do
6    loop do
7      move(10)
8      if reach_wall?
9        turn
10     end
11   end
12 end
```

Ruby

blockly

A visual programming editor

Project Home | Wiki | Issues | Source

Summary | People

Project Information

Starred by 970 users
Project feeds

Code license
Apache License 2.0

Labels
Visual, Editor, JavaScript, SVG, Python, Google, Academic

Members
neil.fra...@gmail.com,
sper...@google.com
16 committers
2 contributors

Featured

Blockly is a web-based, graphical programming editor. Users can drag

Check out our sample applications:

- Puzzle - Learn how blocks work while solving this simple country
- Maze - Use Blockly to solve a maze.
- Turtle - Drawing with Blockly.
- Graph - Blockly's graphing calculator.
- Code - Export a Blockly program into JavaScript, Python or XML.

Blockly is international. Help us translate Blockly into even more langu

http://code.google.com/p/blockly/

Define Instruction Block

```
Blockly.Blocks['motion_move'] = {
  init: function() {
    this.setColour(208)
    this.interpolateMsg('%1歩動かす',
      ['STEP', ['Number'], Blockly.ALIGN_RIGHT],
      Blockly.ALIGN_RIGHT);
    this.setInputsInline(true)
    this.setPreviousStatement(true)
    this.setNextStatement(true)
  }
};
```

(歩動かす = move)

/app/assets/javascripts/blocks/motion.js.coffee.erb

Generate Ruby from Block

```
Blockly.Ruby['motion_move'] =
function(block) {
  var arg =
    Blockly.Ruby.valueToCode(this,
      'STEP',
      Blockly.Ruby.ORDER_NONE);
  return 'move(' + arg + ')';
};
```

/app/assets/javascripts/blocks/motion.js.coffee.erb

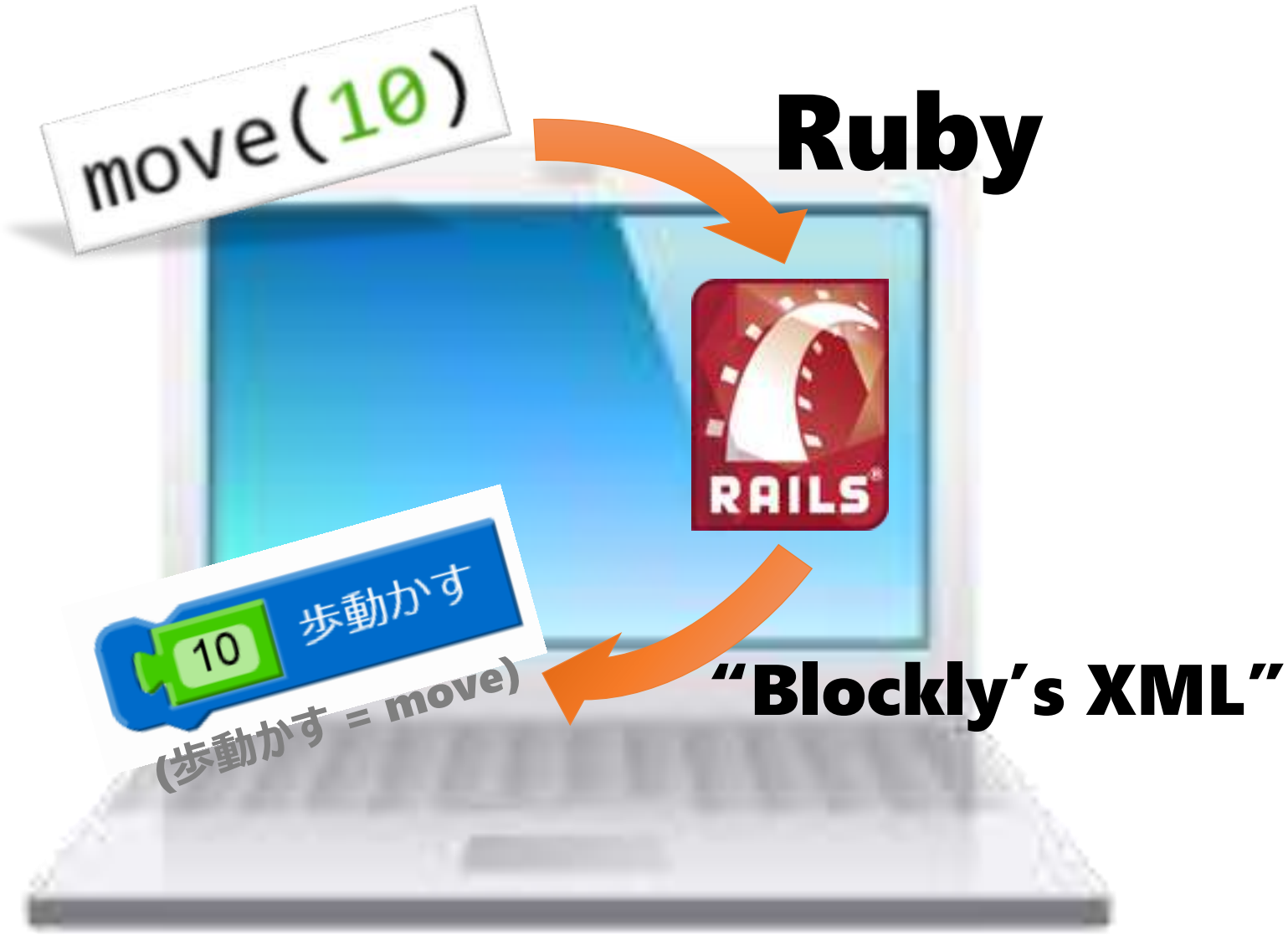
Kids want to challenge!

Ruby

```
move(10)
```

Instruction Block

(歩動かす = move)


move(10)
Ruby
RAILS
10
歩動かす
(歩動かす = move)
“Blockly’s XML”

Translate Block from Ruby

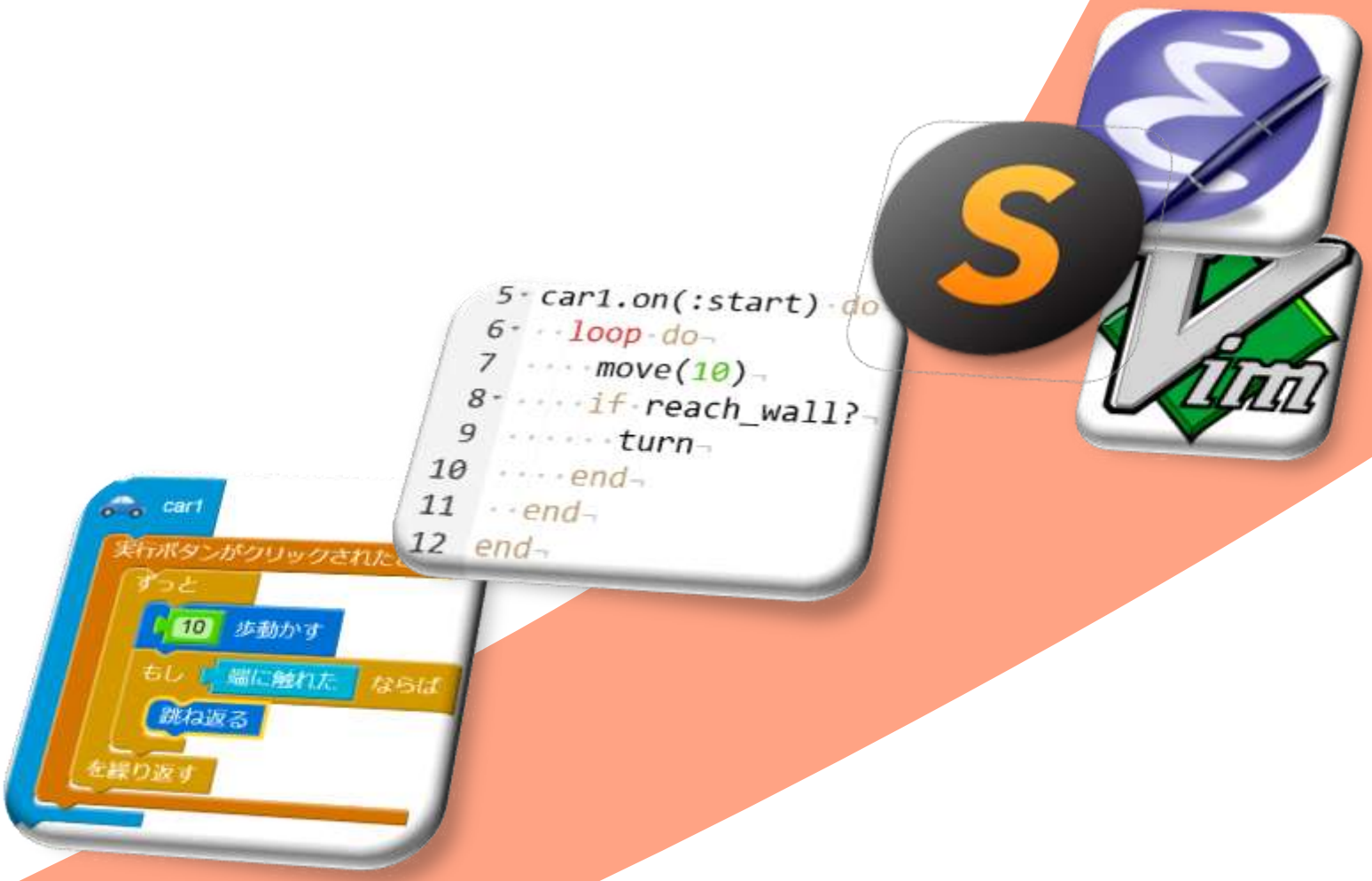
```
class MotionMove < CharacterMethodCall
  blocknize '^¥s*' + CHAR_RE + 'move¥((.+)¥)¥s*$',
                statement: true, inline: true

  def self.process_match_data(md, context)
    md2 = regexp.match(md[type])
    add_character_method_call_block(
      context, md2[1], new, STEP: md2[2])
    true
  end
end
```

We think...

Programming > **Creativity and Logical thinking**

http://mashable.com/2014/05/20/surface-pro-3-macbook-air-compared/



Vim Icon : http://www.vim.org/index.php
Emacs icon : http://ochiailab.blogspot.jp/2013/04/powerlineelemacs.html
Sublime Text icon : http://blog.livedoor.jp/nonprofessional/archives/1004031653.html

Conclusion

The Ruby Proshou
Programming education
Smalruby

まとめ

プログラミング少年団
プログラミング教育
スモウルビー

Welcome
Developers,
Workshop
Owners

Ruby is

A Programmer's Best Friend and Kids

Q & A

Contact us:

@smalruby

contact@smalruby.jp

fb:Rubyプログラミング少年団

Ruby
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