

All About Me

Joshua Wehner, Unspace
@jaw6, joshua@unspace.ca

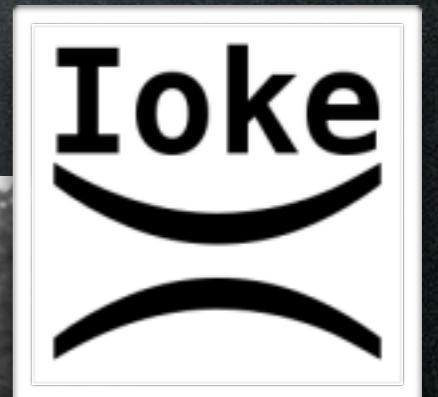
A story

- ▶ About a year ago...
- ▶ Working in Amsterdam
- ▶ Innovation Factory
- ▶ Sam Aaron
(@samaaron)



All About Ioke

- ▶ Sounds like Eye-Oh-Key
- ▶ Ola Bini: JRuby Core,
ThoughtWorks
- ▶ Dynamic, strongly typed
- ▶ Hosted on the JVM
- ▶ Inspired by Io, Smalltalk,
Self, Lisp
- ▶ Prototype-based,
homoiconic



<http://github.com/olabini/ioke/>
<http://olabini.com/blog/>

Can your language do this?

```
RPS = Origin mimic do(
    Player = Origin mimic
    Field = Origin mimic

    Field pass = macro(
        RPS Player with(name: call message name asText, field: self))

    scores = {} withDefault(0)

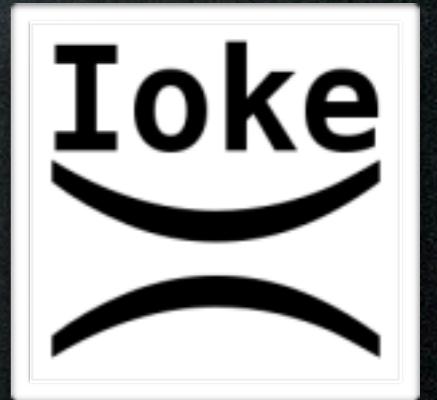
    Player throws = macro(
        field plays << (self name => call message next name)
        call message -> call message next next
    )

    win = method(p,
        scores[p key] += 1
        "#{p key} wins" println)

    draw = method("Draw" println)

    play = macro(
        field = Field with(plays: [])
        call arguments[0] evaluateOn(field)
        p1 = field plays[0]
        p2 = field plays[1]

        case([p1 value, p2 value],
```

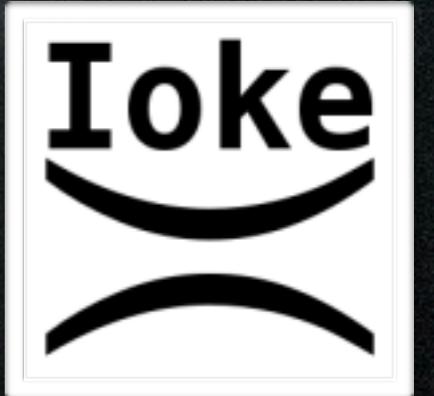


Rock Paper Scissors.ik

```
System ifMain()
    RPS play()
        Carlos throws paper
        Ola throws rock
    )

    RPS play()
        Carlos throws scissors
        Ola throws rock
    )

    RPS play()
        Carlos throws scissors
        Ola throws scissors
    )
)
```



Rock Paper Scissors.rb

```
RPS.play {  
    Sam throws paper  
    Ola shoots rock  
}
```

```
RPS.play {  
    Sam throws paper  
    Ola shoots scissors  
}
```

```
RPS.play {  
    Sam throws rock  
    Ola shoots rock  
}
```



Rock Paper Scissors.rb

```
RPS.play {  
    Sam throws paper  
    Ola shoots rock  
}  
  
RPS.play {  
    Sam throws paper  
    Ola shoots scissors  
}  
  
RPS.play {  
    Sam throws rock  
    Ola shoots rock  
}
```

```
def method_missing(method_name, object=nil)  
    if [:paper, :rock, :scissors].include? method_name  
        method_name.to_s  
    elsif RPS.playing_with?(method_name)  
        RPS.play_as(Player.new(:name => method_name.to_s))  
    elsif [:throws, :shoots].include?(method_name)  
        RPS.play_with(object)  
    else  
        method_name.to_s  
    end  
end
```



Stupid Language Tricks

```
System ifMain(
```

```
    RPS play(
```

```
        Carlos throws paper
```

```
        Ola throws rock
```

```
)
```

```
    RPS play(
```

```
        Carlos throws scissors
```

```
        Ola throws rock
```

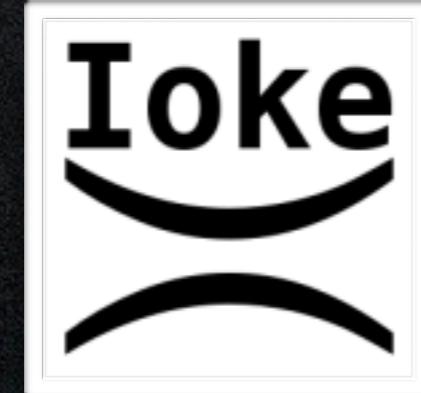
```
)
```

```
    RPS play(
```

```
        Carlos throws scissors
```

```
        Ola throws scissors
```

```
)
```



```
RPS.play {
```

```
    Sam throws paper
```

```
    Ola shoots rock
```

```
}
```

```
RPS.play {
```

```
    Sam throws paper
```

```
    Ola shoots scissors
```

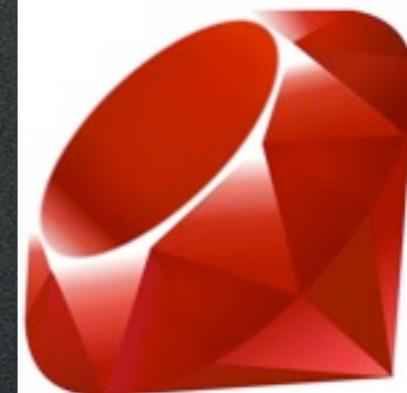
```
}
```

```
RPS.play {
```

```
    Sam throws rock
```

```
    Ola shoots rock
```

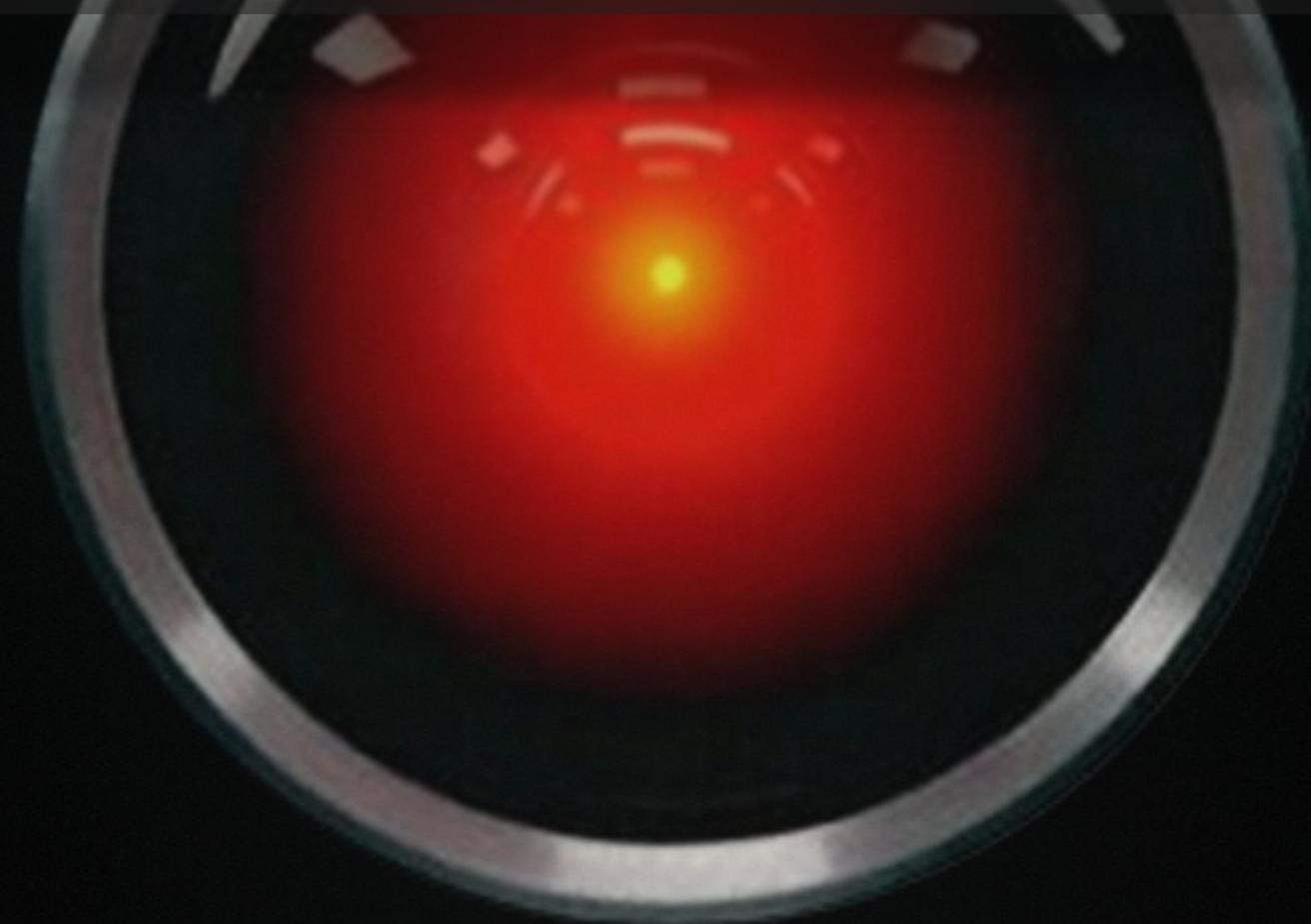
```
}
```



```
[Hal open:[Doors getByLocation:podbay]]
```

```
HAL.open(Door.find(:all, :podbay))
```

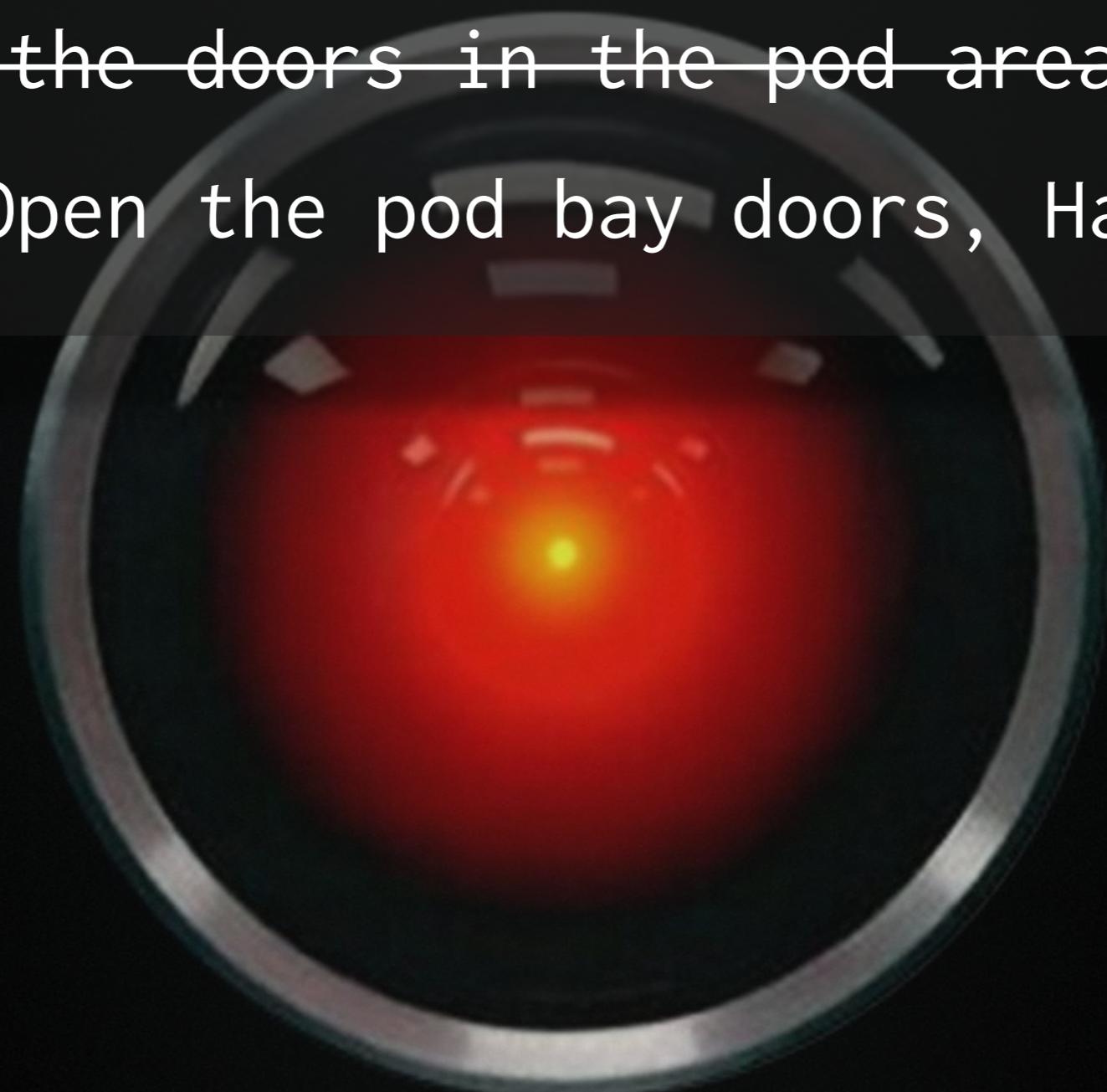
Open the pod bay doors, Hal.



~~Hal, could you open those doors?~~

~~Open the doors in the pod area, Hal.~~

Open the pod bay doors, Hal.

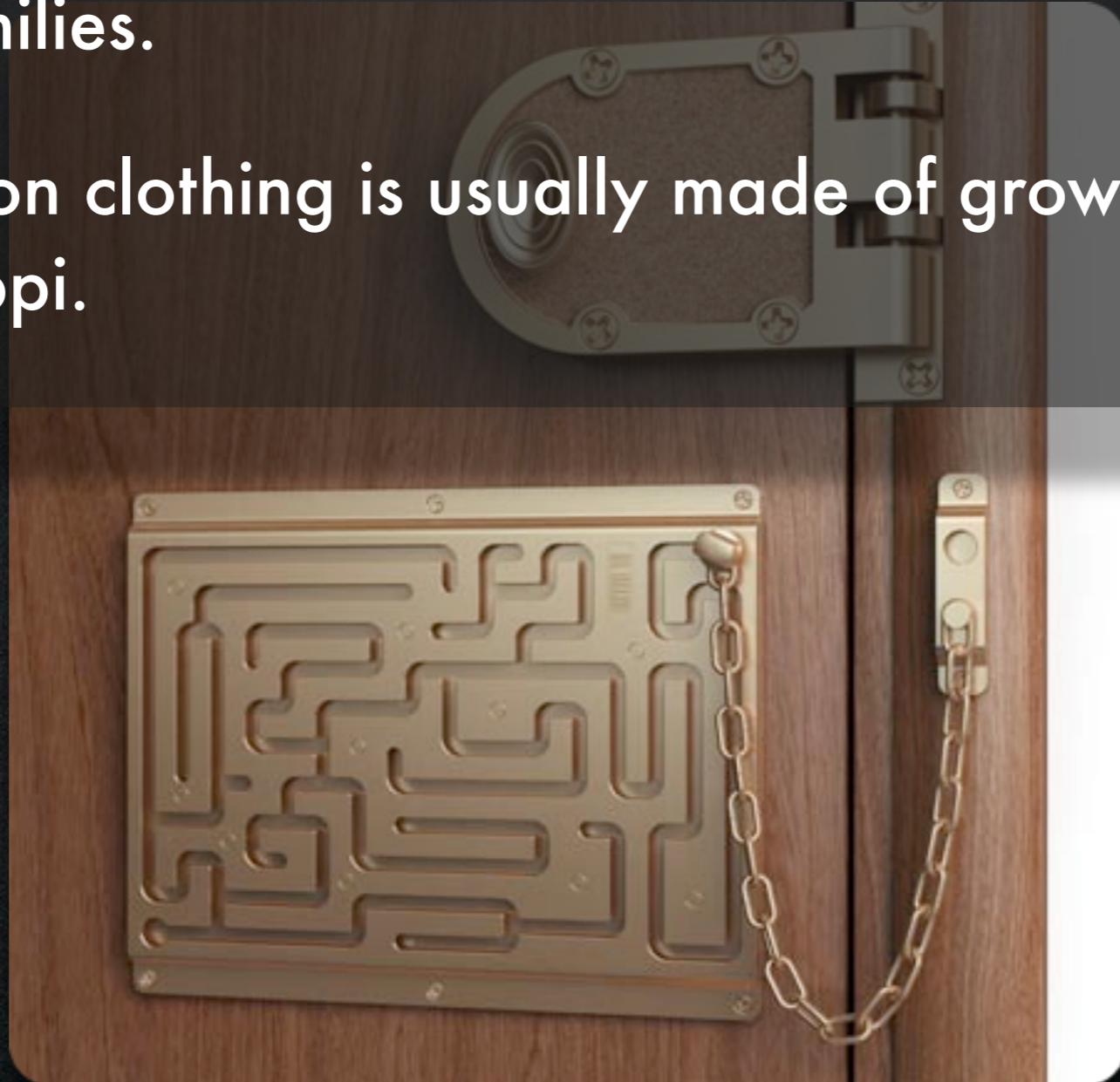


'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe:
All mimsy were the borogoves,
And the mome raths outgrabe.
"Beware the Jabberwock, my son!
The jaws that bite, the claws that
catch!
Beware the Jubjub bird, and shun
The frumious Bandersnatch!"
He took his vorpal sword in hand:
Long time the manxome foe he
sought-
So rested he by the Tumtum tree,
And stood awhile in thought.



Language is tricky

- ▶ Until the police arrest the drug dealers control the street.
- ▶ The complex houses married and single students and their families.
- ▶ The cotton clothing is usually made of grows in Mississippi.



Sub Shop DSL

I'd like a ham and
cheese on rye, extra
mayo, hold the pickles

rye, size:regular,
+cheese, +ham,
++mayo,
-pickles



ThePeoplesCube.com

An Informal Survey

- “It’s what the client ~~demanded~~
requested”
- “It’s on the ‘approved’ list”
- Works with other library/vendor/API

**In other words: language had
nothing to do with it**

You don't hear...

“It was better writing ...

```
NSString = @"String here";
```

```
for(i=0;i<=array.size();i++)
```

than writing ...

```
string = 'String here'
```

```
for widget in container
```

for our project.”

Bright, Shiny Future

- ▶ JVM: loke, JRuby, Clojure, Scala
- ▶ .Net: loke, IronRuby, IronScheme, IronLisp
- ▶ Perl6/Parrot



Cucumber.rb

```
# language: en
Feature: Addition
  In order to avoid silly mistakes
  As a math idiot
  I want to be told the sum of two numbers
```

Scenario Outline: Add two numbers

```
Given I have entered <input_1> into the calculator
And I have entered <input_2> into the calculator
When I press <button>
Then the result should be <output> on the screen
```

Examples:

input_1	input_2	button	output
20	30	add	50
2	5	add	7
0	40	add	40

Oh, Nothing Much, Just Inventing New Languages



Credit where due

Buck Rogers Toys - http://www.bergintoys.com/sp_vehicles/2005-Feb/index.html - Trinity College Library - <http://www.flickr.com/photos/ec-jpr/3493900135/> - Jabberwocky by Lewis Carroll - <http://www.jabberwocky.com/carroll/jabber/jabberwocky.html> - Soup Nazi / Hope by ThePeoplesCube.com - <http://thepeopescube.com/red/viewtopic.php?t=1884> - Garden Path Sentences by Fun-With-Words.com - http://www.fun-with-words.com/ambiguous_garden_path.html - “Defendius door chain” by Art Lebedev studio - <http://www.artlebedev.com/everything/defendius/> - “Perils of Modern Science” by travis76/Threadless - http://www.threadless.com/submission/104911/Perils_of_Modern_Science/showmore,designs