

Everything You Know

About REST is

WRONG!!!! |

by @steveklabnik

If you think REST is about...

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- Pretty URLs

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- Routing

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- HTTP Methods

If you think REST is about...

- Pretty URLs
- Routing
- HTTP Methods
- JSON or XML

ARE YOU COMING TO BED?

I CAN'T. THIS
IS IMPORTANT.

WHAT?

SOMEONE IS WRONG
ON THE INTERNET.



Who?



Who?



Who?



Who?



Info

Text TWL53 to 46876 to ask a question, follow up with me, or get my slides.

[@steveklabnik](#)

<http://spkr8.com/t/8365>



- Pretty URLs
- Routing
- HTTP Methods
- JSON

Actually...

- Resources
- Representations
- Hypermedia

Resources

Any information that can be named can be a resource: a document or image, a temporal service (e.g. "today's weather in Los Angeles"), a collection of other resources, a non-virtual object (e.g. a person), and so on.

Representations

Presentation of that resource

Hypermedia

Interconnectedness between the representations of resources

Other Options?

*-RPC

SOAP

Guiding Principles

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- XML-RPC: remote procedure call

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- XML-RPC: remote procedure call
- SOAP: Simple Object Access Protocol

Guiding Principles

- XML-RPC: remote procedure call
- SOAP: Simple Object Access Protocol
- REST: Representational State Transfer

REST is not about exposing
your objects over the web

REST is not about exposing
your database over the web

REST is is an “architectural style
for distributed hypermedia systems.
REST provides a set of architectural
constraints that, when applied as a
whole, emphasizes scalability of
component interactions, generality of
interfaces, independent deployment of
components, and intermediary
components to reduce interaction
latency, enforce security, and
encapsulate legacy systems.”

architectural style



impressionism



SafeSearch moderate

Advanced search

Search

About 523,000 results (0.10 seconds)

Everything

Related searches: french impressionism impressionism monet post impressionism modern impressionism impressionism wallpaper claudes monet

Images

Maps

Videos

News

Shopping

Books

More

Sort by relevance

Sort by subject

Any size

Large

Medium

Icon

Larger than...

Exactly...

Any color



distributed hypermedia

HATEOAS

scalability



Glory of REST



Level 3: Hypermedia Controls

Level 2: HTTP Verbs

Level 1: Resources

Level 0: The Swamp of POX



Level 0

POST <http://foo.com/phoneService> HTTP/1.1

<sms>Hello, world!</sms>

POST <http://foo.com/phoneService> HTTP/1.1

<say>Hello, world!</say>

Glory of REST



Level 3: Hypermedia Controls

Level 2: HTTP Verbs

Level 1: Resources

Level 0: The Swamp of POX



Level I

POST <http://foo.com/newText> HTTP/1.1

<sms>Hello, world!</sms>

POST <http://foo.com/newCall> HTTP/1.1

<say>Hello, world!</say>

Glory of REST



Level 3: Hypermedia Controls

Level 2: HTTP Verbs

Level 1: Resources

Level 0: The Swamp of POX



Level 2

POST http://foo.com/texts HTTP/1.1

<sms>Hello, world!</sms>

GET http://foo.com/texts/1 HTTP/1.1

<sms>Hello, world!</sms>



Glory of REST



Level 3: Hypermedia Controls

Level 2: HTTP Verbs

Level 1: Resources

Level 0: The Swamp of POX



HATEOAS



Hateoas

Toasted Whole Grain Oat Cereal



AS PART OF A HEART-HEALTHY DIET, THE SOLUBLE FIBER IN
Cheerios May Reduce Your Cholesterol!™

Three grams of soluble fiber daily from whole-grain oat foods, like Cheerios, in a diet low in saturated fat and cholesterol, may reduce the risk of heart disease. Cheerios has 1 gram per cup.

NET WT 10 OZ (283g) ©



1 FREE INSIDE FIRST PENNIES OF THE NEW MILLENNIUM
YOU COULD ALSO WIN \$1 OR \$100 IN NEW GOLDEN DOLLAR COINS
SEE BACK FOR DETAILS

... how I stopped worrying and
learned to love the rel attribute

... rel?

relation

GET http://localhost:3000/

```
<html>
  <body>
    <h1>Stuff you can do</h1>
    <ul>
      <li>
        <a href="/posts/new" rel="/rels/newpost">Make a new post</a>
      </li>
    </ul>
  </body>
</html>
```

GET http://localhost:3000/

```
<html>
  <body>
    <h1>Stuff you can do</h1>
    <ul>
      <li>
        <a href="/posts/new" rel="/rels/newpost">Make a new post</a>
      </li>
    </ul>
  </body>
</html>
```

GET http://localhost:3000/

```
<html>
  <body>
    <h1>Stuff you can do</h1>
    <ul>
      <li>
        <a href="/lol/wtf" rel="/rels/newpost">Make a new post</a>
      </li>
    </ul>
  </body>
</html>
```

Pseudocode: Bad Way

- Construct a 'new post' URL
- Submit the form it gives you
- Construct a 'review post' url
- Submit the form it gives you

Pseudocode: Bad Way II

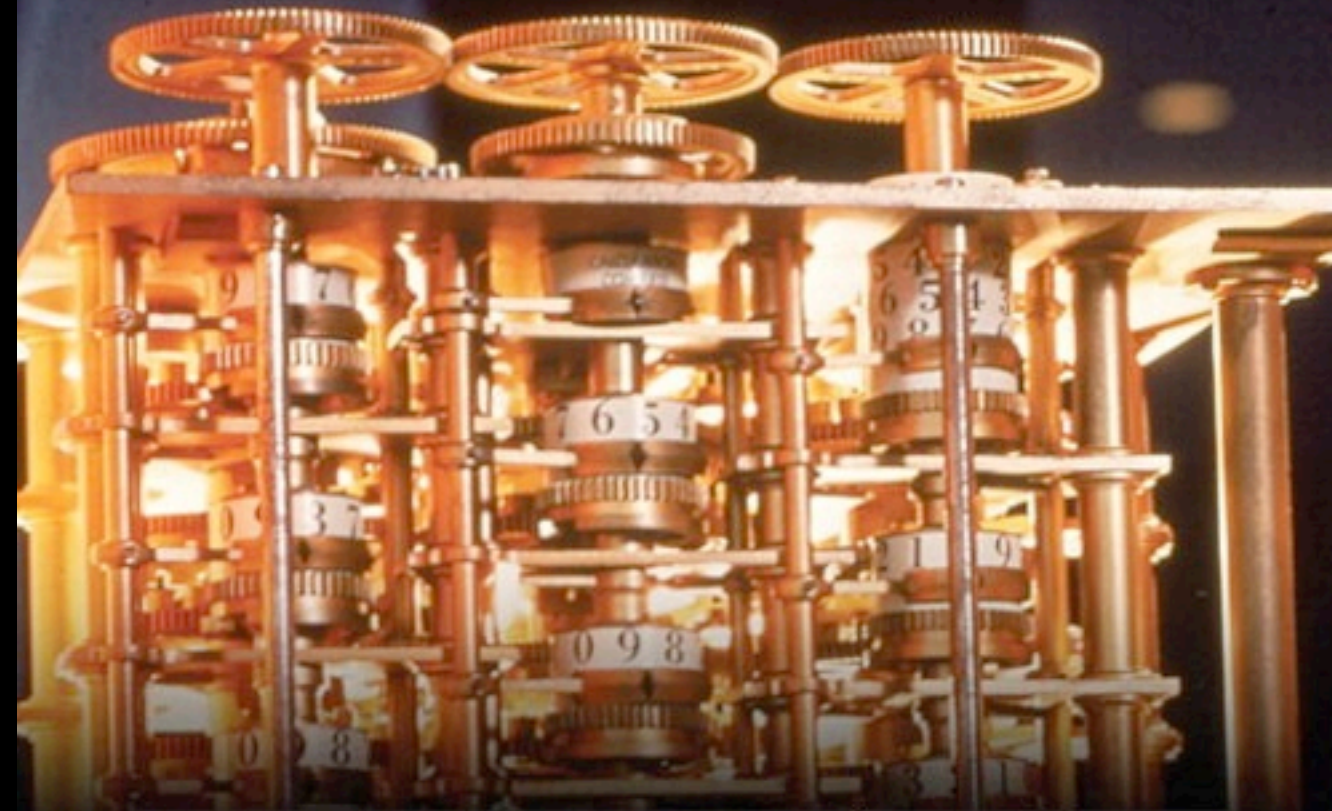
- Hit API Root
- Follow the link to `/posts/new`
- Submit the form it gives you
- Follow the link to `/posts/1/review`
- Submit the form it gives you

Pseudocode: Good Way!

- Hit API Root
- Follow the “new-post” rel
- Submit the form it gives you
- Follow the “review-post” rel
- Submit the form it gives you

Client code does not break!

Robert C. Martin Series



**WORKING
EFFECTIVELY
WITH
LEGACY CODE**

Michael C. Feathers

RESTful

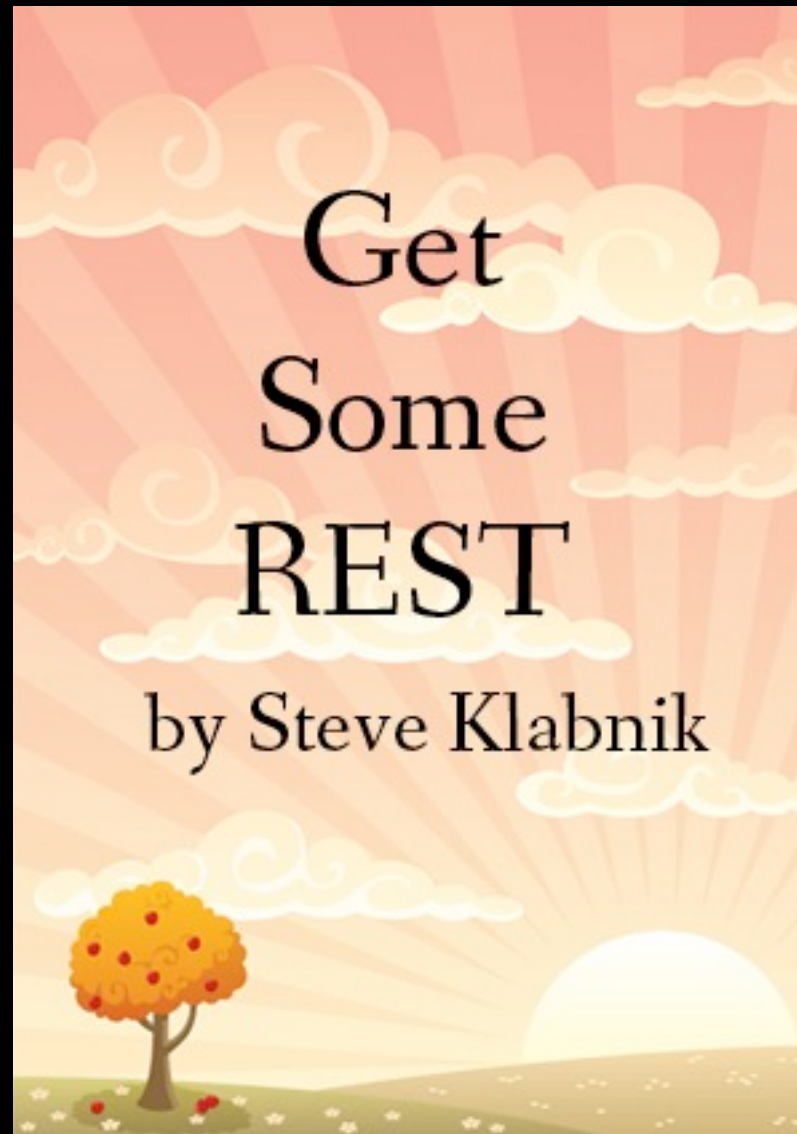
RESTish

"When I use a word," Humpty Dumpty said, in a rather scornful tone, "it means just what I choose it to mean - neither more nor less."

- Lewis Carroll -- Through the Looking Glass,
Chapter 6

Hypermedia APIs

[@getsomere.st](http://getsomere.st)
[@getsomere.st](http://getsomere.st)



Thanks!

@steveklabnik

@getsomerestbook

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