10 Reasons Developers Hate Your API

(and what to do about it)

John Musser @johnmusser / API Science @apiscience

QCon NYC, 2014

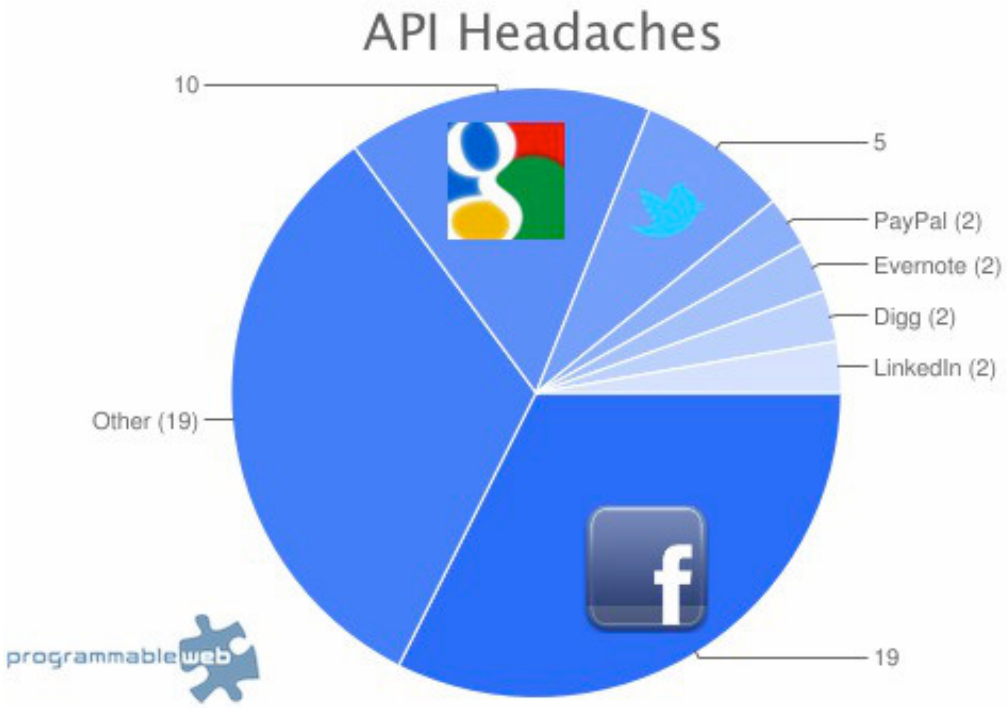
(private beta)

TechCrunch

Facebook Wins "Worst API" in Developer Survey

Posted Aug 11, 2011 by Sarah Perez (@sarahintampa)

144 Like 1.7k Tweet 1,741 Share 0



11 JULY 2011

PayPal, You Suck, Your API Sucks, And So Does Your Documentation

For the past two weeks I have been grappling with creating a PayPal integration for Gameolith. PayPal's documentation (located at x.com) is frequently outdated, inaccurate, incomplete and even contradicts itself many a time. Their sandbox is buggy and broken, and went down shortly before I was about to launch, forcing me to delay its launch for more than a week.

The Many Ways in Which the Yammer API Sucks

Posted on Sunday, the 1st of March, 2009.

Tagged: api, rest, sucks and yammer

A lot of the guys out in our San José office have been using Yammer recently. For the uninitiated, Yammer is a lot like Twitter, but with access controls, making it more suitable for communication within a company.

Yammer exposes an API for developers to hook into, so I thought it would make for a fun Sunday afternoon project to see if I could put together an Opera Panel interface, which - if done right - might double as a mobile Web interface. Unfortunately the Yammer API is *awful*, so awful that it's basically futile to try to work with it. Here are some of the ways in which the Yammer API sucks.

Forrest Zeisler
@fzeisler

Follow

Quickbooks Online API sucks. Instead of fixing it, they tell you to suck it up, or switch to 20% revenue sharing. idnforums.intuit.com/messageview.as…

Reply Retweet Favorite Buffer Pocket More

6:45 AM - 28 Mar 2012

Polldaddy's API Sucks

zzzzBov

I've recently been doing some work involving polldaddy. I
straight-forward to go from the concept of a poll to puttin
Unfortunately for me, I need to delve a little deeper and g

Warning sign that your API sucks

Posted by Tom Limoncelli | Fri, 20 Sep 2013
see the original posting from Everything Sysadmin

People say things like, "Can you just send me a copy of data?"

If people are taking your entire database as a CSV file and processing it themselves, your API sucks.

(Overheard at an ACM meeting today)

REASON #1

Your documentation sucks

ISSUES

Out of date

Inaccurate

Incomplete

No getting started

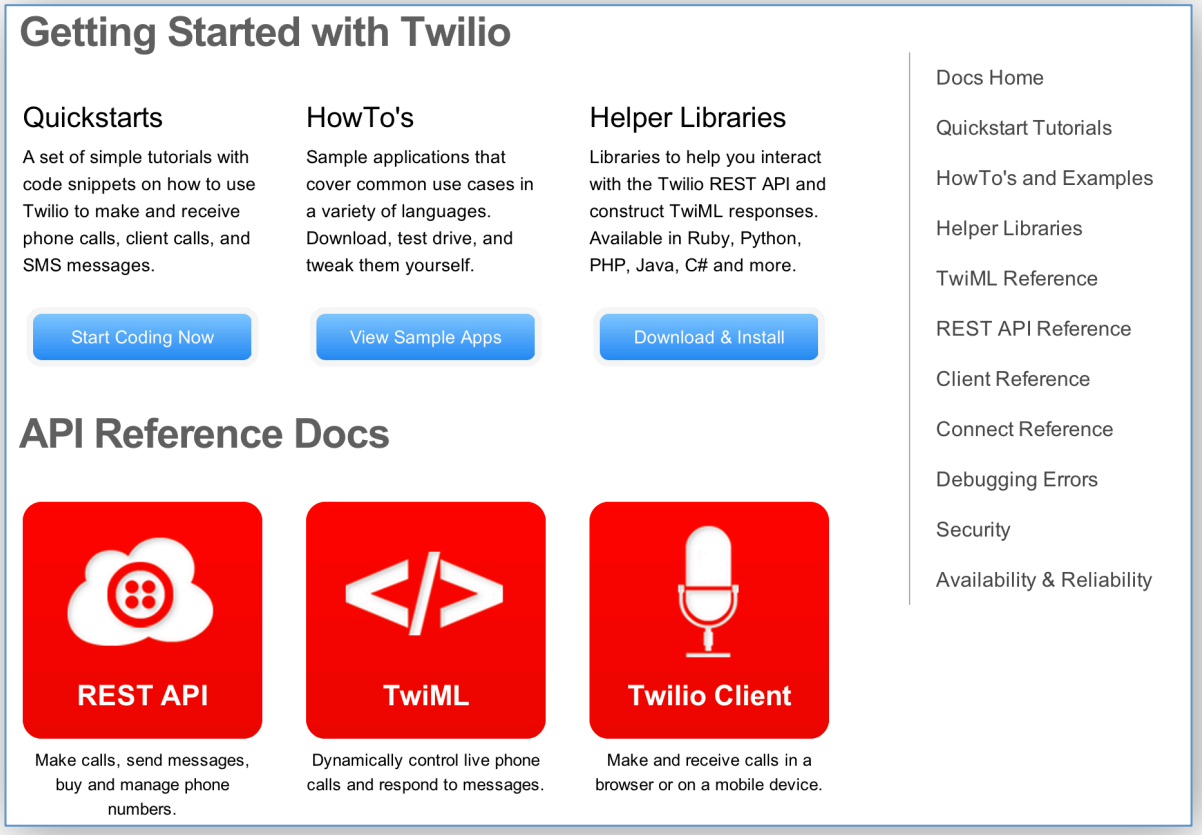
Static

Unprofessional

Unloved

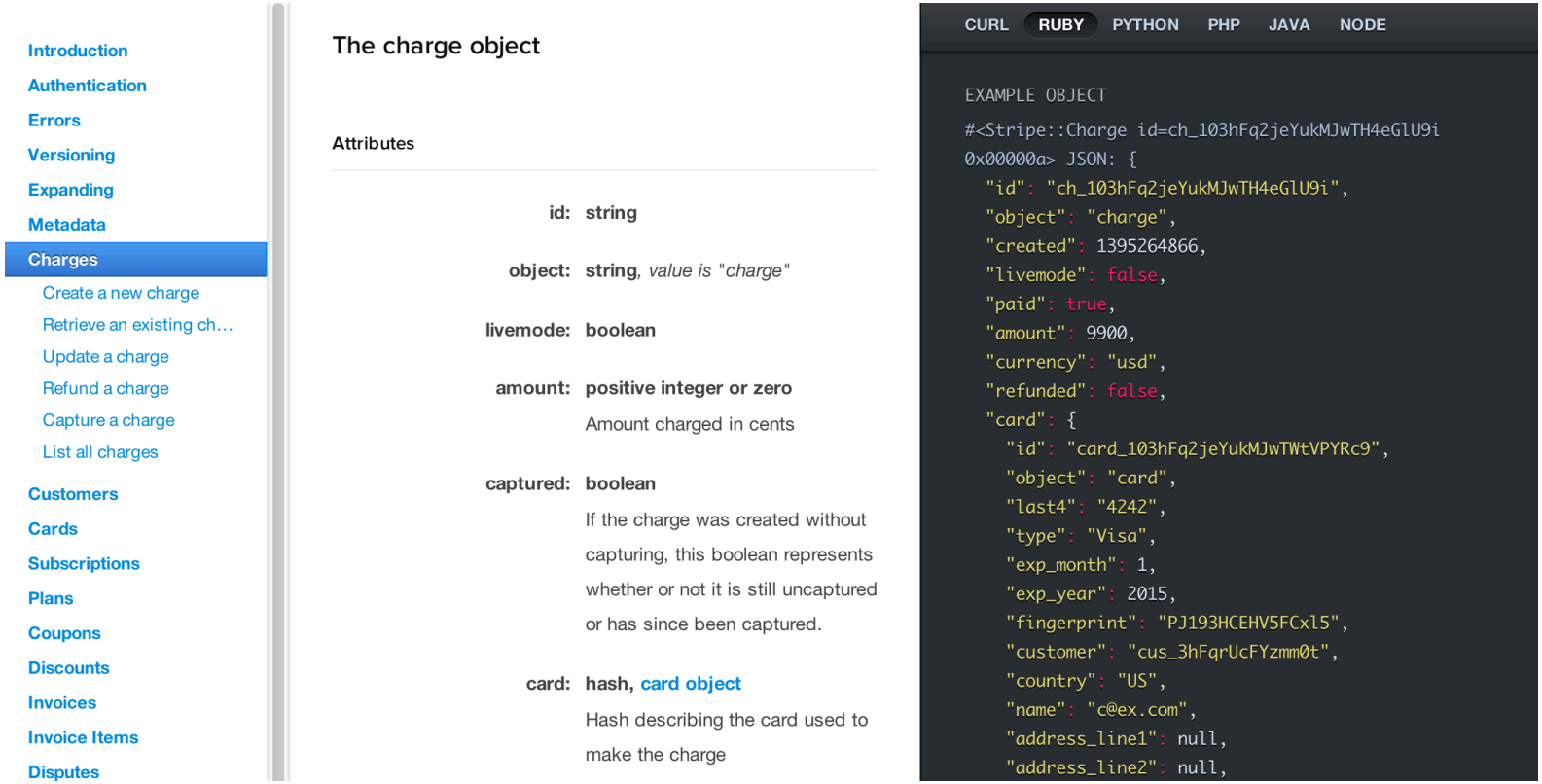
FIX #1

Big picture



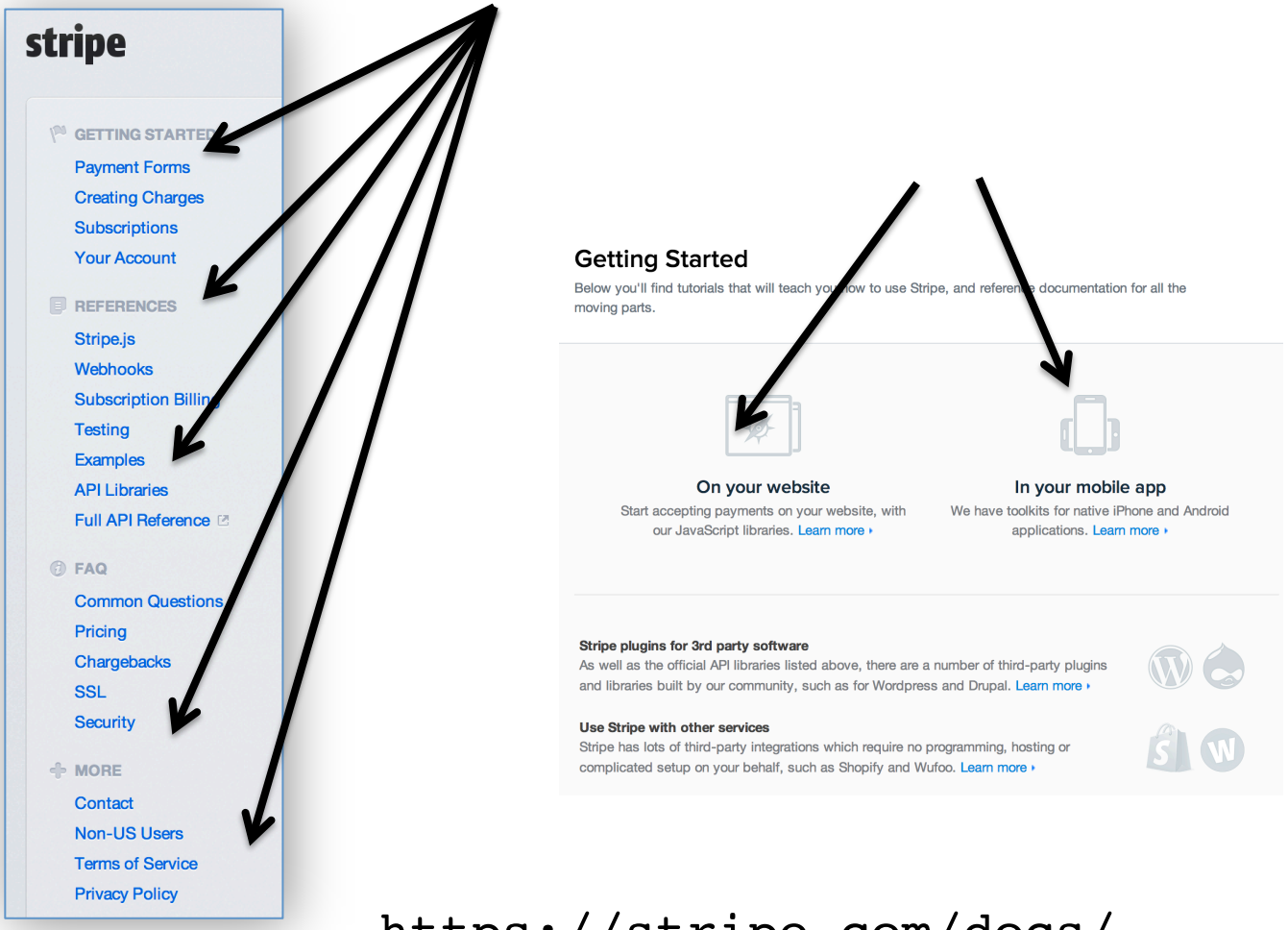
https://www.twilio.com/docs

FIX #2 Clarity



https://stripe.com/docs/api

FIX #3 Find-ability



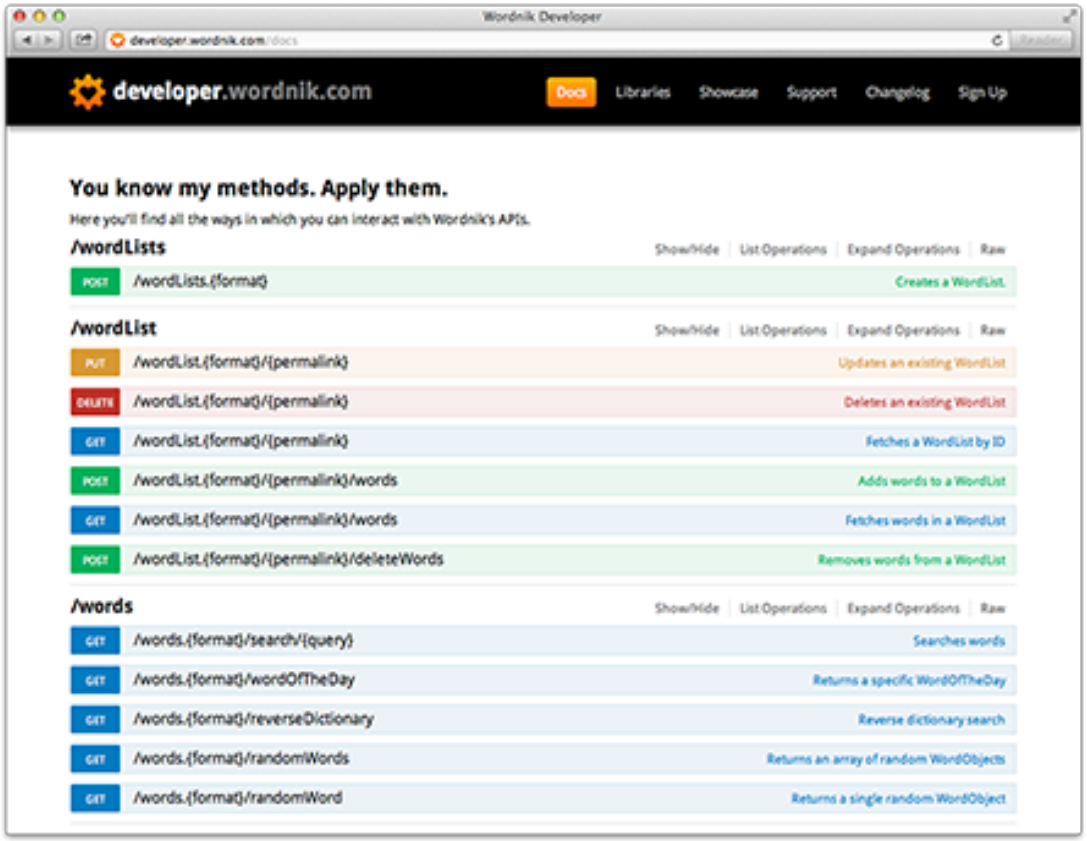
https://stripe.com/docs/

FIX #4

Live Docs

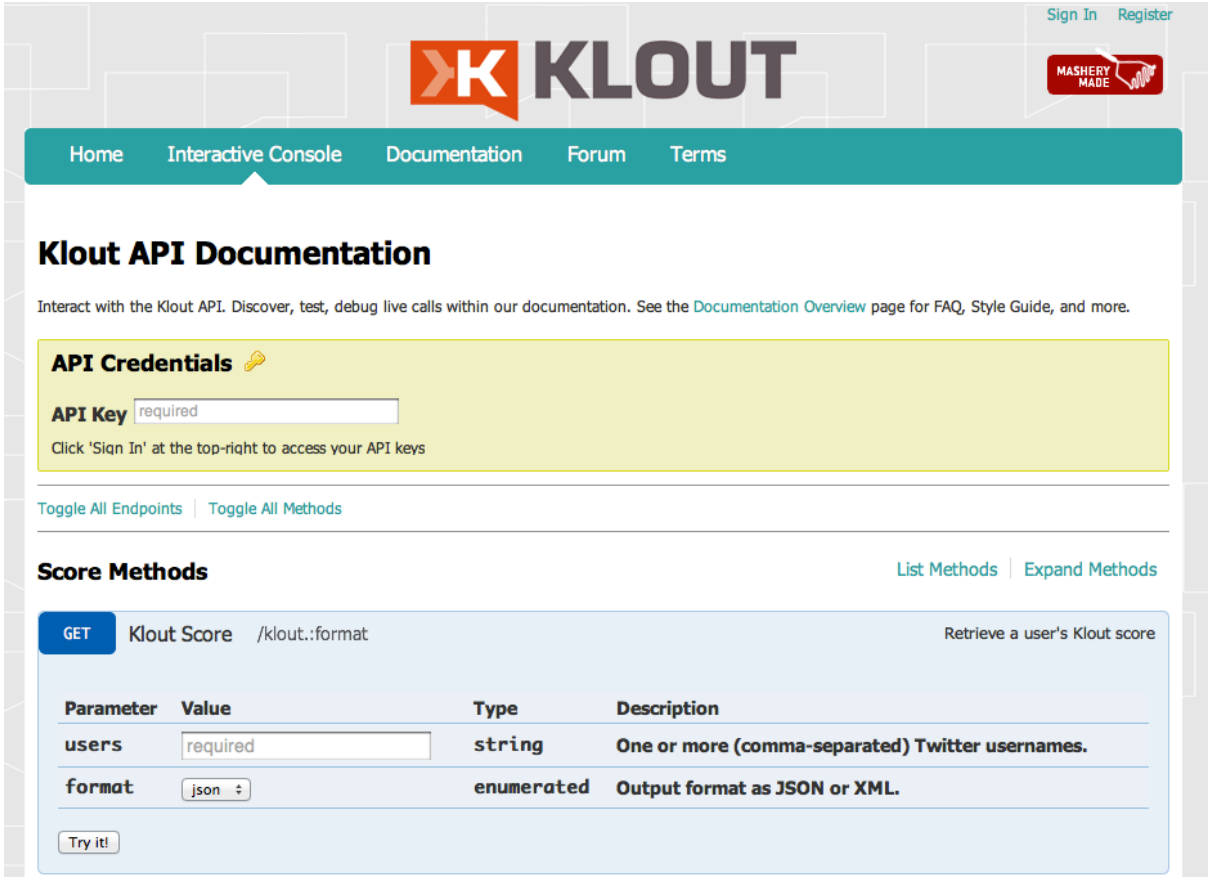
Interactive documentation,
like...

Swagger



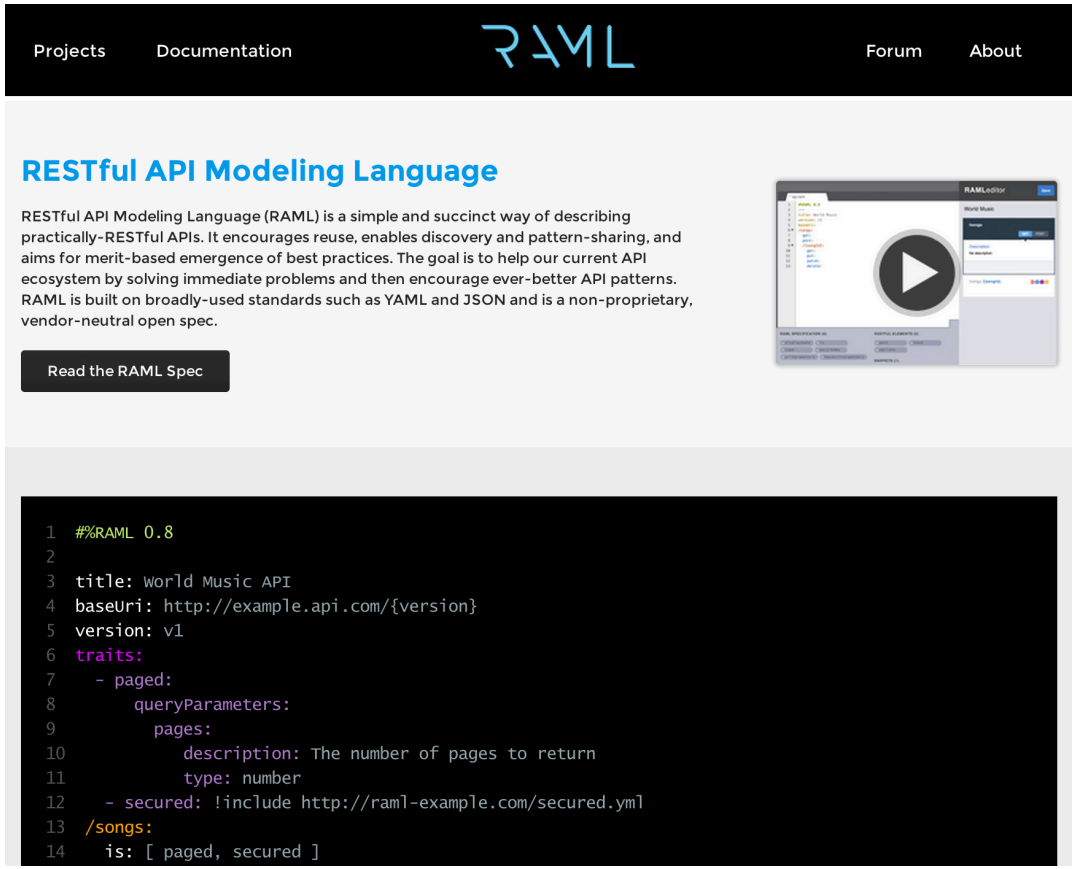
https://github.com/wordnik/swagger-core

I/O Docs



https://github.com/mashery/iodocs

RAML



RESTful API Modeling Language
raml.org

REASON #2

Your communication skills need work

REASON #2B

You don't keep your developers informed

ISSUES

Infrequent communication

You broke my code without warning

Too many/few channels

Where do I get support again?

FIX #1 Change Log

Reminder: March 12 Cutover Test for Default Media Type

March 5, 2014 jasonrudolph

Improved timezone handling in the API

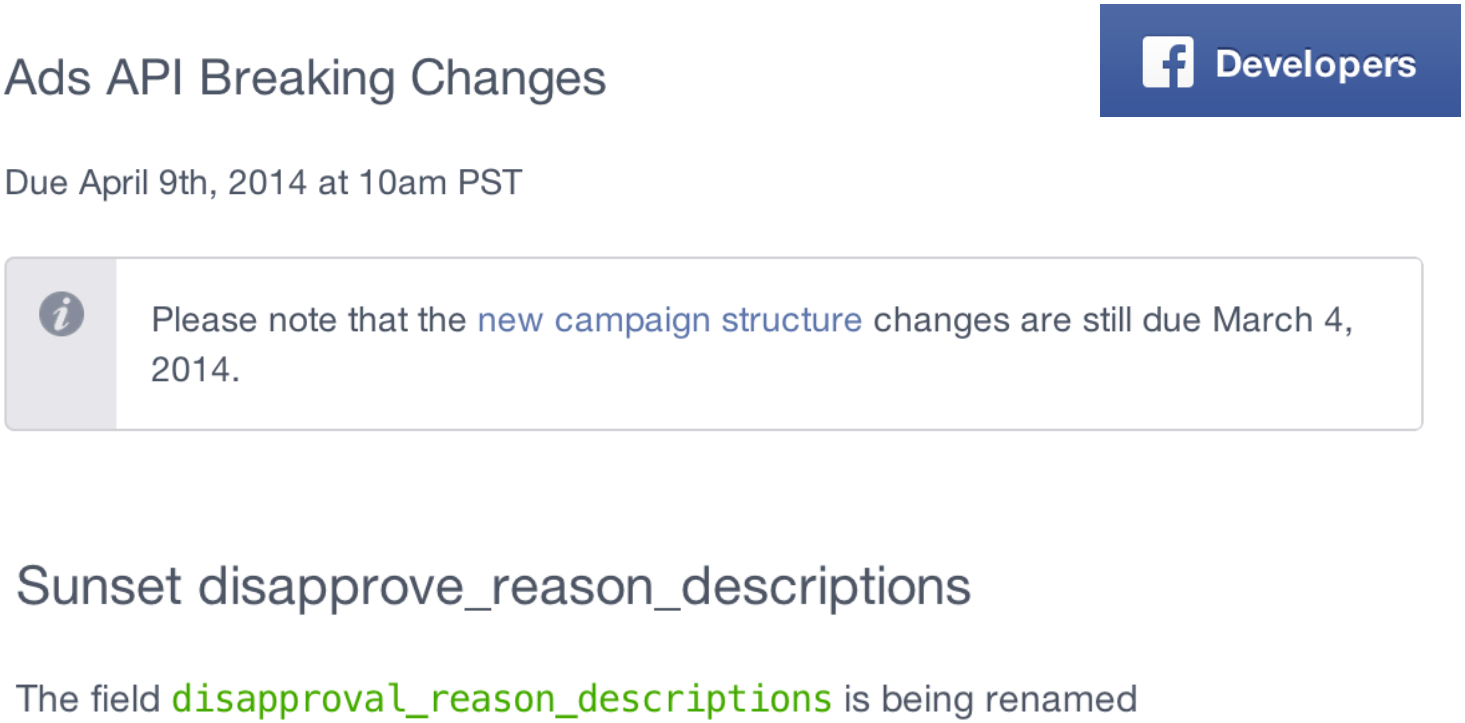
March 4, 2014 dbussink

New Payload Format for Deployments

March 3, 2014 atmos

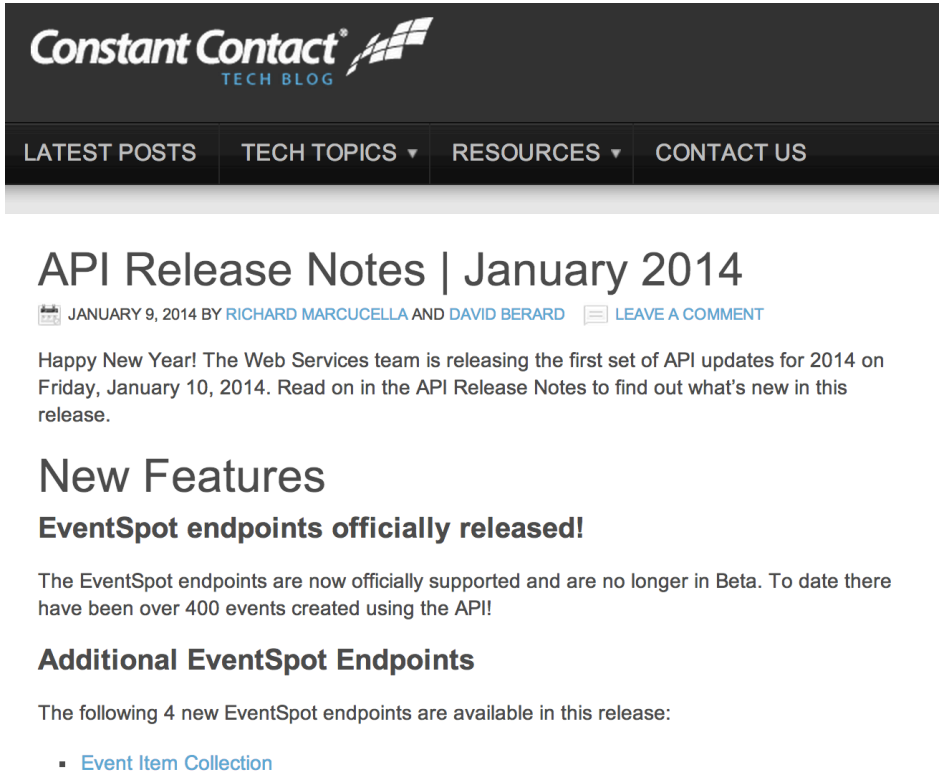
http://developer.github.com/changes/

FIX #2 Roadmap



https://developers.facebook.com/roadmap/

FIX #3 Release Notes



http://techblog.constantcontact.com/api/release-updates

FIX #4

Blog

Amazon Web Services Blog

Amazon Web Services, Products, Tools, and Developer Information...

amazon web services

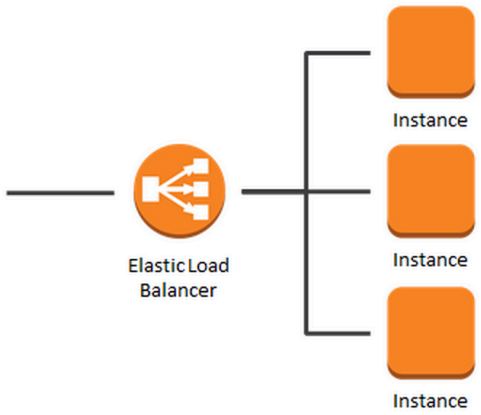
MORE AWS BLOGS

- AWS Blog (China)
- AWS Blog (Portuguese)
- AWS Blog (German)
- AWS Blog (Japanese)
- AWS Application Management
- AWS PHP Development
- AWS .NET Development
- AWS Ruby Development
- AWS Mobile Development
- AWS Java Development
- AWS Security

RECENT AWS CUSTOMER SUCCESS STORIES & VIDEOS

ELB Connection Draining - Remove Instances From Service With Care

AWS Elastic Load Balancing distributes incoming traffic across multiple Amazon EC2 instances:



You can use Elastic Load Balancing on its own, or in conjunction with Auto Scaling. When combined, the two features allow you

AWS Summit 2014

San Francisco
March 26

Register for Free today »

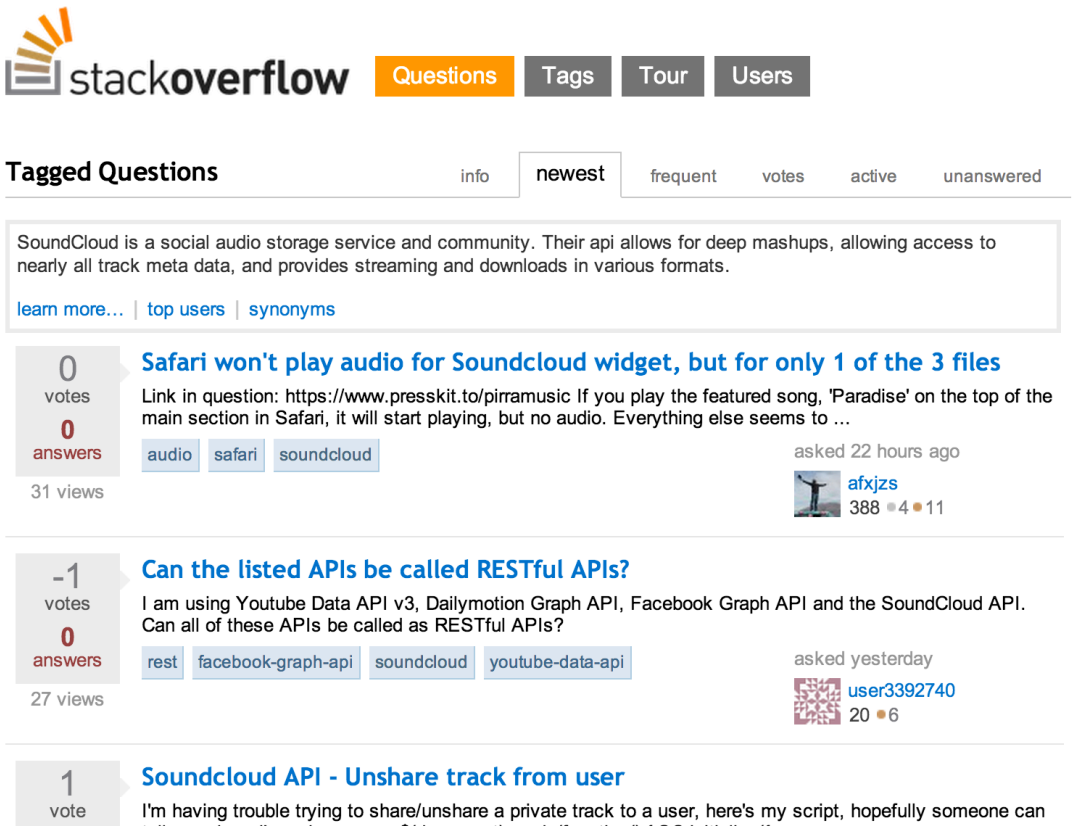
SEARCH

Search

http://aws.typepad.com/

FIX #5

Forum



http://stackoverflow.com/questions/tagged/soundcloud

FIX #6

Email

Team Twilio <news@twilio.com>
to john

Mar 4

newsletter

MARCH EDITION

VIEW ONLINE | FORWARD TO FRIENDS

ahoy | THE TWILIO NEWSLETTER

FEATURED

Expanding SMS Mobile Numbers in 6 New Regions

KEEP UP WITH TWILIO

LeadsCon West

Catch up with us at LeadsCon West, March 25-26th in Las Vegas.

Schedule some time with us »

Work at Twilio

We're looking for like-minded people to help us reinvent how the world communicates.

See all jobs »

REASON #3

You don't make it easy

ISSUES

No “hello world”

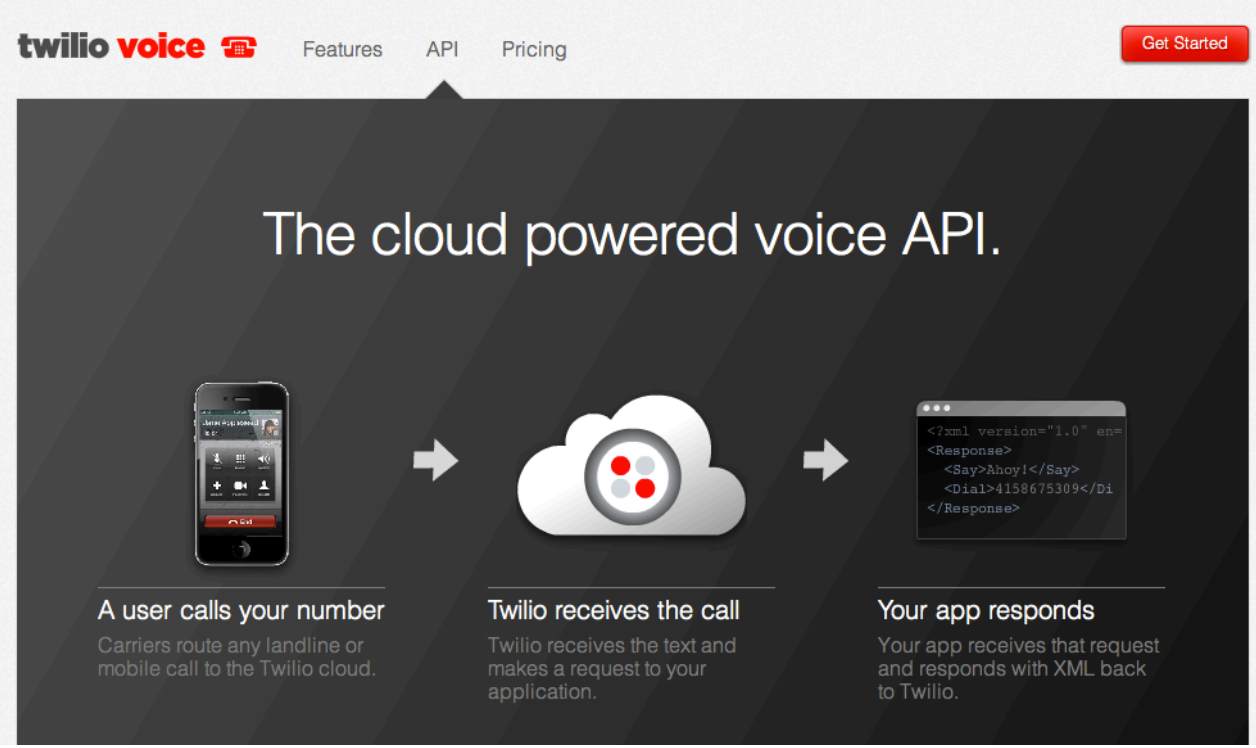
No getting started guide

How do I get my keys?

No SDKs / samples in my language

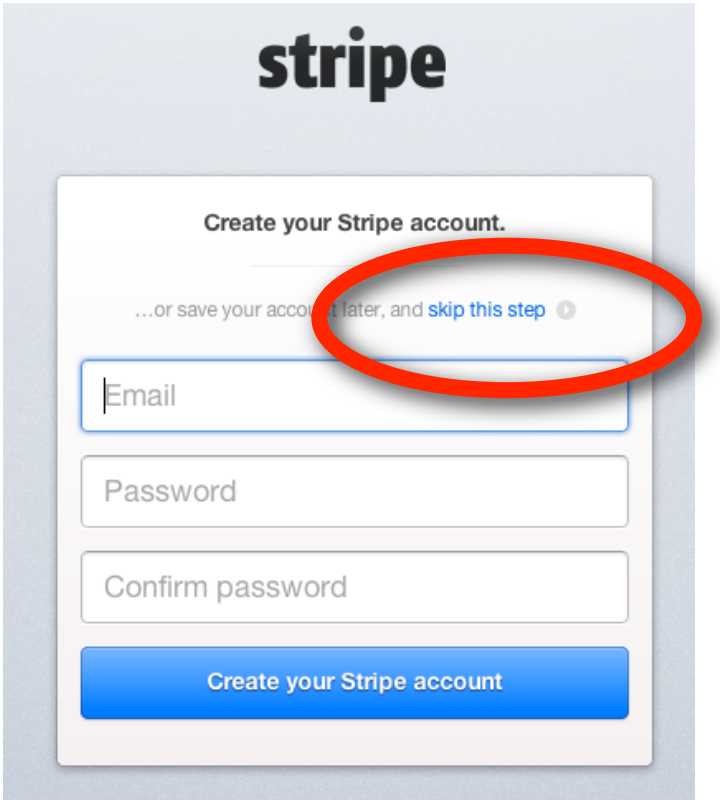
Nothing to copy & paste...

FIX #1 What do you do?



https://www.twilio.com/voice/api

FIX #2 Fast signup



(so fast, you can even skip this step till you're convinced...)

`https://manage.stripe.com/register`

FIX #3 The 1-2-3

Get Started with the Constant Contact API

Ready to start integrating with Constant Contact? We've made it easy for you to get started in just a few short steps. We leverage Mashery's robust API management platform to deliver a development experience that gives you the information and tools you need to quickly get your apps integrated with Constant Contact.

Step 1 **Set up your developer account, or log in if you're a returning developer.**

Step 2 **Get an API key to start integrating with us.**

- You'll also get these items for authenticating with the API key (keep them handy):
  - client id
  - client secret (don't share this with anyone, it's a secret)

Step 3 **Start your integration!**

- Create an access token that authorizes access to a Constant Contact account
- Make API calls using our API Tester
- Check out how we do authentication using OAuth 2.0.
- Get all of the support you need: visit our Code Libraries & samples, and API documentation.

Step 4 **Share your app with the world - Publish it in our MarketPlace.**

http://developer.constantcontact.com/get-started.html

FIX #4 Quickstarts

Twilio Quickstart Tutorials

These quickstarts are short, simple guides intended to help you get started using Twilio's Voice, Client, SMS and Connect APIs.

Voice

Receive Incoming Calls

The Hello Monkey Quickstart provides an introduction to the Twilio Markup Language (TwiML). The demo walks through the process of building a system to handle incoming calls that greets callers by name, plays an audio file, connects the call to another phone number, and lets callers leave an audio recording.

Learn More »

Quickstart Tutorials

Send and Receive SMS

1. Receiving Incoming Text Messages
2. Replying to Incoming Messages
3. Sending SMS Messages
4. Tracking Conversations
5. Sending SMS via TwiML

Handle Incoming Calls

1. Say a Message
2. Greet Caller By Name
3. Play MP3 for Caller
4. Connect Call to Second Person
5. Record Caller's Voice

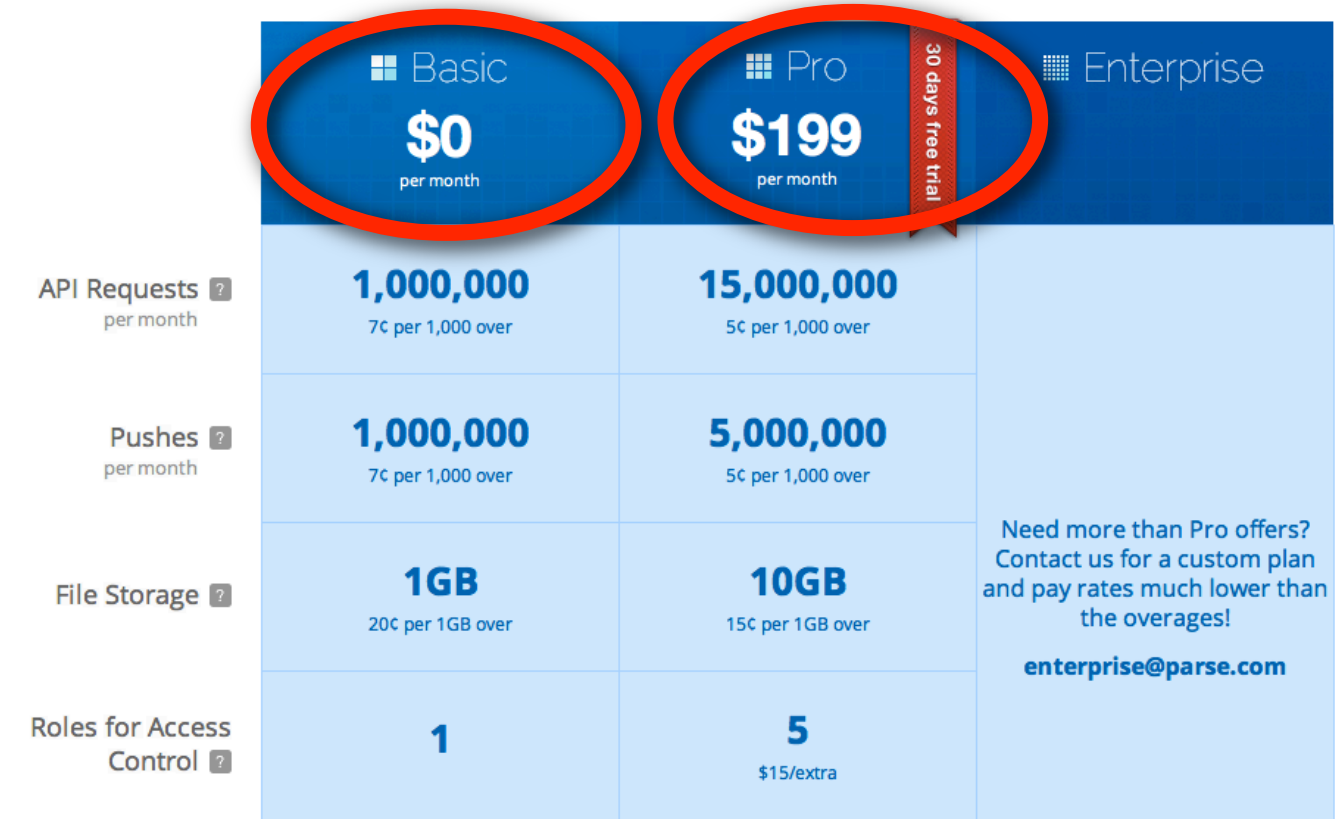
Make Outgoing Calls

1. Preparing a Call

`https://www.twilio.com/docs/quickstart`

FIX #5 Free & Trial

Parse



https://parse.com/plans

FIX #6 Copious SDKs

MailChimp

Downloads & API Wrappers

- Standard API
  - ColdFusion
  - Microsoft .NET Framework
  - ActionScript / Flash
  - FileMaker Pro
  - Grails
  - Java
  - Lasso
  - Node.js
  - Objective-C
  - Perl
  - PHP
  - Python / Django
  - Ruby / Rails
  - Wordpress
- Webhooks
- Export
- Example Code

Campaign Monitor

Ruby ›

A comprehensive Ruby library which implements the complete functionality of v3 of the Campaign Monitor API including graceful error handling.

Visit the Ruby repository

Python ›

A comprehensive Python library which implements the complete functionality of v3 of the Campaign Monitor API including graceful error handling.

Visit the Python repository

PHP ›

A comprehensive PHP library which implements the complete functionality of v3 of the Campaign Monitor API including graceful error handling.

Visit the PHP repository

.NET ›

A comprehensive .NET library which implements the complete functionality of v3 of the Campaign Monitor API including graceful error handling.

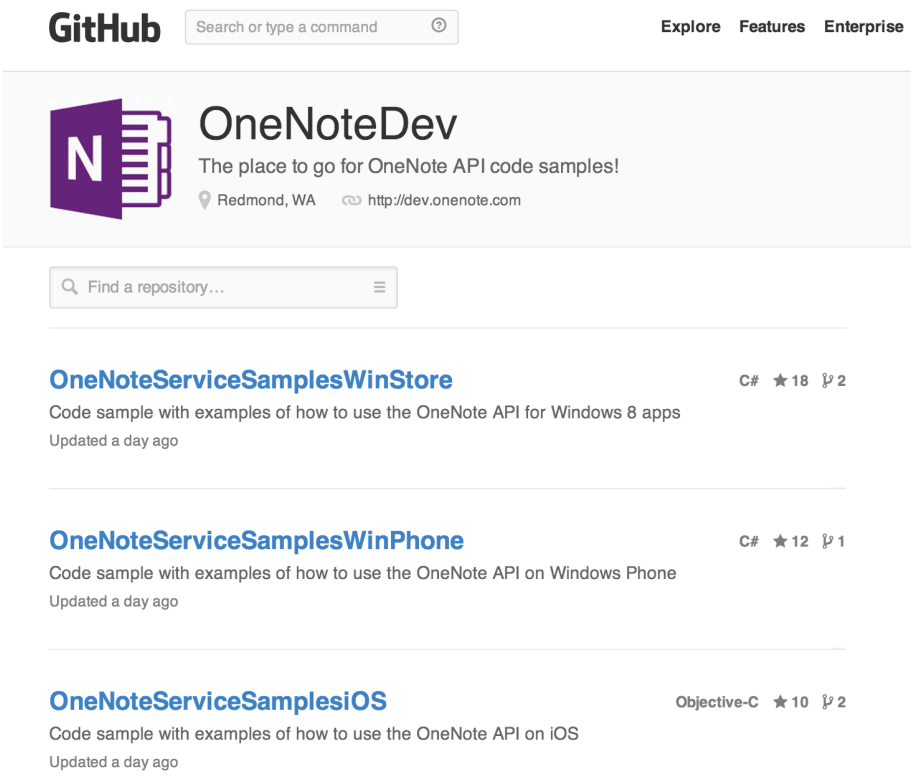
Visit the .NET repository

Java ›

A comprehensive Java library which implements the complete functionality of v3 of the Campaign Monitor API including graceful error handling.

Visit the Java repository

FIX #7 Use GitHub



https://github.com/OneNoteDev

REASON #4

Lawyers

ISSUES

It's all about you

Not setup for win-win

Commercial restrictions

No SLA

Rate limit / throttling issues

FIX #1

Be clear

Acceptance Of Terms

The web pages available at 500px.com and all linked pages ("Site"), are owned and operated by 500px, Inc. ("500px") a Canadian corporation and is accessed by you under the Terms of Use described below ("Terms").

Please read these terms carefully before using the services. By accessing the site, viewing any content or using any services available on the site (as each is defined below) you are agreeing to be bound by these terms, which together with our Privacy policy, governs our relationship with you in relation to the site. If you disagree with any part of the terms then you may not access the site.

Basically,

By using 500px you agree to all the terms below.

Description Of Service

The Site is an online community which enables photographers and graphic artists to post photographs and images, share comments, opinions and ideas, promote their work, participate in contests and promotions, and access and/or purchase services from time to time made available on the Site ("Services"). Services include, but are not limited to, any service and/or content 500px makes available to or performs for you, as well as the offering of any materials displayed, transmitted or performed on the Site or through the Services. Content ("Content") includes, but is not limited to text, user comments, messages, information, data, graphics, news articles, photographs, images, illustrations, and software.

Your access to and use of the Site may be interrupted from time to time as a result of equipment malfunction, updating, maintenance or repair of the Site or any other reason within or outside the control of 500px. 500px reserves the right to suspend or discontinue the availability of the Site and/or any Service and/or remove any Content at any time at its sole discretion and without prior notice. 500px may also impose limits on certain features and Services or restrict your access to parts of or all of the Site and the Services without notice or liability. The Site should not be used or relied upon for storage of your photographs and images and you are directed to retain your own copies of all Content posted on the Site.

Basically,

We develop a photo community and provide services to create online portfolios and we will develop more features and services in the future. At times things can go wrong and the service may be interrupted. Unlikely, but sometimes things can go really wrong.

http://500px.com/terms

FIX #2 Set the tone

API Terms of Use

Etsy

Introduction

Below this introduction is quite a bit of important legal language. Please read it.

Inside Etsy, we talk a lot about the importance of humanity, honesty and transparency in our communications. So, before you read on to the important legalese, we want to share a few thoughts in human and honest terms.

1. Etsy believes in the power of APIs to unleash the talents of developers around the globe to build new applications that extend Etsy's utility and help build the world's most vibrant handmade marketplace.
2. We are trying to build Etsy into a profitable and lasting company. Thus, there are several important guidelines in our APIs related to "commercial use" and driving transactions back to Etsy. Please pay particular attention to those sections.

https://www.etsy.com/developers/terms-of-use

FIX #3 Shorter = Better

“Beginning today, most of our APIs use a single Terms of Service. We have **rewritten** these terms from the ground up with the **goals of making them concise and easier to understand**.

….

In this rewrite, **we have removed over 125,000 words** from the combined previous terms

…”

http://googledevelopers.blogspot.com

Home | Personal | Business

Get to Know PayPal | Pay Online | Send Money | Get Paid | Products & Services

>> View all legal agreements

PayPal Developer Agreement

Last Update: Aug 23, 2013

Print

The PayPal Developer Agreement ("Agreement") is an agreement between you and PayPal and applies to your access to and use of the Developer's Tools. You must read, agree with and accept all of the terms and conditions contained in this Agreement. By registering for, accessing and/or using the Developer's Tools, you acknowledge that you have read, understood and agree to be bound by this Agreement. If you do not agree to these terms and conditions, you may not access or use the Developer's Tools.

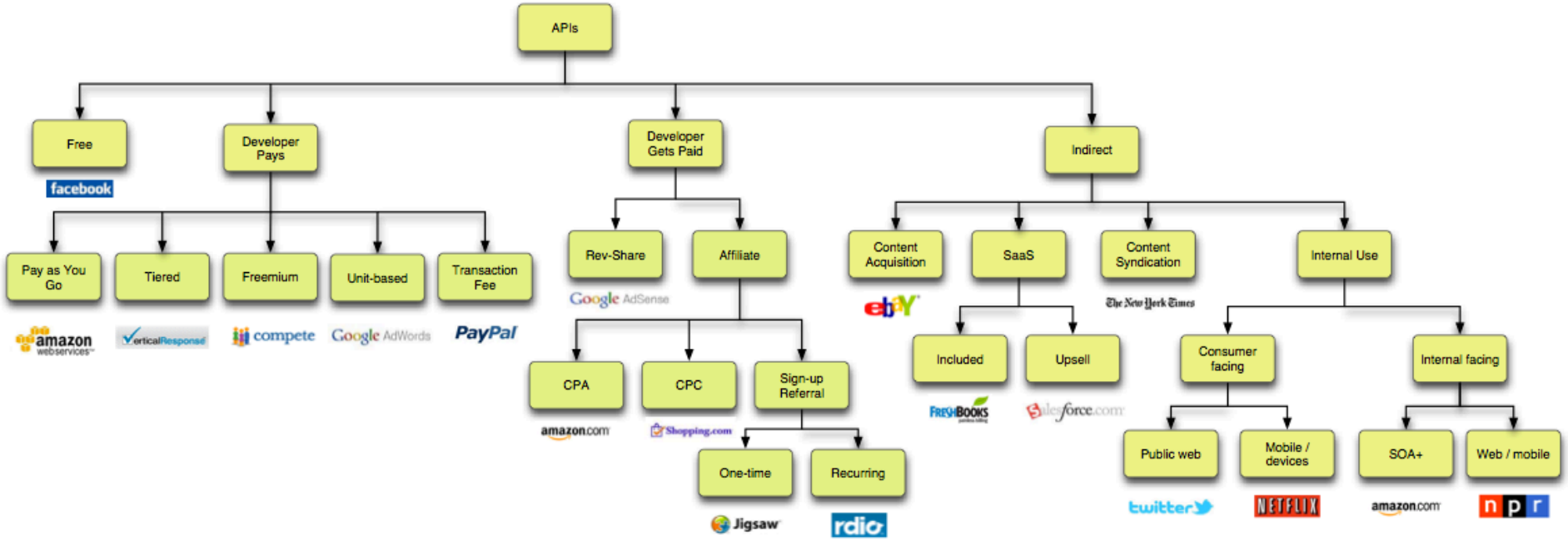
This Agreement, with the PayPal User Agreement and any other agreement into which you have entered with PayPal (collectively "**PayPal Agreements**"), apply to your access to and use of the Developer's Tools. If any inconsistency exists between the terms of this Agreement

FIX #4 Think long term

Note: The YouTube Data API (v2) has been deprecated as of February 26, 2014. In keeping with our deprecation policy, most API functionality that was subject to that policy will continue to be available until April 20, 2015. Support for some API features may be discontinued earlier if the corresponding features are also removed from YouTube prior to that date. See the Deprecation FAQ for answers to frequently asked questions about the deprecation.

https://developers.google.com/youtube/terms

FIX #5 Share the wealth



http://slideshare.net/jmusser

REASON #5

Your API is unreliable

REASON #5

Your API is slow, buggy and unreliable

ISSUES

API outages

Unannounced changes

Bugs

Performance issues

Inconsistency

APIs can break

Outage

Bug

Rate limit

Change (planned)

Change (undocumented)

ToS violation

Provider biz change

Network

Breaking bad

Jens Norrgrann
@jensnorr

Follow

@henrik yesterday. Had to call them to let them know that their API was down.

Reply Classic RT Retweet Favorite Buffer More

Matt Farmer
@farmdawgnation

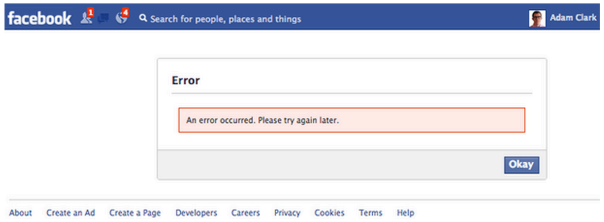
Follow

Hey @Zoho - did you guys change something about your API within the last day or two? Like maybe the Content-Type header?

Reply Classic RT Retweet Favorite Buffer More

11:15 AM - Dec 13, 2012

Facebook Broke the Internet



TrustCloud
@trustcloud

Follow

@hpcareernet Google+ is currently unavailable for connection because of an API change. We are working on getting it reconnected soon. Sorry!

Reply Retweet Favorite Buffer More

Maarten
@romenov

Follow

bloody API changes..

Reply Retweet Favorite Buffer More

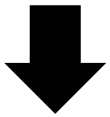
Don’t let this happen to you

GET http://api.yourcompany.com/resource/142

```
<?xml version="1.0"?>
<Error>
  <Message>A server error has occurred</Message>
  <Description>Unknown error</Description>
  <Id>7401</Id>
</Error>
```

Or this...

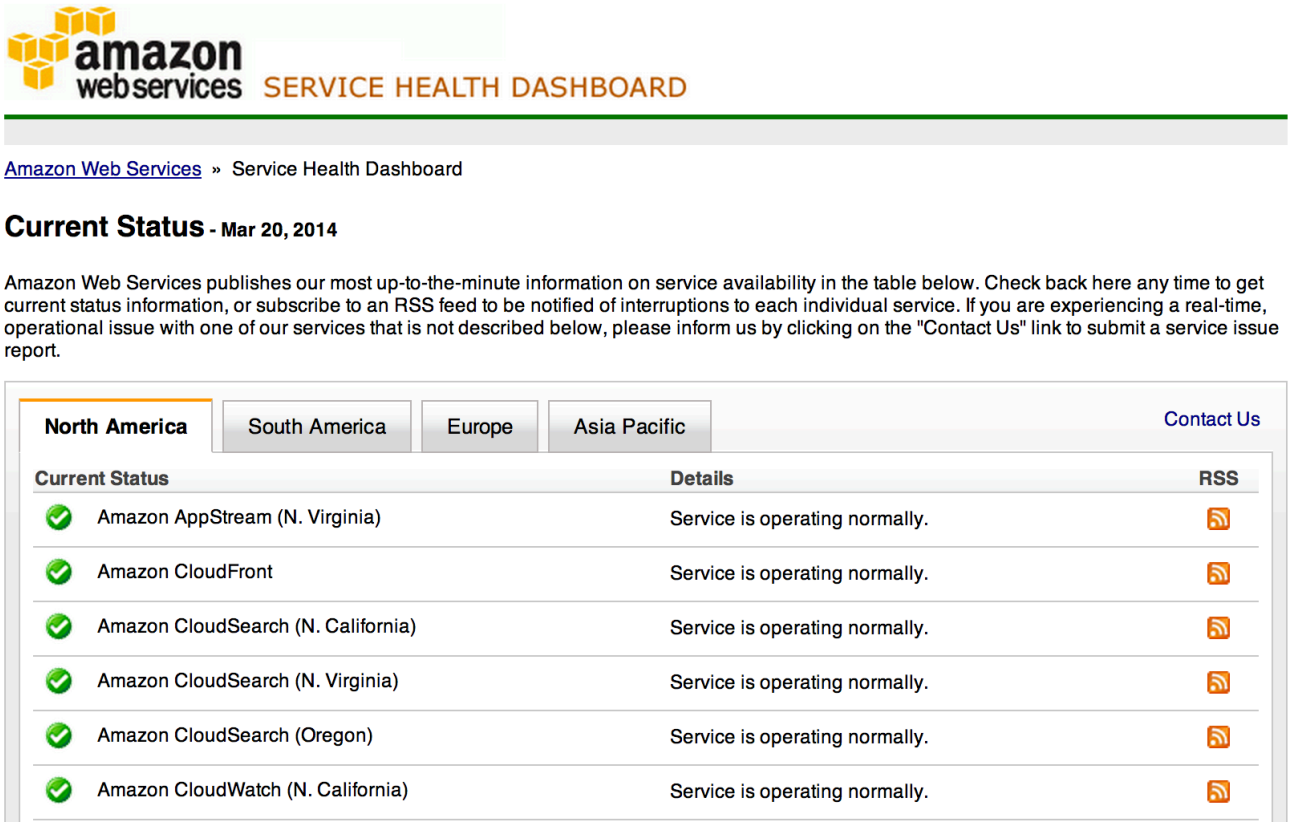
GET http://api.yourcompany.com/resource/142



```
HTTP/1.1 500 Internal Server Error
Cache-Control: no-cache="Set-Cookie"
Connection: close
Date: Fri, 03 Dec 2010 21:27:20 GMT
Content-Length: 3612
Content-Type: text/html
Set-Cookie: _WL_AUTHCOOKIE_JSESSIONID=vTF[HVHNPtEp8Co19[EI; path=/; secure
X-Powered-By: Servlet/2.5 JSP/2.1

<pre>flexjson.JSONException: Stepping back two steps is not supported
at flexjson.JSONTokener.back(JSONTokener.java:83)
at flexjson.JSONTokener.nextValue(JSONTokener.java:378)
at flexjson.JSONDeserializer.deserialize(JSONDeserializer.java:156)
at weblogic.security.acl.internal.AuthenticatedSubject.doAs(AuthenticatedSubject.java:321)
at weblogic.security.service.SecurityManager.runAs(Unknown Source)
at weblogic.servlet.internal.WebAppServletContext.securedExecute(WebAppServletContext.java:2180)
at weblogic.servlet.internal.WebAppServletContext.execute(WebAppServletContext.java:2086)
at weblogic.servlet.internal.ServletRequestImpl.run(ServletRequestImpl.java:1406)
at weblogic.work.ExecuteThread.execute(ExecuteThread.java:201)
at weblogic.work.ExecuteThread.run(ExecuteThread.java:173)
```

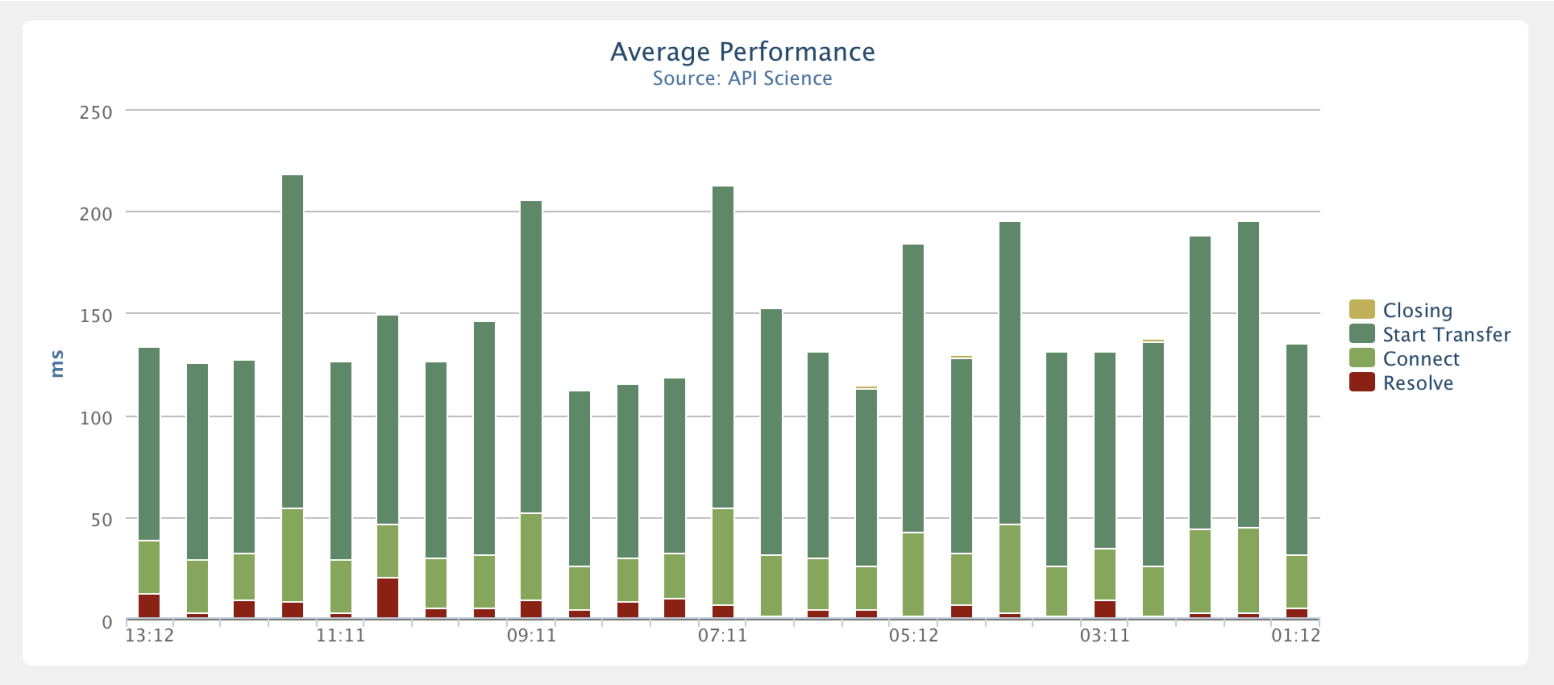
FIX #1 Status Page



http://status.aws.amazon.com/

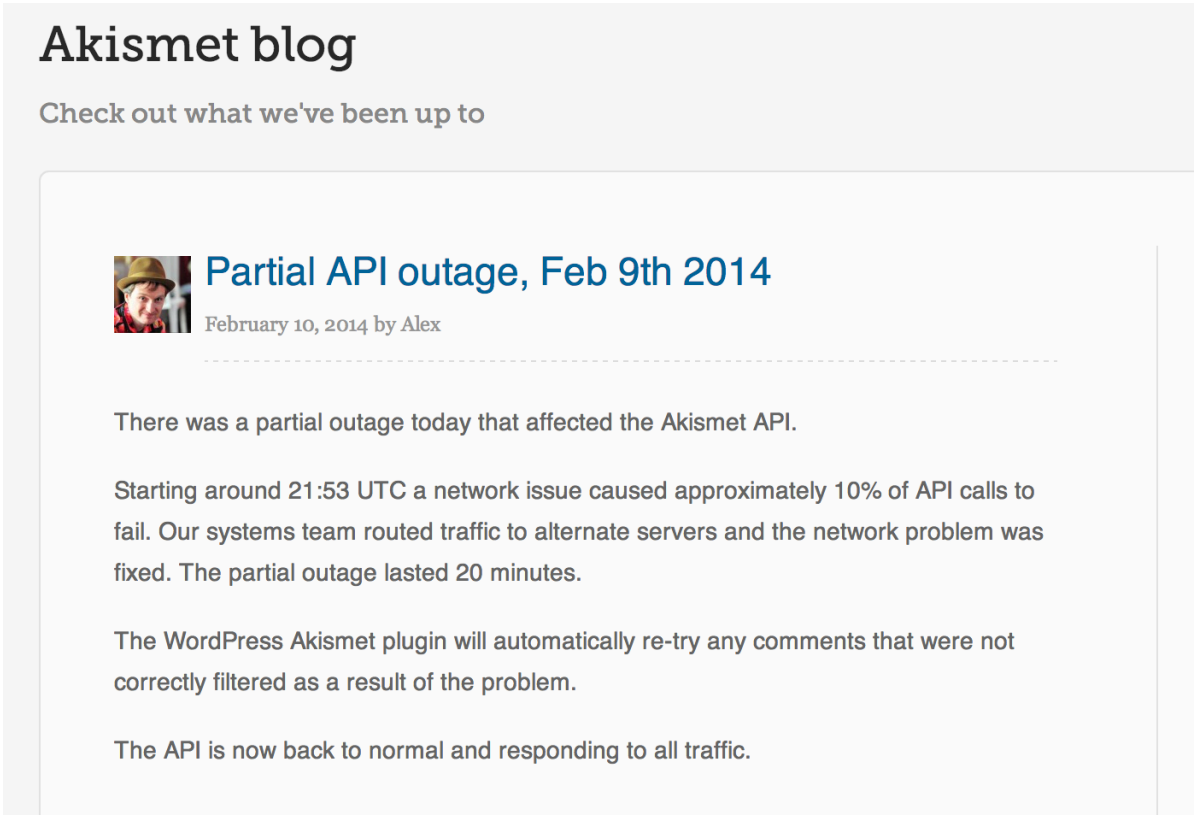
FIX #2

Monitor



http://www.apiscience.com

FIX #3 Don't hide



Akismet blog

Check out what we've been up to

Partial API outage, Feb 9th 2014

February 10, 2014 by Alex

There was a partial outage today that affected the Akismet API.

Starting around 21:53 UTC a network issue caused approximately 10% of API calls to fail. Our systems team routed traffic to alternate servers and the network problem was fixed. The partial outage lasted 20 minutes.

The WordPress Akismet plugin will automatically re-try any comments that were not correctly filtered as a result of the problem.

The API is now back to normal and responding to all traffic.

http://blog.akismet.com

REASON #6

You don't give me the tools to help me succeed

ISSUES

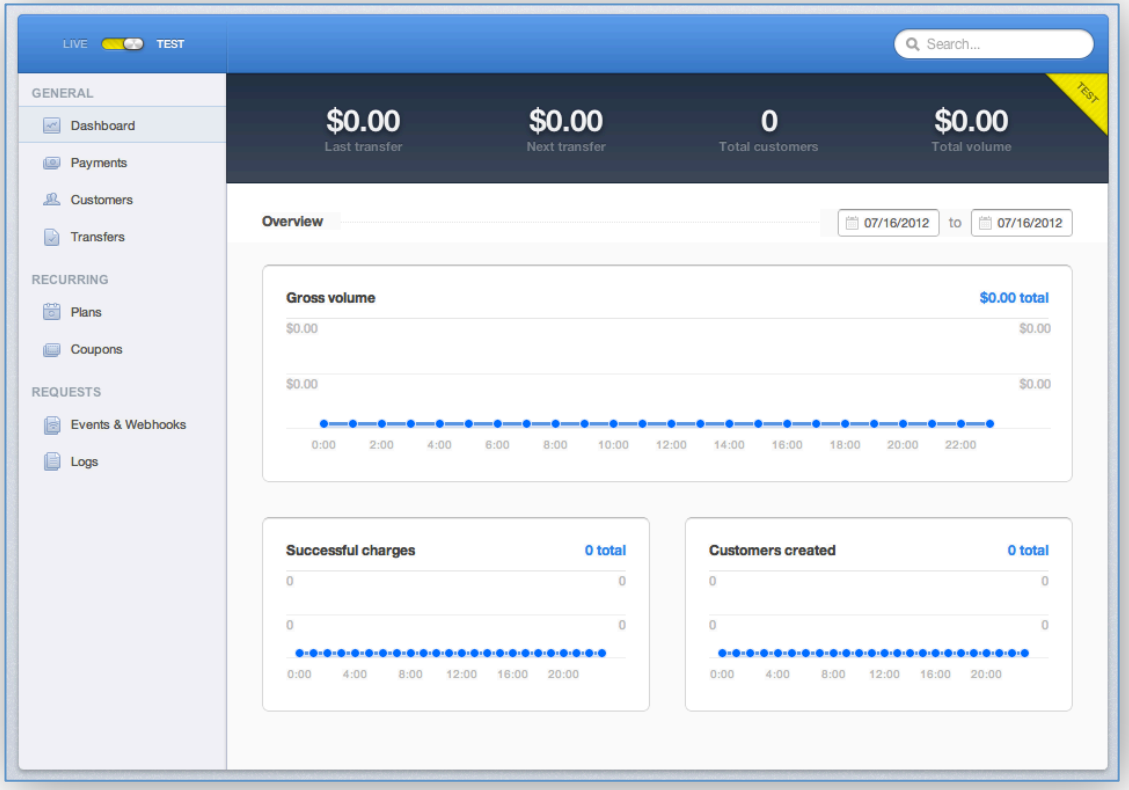
How do I debug?

What's my usage? Spend?

OAuth, ouch

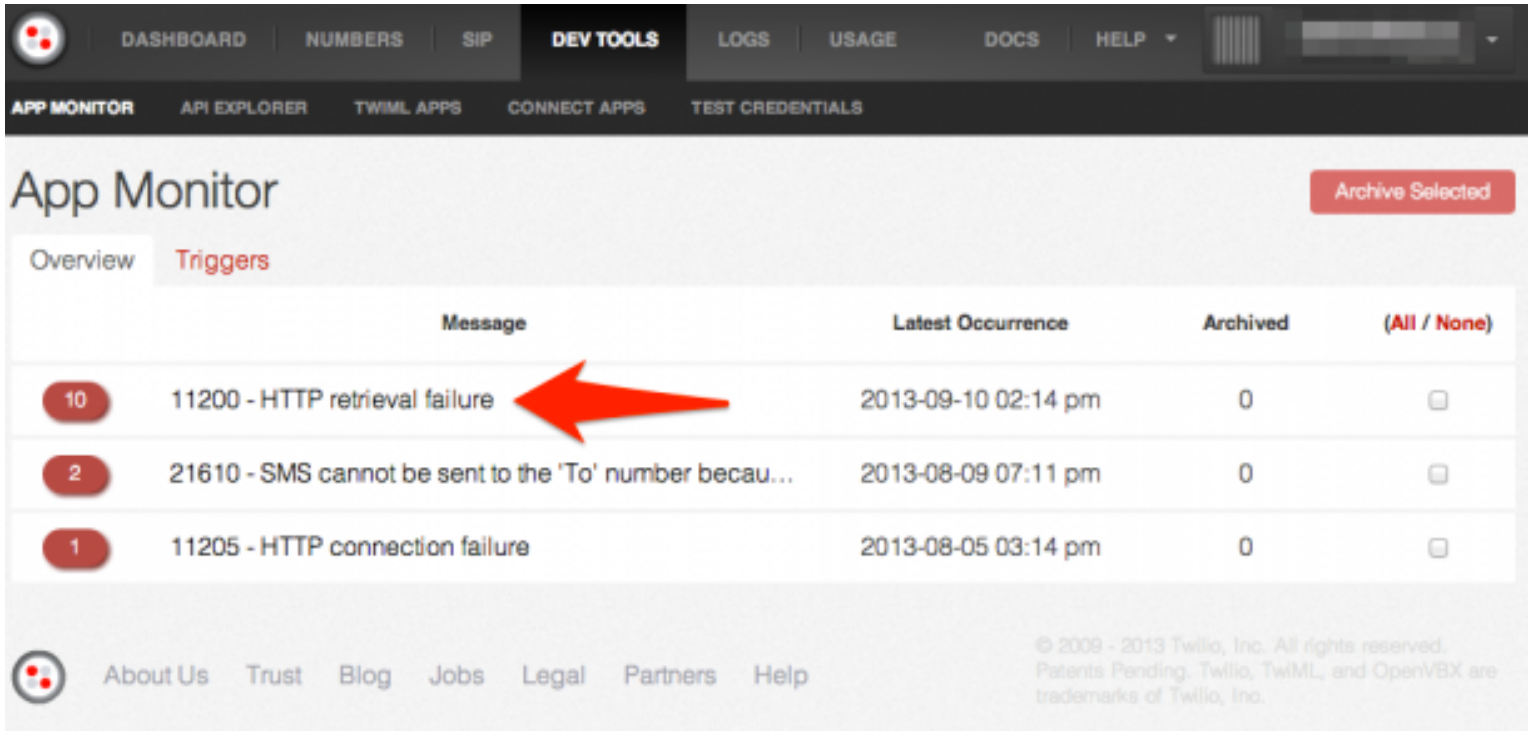
Test console?

FIX #1 Dev Dashboard



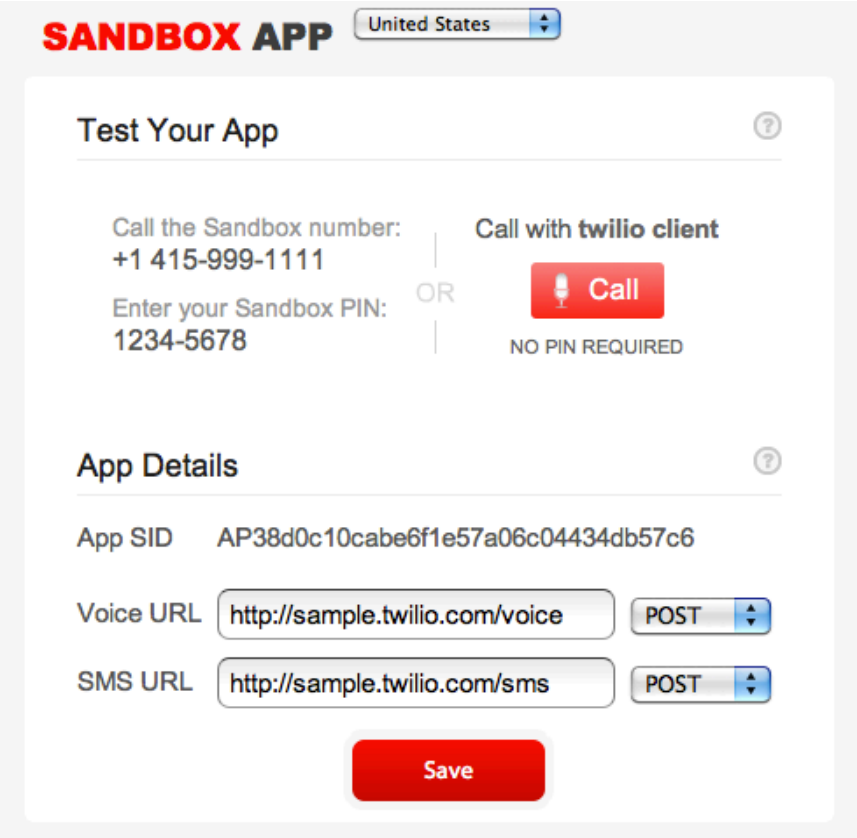
https://manage.stripe.com/test/dashboard

FIX #2 Debug / Log



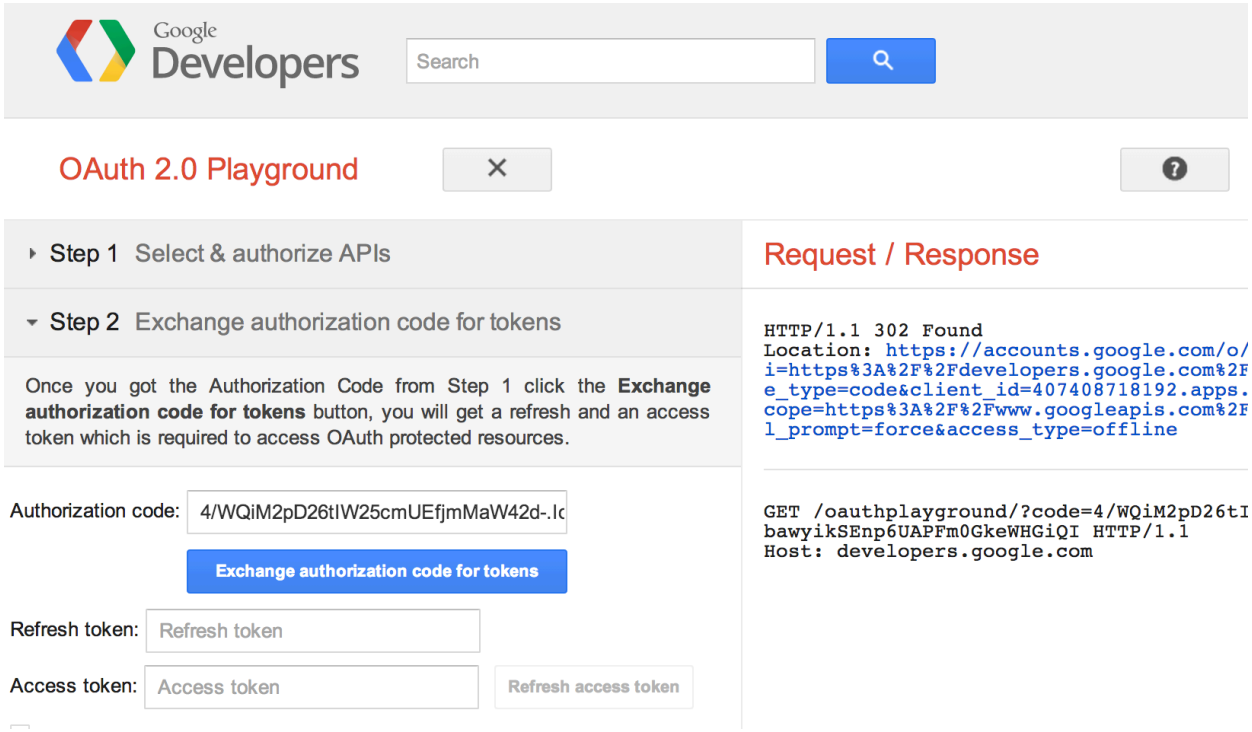
www.twilio.com/user/account/developer-tools/app-monitor

FIX #3 Test Sandbox



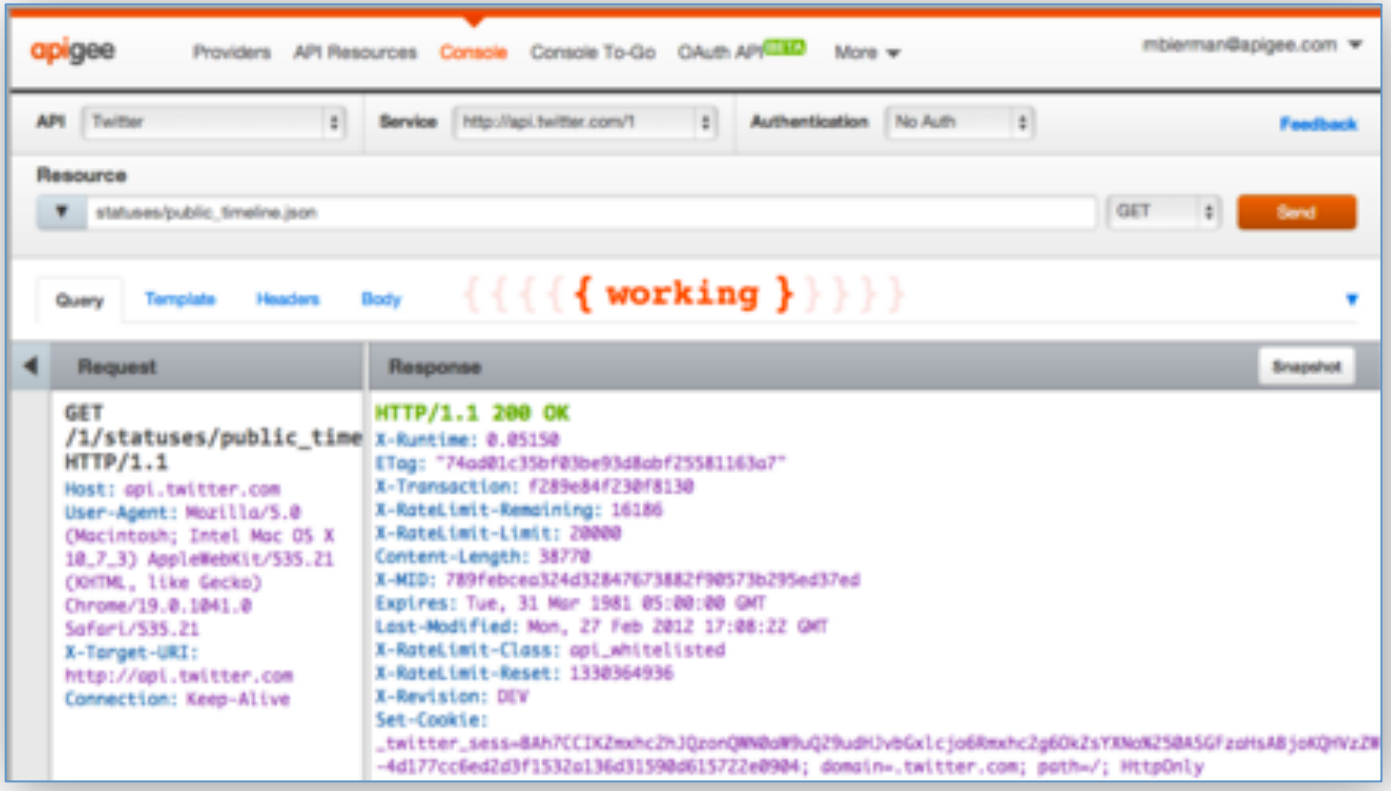
https://www.twilio.com/user/account

FIX #4 Playground



https://developers.google.com/oauthplayground

FIX #5 Test Console



https://apigee.com/providers

REASON #7

You're marketing to me, not helping me

ISSUES

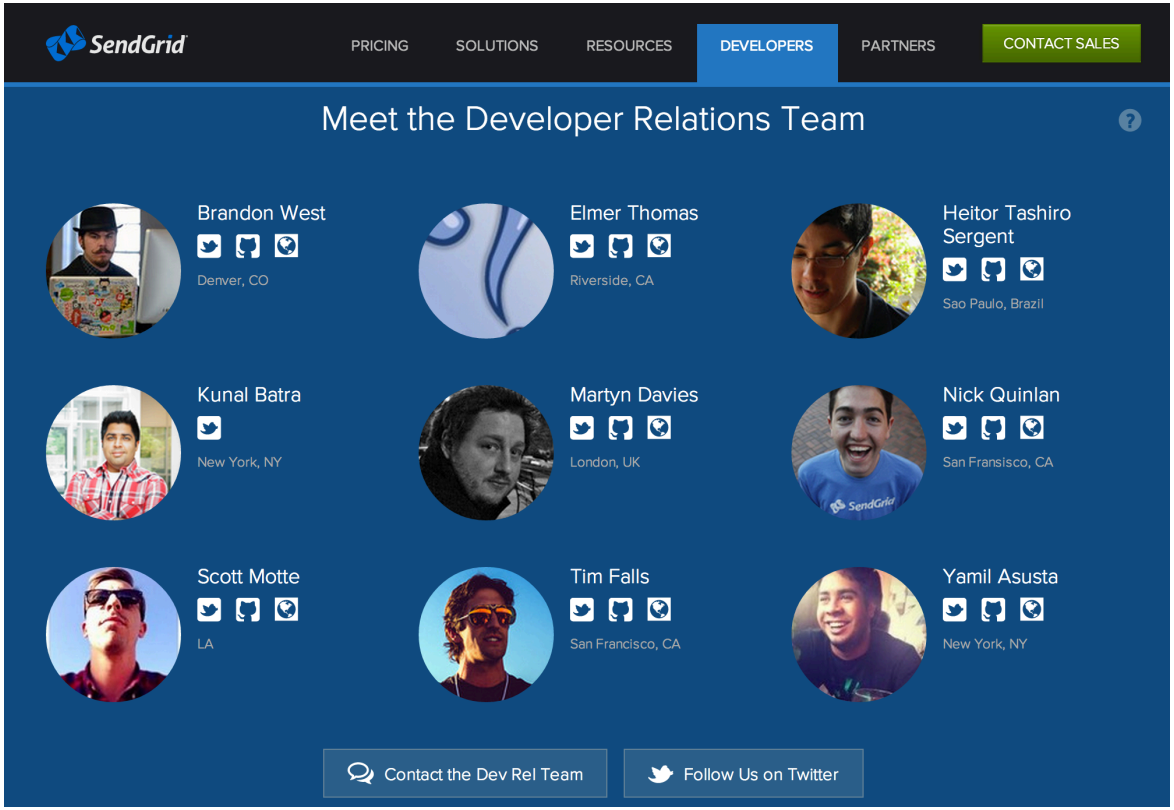
Self-service, not “call us”

Code, not whitepapers

You don’t listen

Developers hate marketing

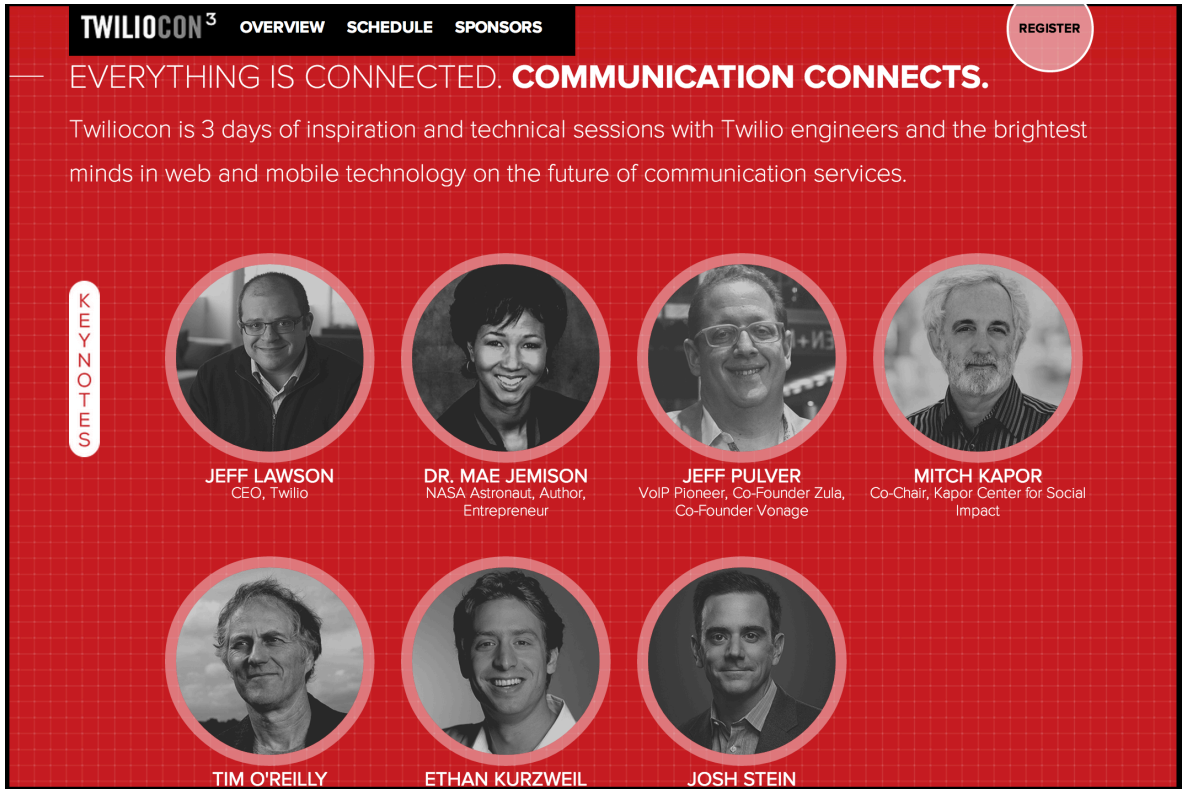
FIX #1 Evangelists



http://sendgrid.com/developers

FIX #2

Events



https://www.twilio.com/conference

FIX #3 Hackathons

This story is part of
ENTREPRENEURS & STARTUPS

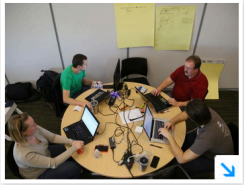
Strauss: Small business lessons of 'Breaking Bad'

Strategies: Women entrepreneurs need a role model

Ask an Expert: Starting a startup on a shoestring

Hackathons gaining popularity as innovation vehicle

Marco Santana, The Des Moines Register 2:56 p.m. EDT March 20, 2014



(Photo: Charlie Litchfield, The Des Moines Register)

SHARE 10 CONNECT 9 TWEET COMMENT EMAIL MORE

ANKENY, Iowa — Nick Leeper spends most of his days writing code and building products for Des Moines-based start-up Dwolla.

However, he spent Saturday "hacking away" at a program that another business could use.

Leeper was among roughly 35 people to attend New York-based Dice.com's first-ever coding marathon, often referred to as a "hackathon."

"It's a good chance to try out new technologies and do something different," said

REASON #8

Your API is too complex

REASON #8B

You have your own customs

(auth, protocol, formats)

ISSUES

You still use SOAP

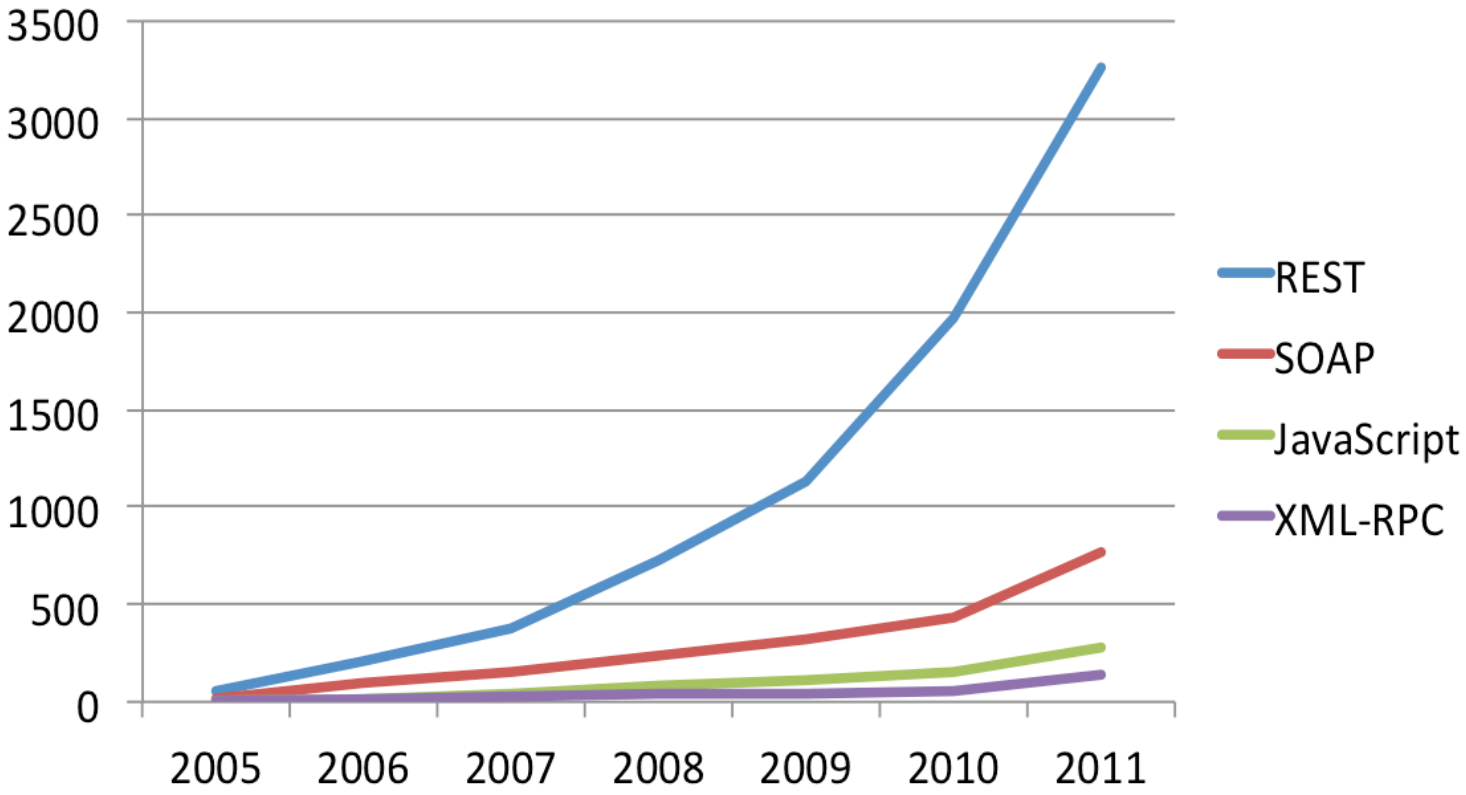
No JSON support

Terse, cryptic error messages

Your “REST” API doesn’t use HTTP rules

FIX #1

Use REST

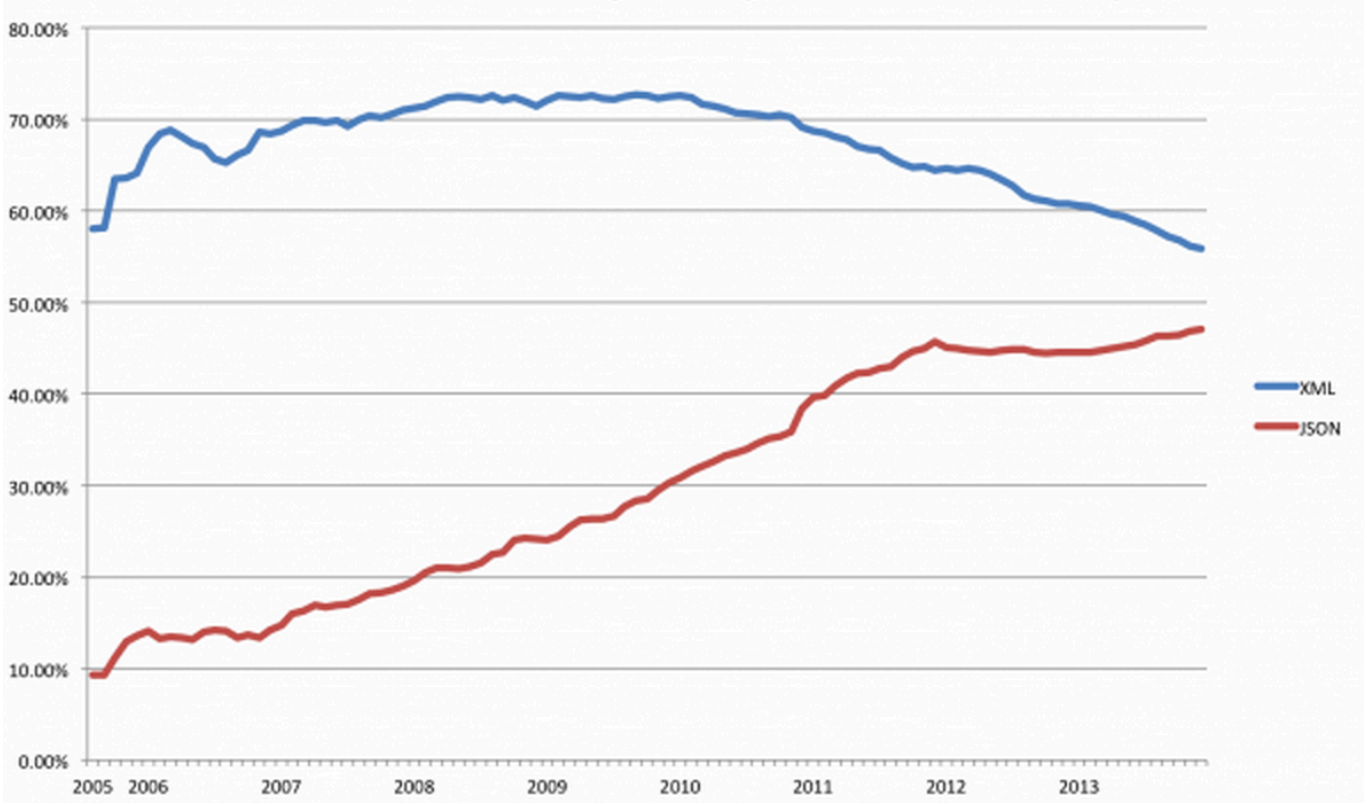


API protocols and styles

Based on directory of 5,100 web APIs listed at ProgrammableWeb, February 2012

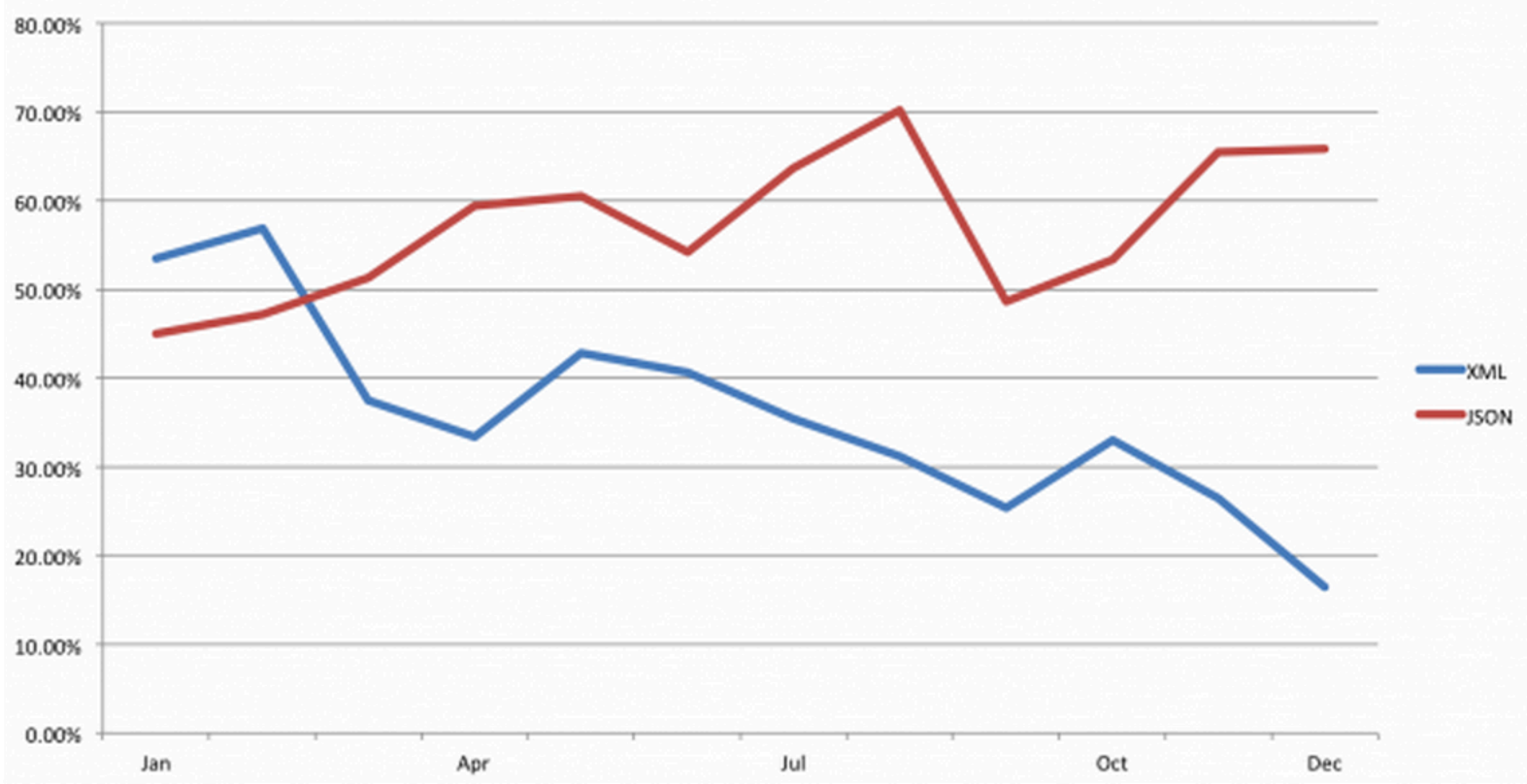
FIX #2

Use JSON



Percentage of APIs supporting JSON vs XML

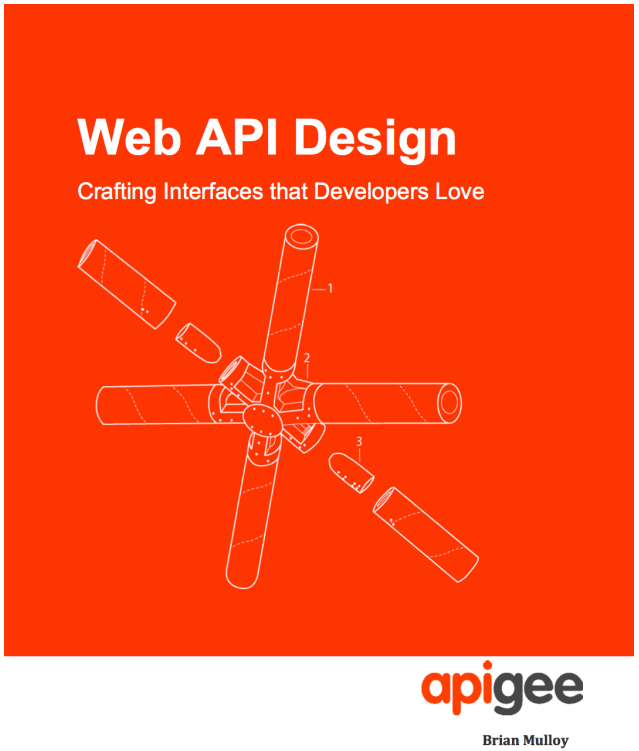
Based on directory 11,000 web APIs listed at ProgrammableWeb, Dec 2013



XML vs. JSON in new APIs

Based on new APIs listed at ProgrammableWeb in 2013

FIX #3 Be pragmatic



Web API Design,
Brian Mulloy

http://apigee.com/about/content/web-api-design

REASON #9

Your TTFHW is too long

What's your TTFHW?

Time To First "Hello World"

aka: how long from zero to 60?

FIX #1

Great DX

http://developerexperience.org

FIX #2

All prior "fixes" in this talk :-)

REASON #10

You haven't learned

REASON #10

You haven't learned (from the best)

FIX #1 Use role models

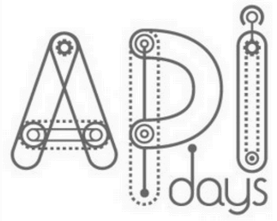
Twilio, Stripe, GitHub, SendGrid

FIX #2 Keep learning

www.qconferences.com

www.gluecon.com

apistrategyconference.com

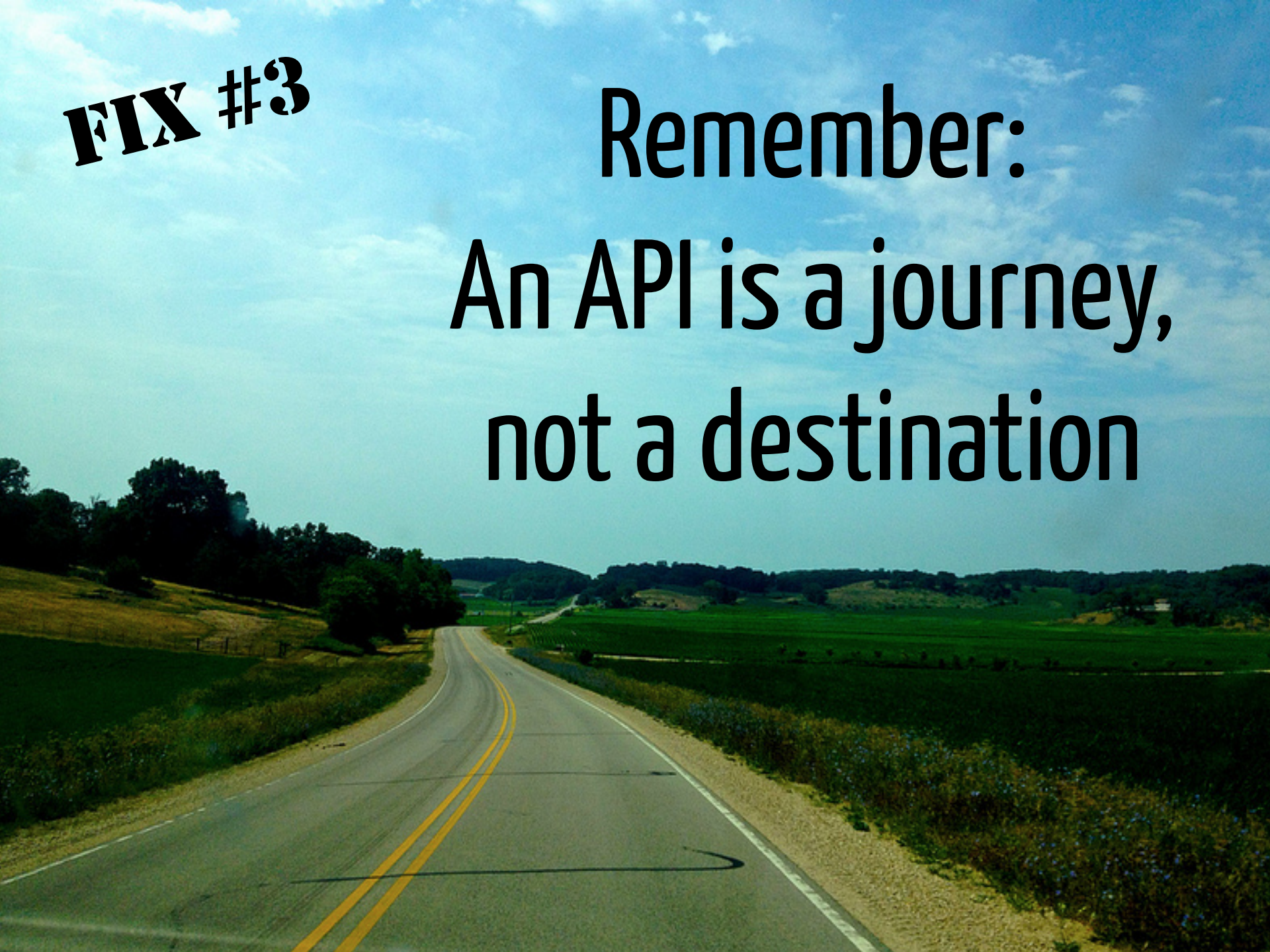


apidays.io

iloveapis2013.com

apicon.programmableweb.com

apiconference.com


FIX #3
Remember:
An API is a journey,
not a destination

Thank You

Questions, ideas, comments?

john@apiscience.com

@johnmusser

Photo credits

Race car: http://www.flickr.com/photos/lim_lik_wei/3270522646/

Winding road: http://www.flickr.com/photos/matthewthecoolguy/7518274258/