

# 10 Reasons Developers Hate Your API (and what to do about it)

John Musser @johnmusser / API Science @apiscience

*QCon NYC, 2014*

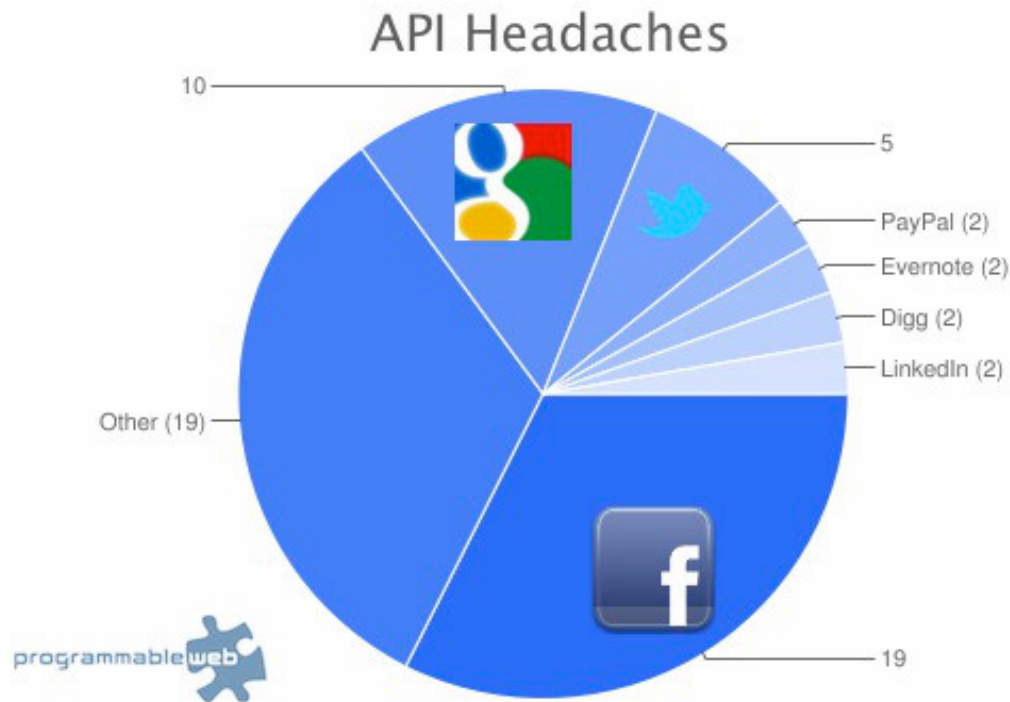


*(private beta)*

## 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 PayPal's documentation (located at [x.com](#)) is frequently outdated, inaccurate, incomplete and even contradicts itself many a time.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.



**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...](http://idnforums.intuit.com/messageview.as...)

[Reply](#) [Retweet](#) [Favorite](#) [Buffer](#) [Pocket](#) [More](#)

6:45 AM - 28 Mar 2012

## 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.

## Polldaddy's API Sucks

zzzzBov

I've recently been doing some work involving [polldaddy](#). It's straight-forward to go from the concept of a poll to putting it in. 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**

**Inaccurate**

**No getting started**

**Unprofessional**

**Out of date**

**Incomplete**

**Static**

**Unloved**

# FIX #1

# Big picture

## Getting Started with Twilio

### Quickstarts

A set of simple tutorials with code snippets on how to use Twilio to make and receive phone calls, client calls, and SMS messages.

[Start Coding Now](#)

### HowTo's

Sample applications that cover common use cases in a variety of languages. Download, test drive, and tweak them yourself.

[View Sample Apps](#)

### Helper Libraries

Libraries to help you interact with the Twilio REST API and construct TwiML responses. Available in Ruby, Python, PHP, Java, C# and more.

[Download & Install](#)

## API Reference Docs



Make calls, send messages, buy and manage phone numbers.



Dynamically control live phone calls and respond to messages.



Make and receive calls in a browser or on a mobile device.

[Docs Home](#)

[Quickstart Tutorials](#)

[HowTo's and Examples](#)

[Helper Libraries](#)

[TwiML Reference](#)

[REST API Reference](#)

[Client Reference](#)

[Connect Reference](#)

[Debugging Errors](#)

[Security](#)

[Availability & Reliability](#)

<https://www.twilio.com/docs>



# FIX #2

# Clarity

Introduction

Authentication

Errors

Versioning

Expanding

Metadata

Charges

Create a new charge

Retrieve an existing ch...

Update a charge

Refund a charge

Capture a charge

List all charges

Customers

Cards

Subscriptions

Plans

Coupons

Discounts

Invoices

Invoice Items

Disputes

## The charge object

### Attributes

|  |
|--|
| <b>id:</b> string  |
| <b>object:</b> string, value is "charge"   |
| <b>livemode:</b> boolean   |
| <b>amount:</b> positive integer or zero<br>Amount charged in cents   |
| <b>captured:</b> boolean<br>If the charge was created without capturing, this boolean represents whether or not it is still uncaptured or has since been captured. |
| <b>card:</b> hash, <a href="#">card object</a><br>Hash describing the card used to make the charge   |

CURL RUBY PYTHON PHP JAVA NODE

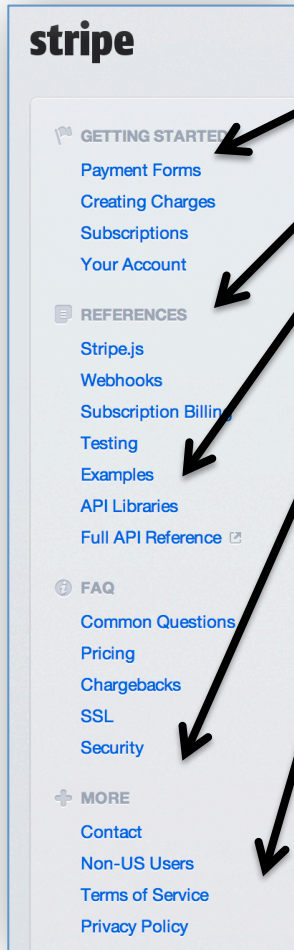
### EXAMPLE OBJECT

```
#<Stripe::Charge id=ch_103hFq2jeYukMJwTH4eGLU9i
0x000000a> JSON: {
  "id": "ch_103hFq2jeYukMJwTH4eGLU9i",
  "object": "charge",
  "created": 1395264866,
  "livemode": false,
  "paid": true,
  "amount": 9900,
  "currency": "usd",
  "refunded": false,
  "card": {
    "id": "card_103hFq2jeYukMJwTWtVPYRc9",
    "object": "card",
    "last4": "4242",
    "type": "Visa",
    "exp_month": 1,
    "exp_year": 2015,
    "fingerprint": "PJ193HCEHV5FCx15",
    "customer": "cus_3hFqrUcFYzmm0t",
    "country": "US",
    "name": "c@ex.com",
    "address_line1": null,
    "address_line2": null,
```

<https://stripe.com/docs/api>

# FIX #3

# Find-ability



## Getting Started

Below you'll find tutorials that will teach you how to use Stripe, and reference documentation for all the moving parts.



### On your website

Start accepting payments on your website, with our JavaScript libraries. [Learn more >](#)



### In your mobile app

We have toolkits for native iPhone and Android applications. [Learn more >](#)

### Stripe plugins for 3rd party software

As well as the official API libraries listed above, there are a number of third-party plugins and libraries built by our community, such as for Wordpress and Drupal. [Learn more >](#)



### Use Stripe with other services

Stripe has lots of third-party integrations which require no programming, hosting or complicated setup on your behalf, such as Shopify and Wufoo. [Learn more >](#)



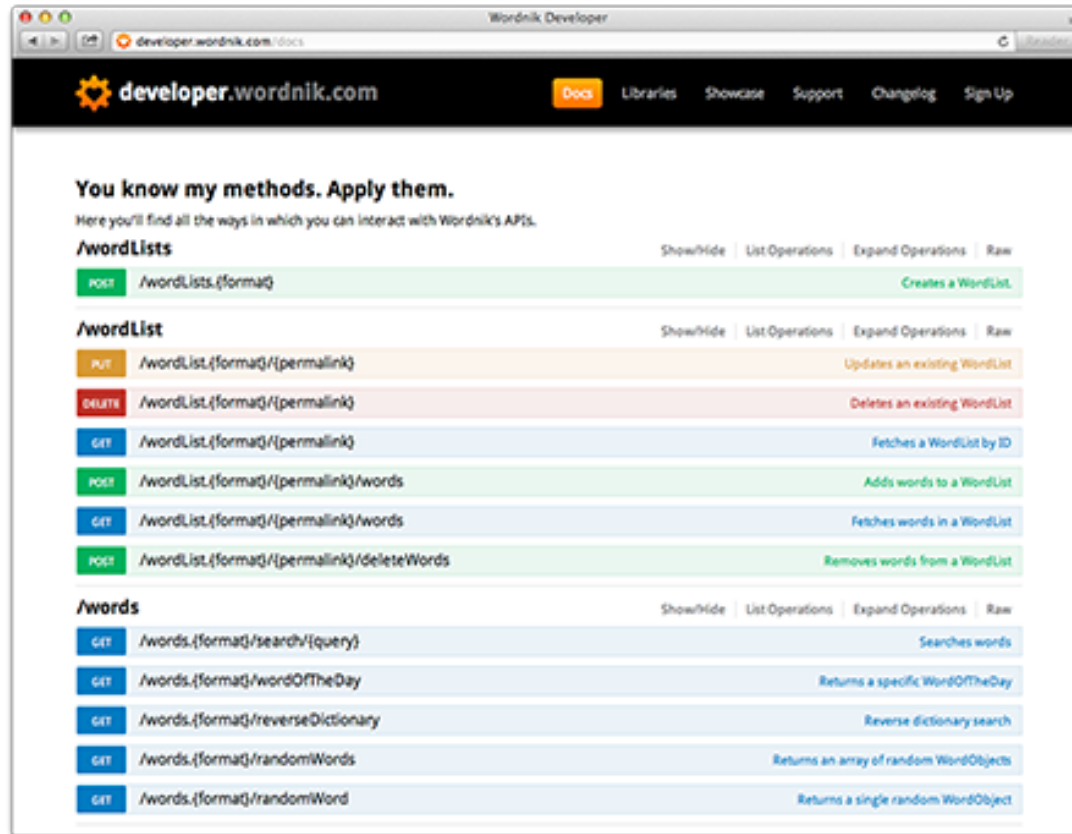
<https://stripe.com/docs/>

**FIX #4**

# Live Docs

**Interactive documentation,  
like...**

# Swagger



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

# I/O Docs

Sign In Register

**KLOUT**

MASHERY MADE

Home Interactive Console Documentation Forum Terms

## Klout API Documentation

Interact with the Klout API. Discover, test, debug live calls within our documentation. See the [Documentation Overview](#) page for FAQ, Style Guide, and more.

### API Credentials

API Key

Click 'Sign In' at the top-right to access your API keys

[Toggle All Endpoints](#) | [Toggle All Methods](#)

### Score Methods [List Methods](#) | [Expand Methods](#)

**GET** Klout Score /klout.:format Retrieve a user's Klout score

| Parameter | Value                                 | Type       | Description                                      |
|-----------|---------------------------------------|------------|--|
| users     | <input type="text" value="required"/> | string     | One or more (comma-separated) Twitter usernames. |
| format    | <input type="text" value="json"/>     | enumerated | Output format as JSON or XML.                    |

[Try it!](#)

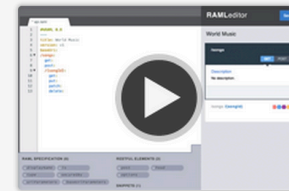
<https://github.com/mashery/iodocs>

# RAML

## RESTful API Modeling Language

RESTful API Modeling Language (RAML) is a simple and succinct way of describing practically-RESTful APIs. It encourages reuse, enables discovery and pattern-sharing, and aims for merit-based emergence of best practices. The goal is to help our current API ecosystem by solving immediate problems and then encourage ever-better API patterns. RAML is built on broadly-used standards such as YAML and JSON and is a non-proprietary, vendor-neutral open spec.

[Read the RAML Spec](#)



```
1  ##RAML 0.8
2
3  title: World Music API
4  baseUri: http://example.api.com/{version}
5  version: v1
6  traits:
7    - paged:
8      queryParameters:
9        pages:
10       description: The number of pages to return
11       type: number
12    - secured: !include http://raml-example.com/secured.yml
13  /songs:
14    is: [ paged, secured ]
```

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

## Ads API Breaking Changes

 Developers

Due April 9th, 2014 at 10am PST



Please note that the [new campaign structure](#) changes are still due March 4, 2014.

## Sunset disapprove\_reason\_descriptions

The field [disapproval\\_reason\\_descriptions](#) is being renamed

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

# FIX #3

# Release Notes

Constant Contact<sup>®</sup>  
TECH BLOG

LATEST POSTS

TECH TOPICS ▾

RESOURCES ▾

CONTACT US

## API Release Notes | January 2014

 JANUARY 9, 2014 BY [RICHARD MARCUCELLA](#) AND [DAVID BERARD](#)  [LEAVE A COMMENT](#)

Happy New Year! The Web Services team is releasing the first set of API updates for 2014 on Friday, January 10, 2014. Read on in the API Release Notes to find out what's new in this release.

### New Features

#### EventSpot endpoints officially released!

The EventSpot endpoints are now officially supported and are no longer in Beta. To date there have been over 400 events created using the API!

#### Additional EventSpot Endpoints

The following 4 new EventSpot endpoints are available in this release:

- [Event Item Collection](#)

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

# FIX #4

# Blog

## Amazon Web Services Blog

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



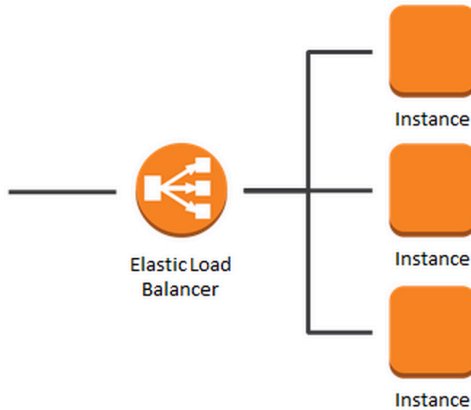
### MORE AWS BLOGS

- [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



## Tagged Questions

info newest frequent votes active unanswered

SoundCloud is a social audio storage service and community. Their api allows for deep mashups, allowing access to nearly all track meta data, and provides streaming and downloads in various formats.

[learn more...](#) | [top users](#) | [synonyms](#)


**0** votes  
**0** answers  
31 views

### Safari won't play audio for Soundcloud widget, but for only 1 of the 3 files

Link in question: <https://www.presskit.to/pirramusic> If you play the featured song, 'Paradise' on the top of the main section in Safari, it will start playing, but no audio. Everything else seems to ...

[audio](#) [safari](#) [soundcloud](#)

asked 22 hours ago

 [afxjzs](#)  
388 ● 4 ● 11


**-1** votes  
**0** answers  
27 views

### Can the listed APIs be called RESTful APIs?

I am using Youtube Data API v3, Dailymotion Graph API, Facebook Graph API and the SoundCloud API. Can all of these APIs be called as RESTful APIs?

[rest](#) [facebook-graph-api](#) [soundcloud](#) [youtube-data-api](#)

asked yesterday

 [user3392740](#)  
20 ● 6

**1** vote

### Soundcloud API - Unshare track from user

I'm having trouble trying to share/unshare a private track to a user, here's my script, hopefully someone can

<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



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?

twilio voice  Features API Pricing [Get Started](#)

## The cloud powered voice API.

**A user calls your number**  
Carriers route any landline or mobile call to the Twilio cloud.

**Twilio receives the call**  
Twilio receives the text and makes a request to your application.

**Your app responds**  
Your app receives that request and responds with XML back to Twilio.

```
<?xml version="1.0" en=  
<Response>  
<Say>Ahoy!</Say>  
<Dial>4158675309</Di  
</Response>
```

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

**FIX #2**

# Fast signup



The image shows a screenshot of the Stripe registration page. At the top, the word "stripe" is written in a bold, lowercase font. Below it, the text "Create your Stripe account." is centered. Underneath, there is a line of text: "...or save your account later, and skip this step". The words "skip this step" are highlighted with a red circle. Below this text are three input fields: "Email", "Password", and "Confirm password". At the bottom of the form is a blue button with the text "Create your Stripe account".

(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



|  | Basic                                 | Pro                                    | Enterprise  |
|--|---------------------------------------|--|---|
|  | <b>\$0</b><br>per month               | <b>\$199</b><br>per month              |   |
| API Requests <sup>?</sup><br>per month | <b>1,000,000</b><br>7c per 1,000 over | <b>15,000,000</b><br>5c per 1,000 over | Need more than Pro offers?<br>Contact us for a custom plan<br>and pay rates much lower than<br>the overages!<br><b>enterprise@parse.com</b> |
| Pushes <sup>?</sup><br>per month       | <b>1,000,000</b><br>7c per 1,000 over | <b>5,000,000</b><br>5c per 1,000 over  |   |
| File Storage <sup>?</sup>              | <b>1GB</b><br>20c per 1GB over        | <b>10GB</b><br>15c per 1GB over        |   |
| Roles for Access Control <sup>?</sup>  | <b>1</b>                              | <b>5</b><br>\$15/extra                 |   |

<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

**GitHub**  [Explore](#) [Features](#) [Enterprise](#)



## OneNoteDev

The place to go for OneNote API code samples!

Redmond, WA <http://dev.onenote.com>

---

**[OneNoteServiceSamplesWinStore](#)** C# ★ 18 📄 2  
Code sample with examples of how to use the OneNote API for Windows 8 apps  
Updated a day ago

---

**[OneNoteServiceSamplesWinPhone](#)** C# ★ 12 📄 1  
Code sample with examples of how to use the OneNote API on Windows Phone  
Updated a day ago

---

**[OneNoteServiceSamplesiOS](#)** Objective-C ★ 10 📄 2  
Code sample with examples of how to use the OneNote API on iOS  
Updated a day ago

<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

The Etsy logo is displayed in white text on an orange rectangular background.

### 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://googleddevelopers.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



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

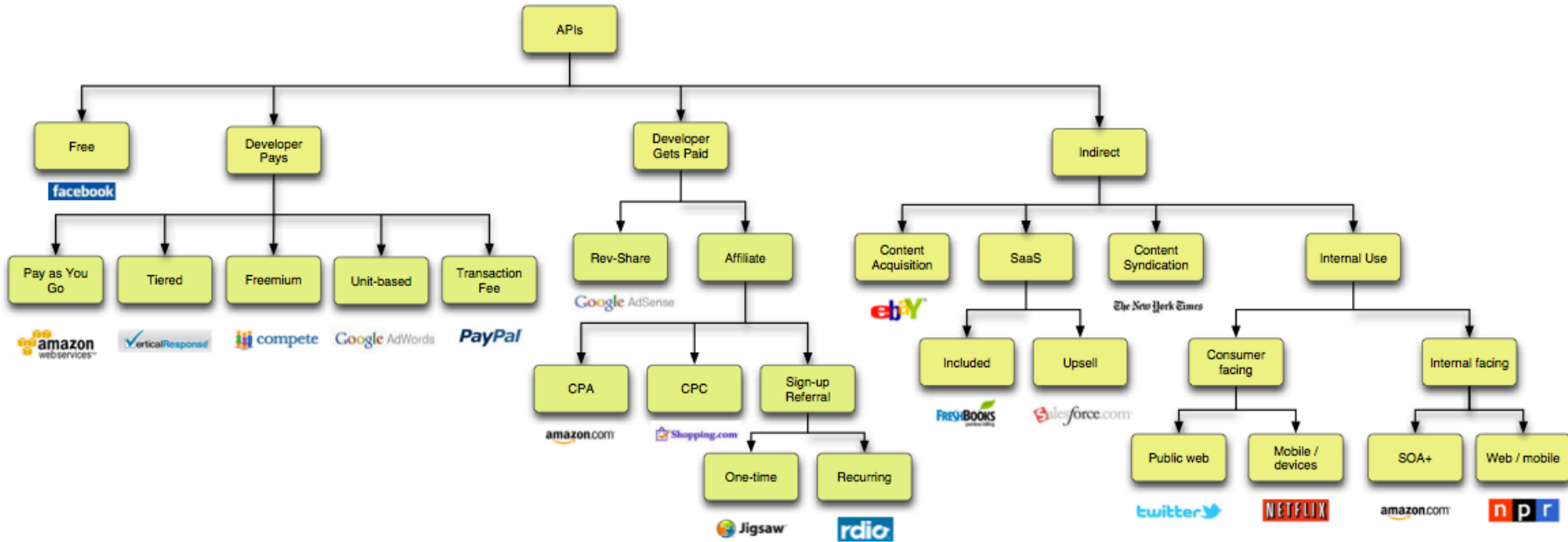


**Note:** The YouTube Data API (v2) has been deprecated as of February 26, 2014. In keeping with our [deprecation policy](#), most API functionality that was subject to that policy will continue to be available until April 20, 2015. Support for some API features may be discontinued earlier if the corresponding 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



@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

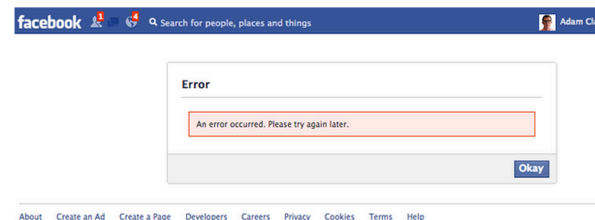


Hey @Zoho - did you guys change something about your API within the last day or two? Like maybe the Content-Type header?

Reply Classic RT Retweet Favorite Buffer More

11:15 AM - Dec 13, 2012

## Facebook Broke the Internet



**TrustCloud**  
@trustcloud



@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

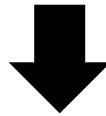


bloody API changes..

Reply Retweet Favorite Buffer More

# Don't let this happen to you

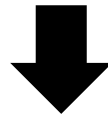
**GET http://api.yourcompany.com/resource/142**



```
<?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



[Amazon Web Services](#) » Service Health Dashboard

## Current Status - Mar 20, 2014

Amazon Web Services publishes our most up-to-the-minute information on service availability in the table below. Check back here any time to get current status information, or subscribe to an RSS feed to be notified of interruptions to each individual service. If you are experiencing a real-time, operational issue with one of our services that is not described below, please inform us by clicking on the "Contact Us" link to submit a service issue report.

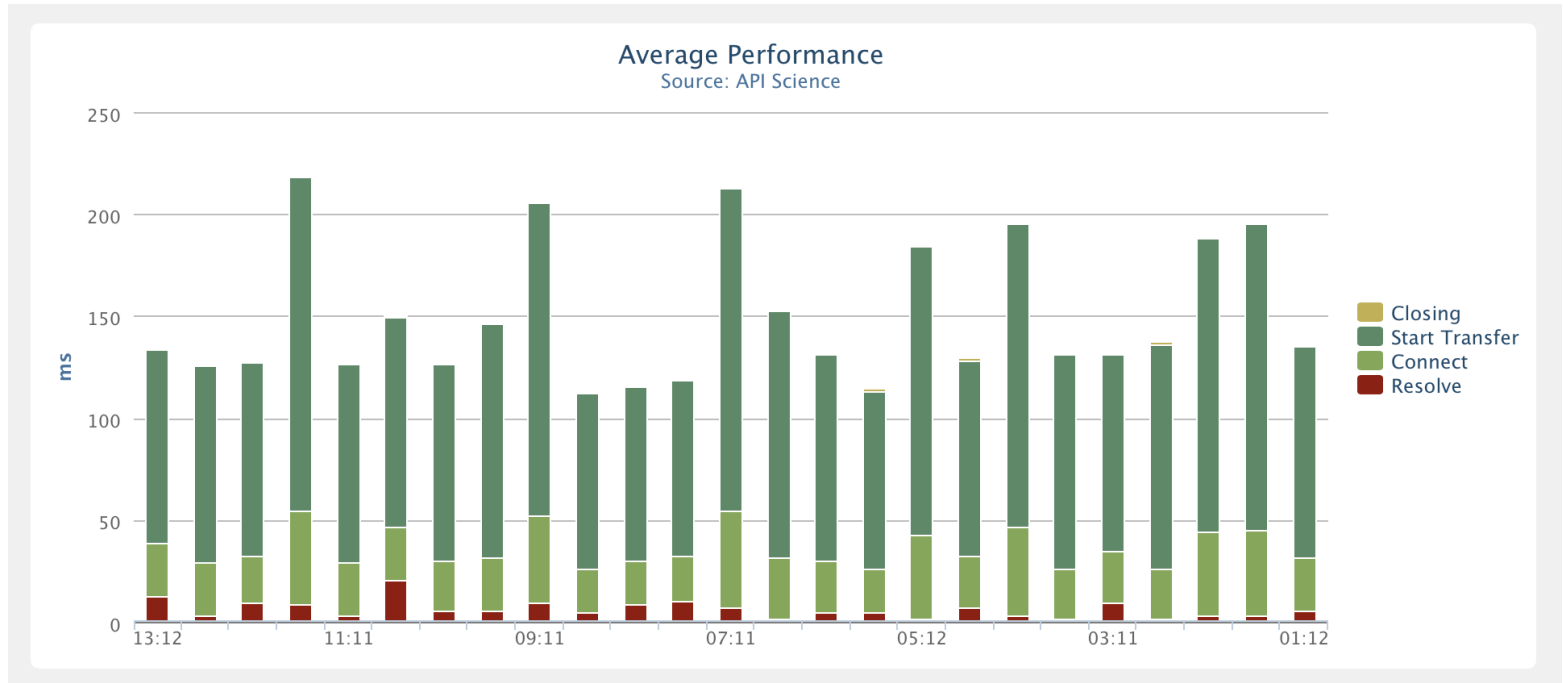
| North America  |                                    |                                | South America | Europe | Asia Pacific | Contact Us |
|----------------|------------------------------------|--------------------------------|---------------|--------|--------------|------------|
| Current Status |                                    | Details                        |               |        |              | RSS        |
| ✓              | Amazon AppStream (N. Virginia)     | Service is operating normally. |               |        |              |            |
| ✓              | Amazon CloudFront                  | Service is operating normally. |               |        |              |            |
| ✓              | Amazon CloudSearch (N. California) | Service is operating normally. |               |        |              |            |
| ✓              | Amazon CloudSearch (N. Virginia)   | Service is operating normally. |               |        |              |            |
| ✓              | Amazon CloudSearch (Oregon)        | Service is operating normally. |               |        |              |            |
| ✓              | Amazon CloudWatch (N. California)  | Service is operating normally. |               |        |              |            |

<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?**

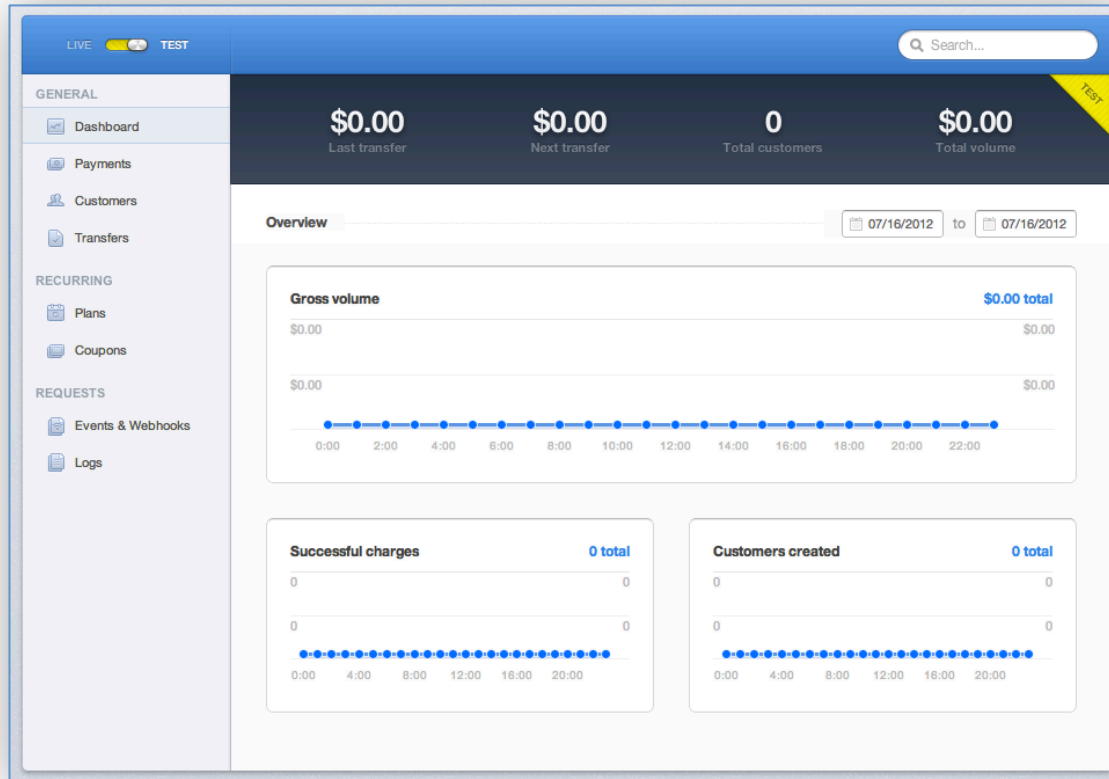
**What's my usage? Spend?**

**OAuth, ouch**

**Test console?**

**FIX #1**

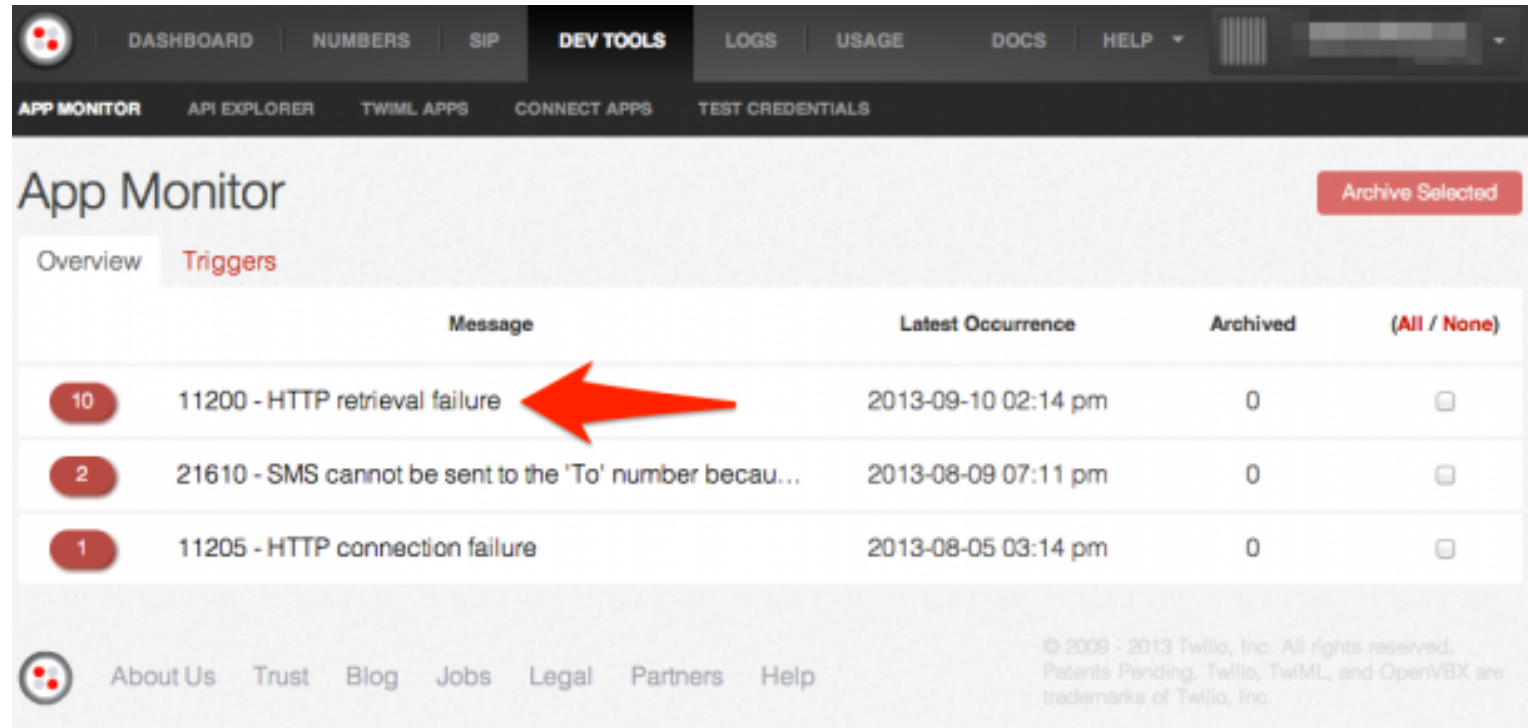
# Dev Dashboard



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

# FIX #2

# Debug / Log



The screenshot shows the Twilio App Monitor interface. The top navigation bar includes 'DASHBOARD', 'NUMBERS', 'SIP', 'DEV TOOLS', 'LOGS', 'USAGE', 'DOCS', and 'HELP'. Below this, there are sub-navigation options: 'APP MONITOR', 'API EXPLORER', 'TWIML APPS', 'CONNECT APPS', and 'TEST CREDENTIALS'. The main content area is titled 'App Monitor' and has a red 'Archive Selected' button. Underneath, there are two tabs: 'Overview' and 'Triggers'. The 'Triggers' tab is active, displaying a table with the following data:

|    | Message  | Latest Occurrence   | Archived | (All / None)             |
|----|--|---------------------|----------|--------------------------|
| 10 | 11200 - HTTP retrieval failure                         | 2013-09-10 02:14 pm | 0        | <input type="checkbox"/> |
| 2  | 21610 - SMS cannot be sent to the 'To' number becau... | 2013-08-09 07:11 pm | 0        | <input type="checkbox"/> |
| 1  | 11205 - HTTP connection failure                        | 2013-08-05 03:14 pm | 0        | <input type="checkbox"/> |

A red arrow points to the '11200 - HTTP retrieval failure' message in the table. The footer contains the Twilio logo, links for 'About Us', 'Trust', 'Blog', 'Jobs', 'Legal', 'Partners', and 'Help', and a copyright notice: '© 2009 - 2013 Twilio, Inc. All rights reserved. Patents Pending. Twilio, TwiML, and OpenVBX are trademarks of Twilio, Inc.'

[www.twilio.com/user/account/developer-tools/app-monitor](http://www.twilio.com/user/account/developer-tools/app-monitor)

**FIX #3**

# Test Sandbox

**SANDBOX APP** United States

---


**Test Your App** ?

Call the Sandbox number:  
+1 415-999-1111

Enter your Sandbox PIN:  
1234-5678

OR

Call with **twilio client**

 **Call**

NO PIN REQUIRED

---

**App Details** ?

App SID AP38d0c10cabe6f1e57a06c04434db57c6

Voice URL

SMS URL

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

# FIX #4

# Playground

The screenshot shows the Google Developers OAuth 2.0 Playground interface. At the top, there is a search bar and the Google Developers logo. Below this is a header for the "OAuth 2.0 Playground" with a close button and a help icon. The main content is divided into two columns. The left column contains two steps: "Step 1 Select & authorize APIs" and "Step 2 Exchange authorization code for tokens". Under Step 2, there is a paragraph explaining that after getting an authorization code from Step 1, clicking the "Exchange authorization code for tokens" button will refresh and provide an access token. Below this text are input fields for the authorization code, refresh token, and access token, along with buttons to exchange the code and refresh the access token. The right column is titled "Request / Response" and displays the following text: "HTTP/1.1 302 Found", "Location: https://accounts.google.com/o/i=https%3A%2F%2Fdevelopers.google.com%2Fe\_type=code&client\_id=407408718192.apps.cope=https%3A%2F%2Fwww.googleapis.com%2F1\_prompt=force&access\_type=offline", and "GET /oauthplayground/?code=4/WQiM2pD26tIW25cmUEfjmMaW42d-Ic bawyksEnp6UAPFm0GkeWHGiQI HTTP/1.1 Host: developers.google.com".

Google Developers  Search

OAuth 2.0 Playground  

▸ Step 1 Select & authorize APIs

▾ Step 2 Exchange authorization code for tokens

Once you got the Authorization Code from Step 1 click the **Exchange authorization code for tokens** button, you will get a refresh and an access token which is required to access OAuth protected resources.

Authorization code:

Refresh token:

Access token:

**Request / Response**

HTTP/1.1 302 Found  
Location: [https://accounts.google.com/o/i=https%3A%2F%2Fdevelopers.google.com%2Fe\\_type=code&client\\_id=407408718192.apps.cope=https%3A%2F%2Fwww.googleapis.com%2F1\\_prompt=force&access\\_type=offline](https://accounts.google.com/o/i=https%3A%2F%2Fdevelopers.google.com%2Fe_type=code&client_id=407408718192.apps.cope=https%3A%2F%2Fwww.googleapis.com%2F1_prompt=force&access_type=offline)

GET /oauthplayground/?code=4/WQiM2pD26tIW25cmUEfjmMaW42d-Ic bawyksEnp6UAPFm0GkeWHGiQI HTTP/1.1  
Host: developers.google.com

<https://developers.google.com/oauthplayground>



# FIX #5

# Test Console

The screenshot shows the Apigee Test Console interface. At the top, the Apigee logo is on the left, and navigation links for Providers, API Resources, Console, Console To-Go, OAuth API, and More are in the center. The user's email, mbieman@apigee.com, is on the right. Below the navigation, the API is set to Twitter, the Service is http://api.twitter.com/1, and Authentication is No Auth. The Resource is /1/statuses/public\_timeline.json, and the method is GET. The Body tab is selected, showing a placeholder response: {{{{{{ { working } }}}}}. Below this, a table displays the Request and Response details.

| Request  | Response   |
|--|--|
| <pre>GET /1/statuses/public_time HTTP/1.1 Host: api.twitter.com User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_7_3) AppleWebKit/535.21 (KHTML, like Gecko) Chrome/19.0.1041.0 Safari/535.21 X-Target-URI: http://api.twitter.com Connection: Keep-Alive</pre> | <pre>HTTP/1.1 200 OK X-Runtime: 0.05150 ETag: "74ad01c35bf03be93d8abf25581163a7" X-Transaction: f289e84f230f8130 X-RateLimit-Remaining: 16186 X-RateLimit-Limit: 20000 Content-Length: 38770 X-MID: 789febcea324d32847673882f98573b295ed37ed Expires: Tue, 31 Mar 1981 05:00:00 GMT Last-Modified: Mon, 27 Feb 2012 17:08:22 GMT X-RateLimit-Class: api_whitelisted X-RateLimit-Reset: 1330364936 X-Revision: DEV Set-Cookie: _twitter_sess=84h7CCIX2mxhc2hJQzorQNB0w9uQ29udHJvbGxlcjo6Rmxhc2g6OkZsYXNoN250ASGFzaHsABjokQVzZ8 -4d177cc6ed2d3f1532a136d315980615722e0994; domain=.twitter.com; path=/; HttpOnly</pre> |

<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

The screenshot shows the 'DEVELOPERS' section of the SendGrid website. The header includes the SendGrid logo and navigation links for PRICING, SOLUTIONS, RESOURCES, DEVELOPERS (highlighted), PARTNERS, and CONTACT SALES. The main content area is titled 'Meet the Developer Relations Team' and features a grid of nine team members, each with a circular profile picture, name, location, and social media icons for Twitter, GitHub, and LinkedIn. At the bottom, there are two buttons: 'Contact the Dev Rel Team' and 'Follow Us on Twitter'.

| Name                   | Location          |
|------------------------|-------------------|
| Brandon West           | Denver, CO        |
| Elmer Thomas           | Riverside, CA     |
| Heitor Tashiro Sergent | Sao Paulo, Brazil |
| Kunal Batra            | New York, NY      |
| Martyn Davies          | London, UK        |
| Nick Quinlan           | San Francisco, CA |
| Scott Motte            | LA                |
| Tim Falls              | San Francisco, CA |
| Yamil Asusta           | New York, NY      |

<http://sendgrid.com/developers>

# FIX #2

# Events

**TWILIOCON<sup>3</sup>** OVERVIEW SCHEDULE SPONSORS REGISTER

— EVERYTHING IS CONNECTED. **COMMUNICATION CONNECTS.**

Twiliocon is 3 days of inspiration and technical sessions with Twilio engineers and the brightest minds in web and mobile technology on the future of communication services.


**KEYNOTES**

- JEFF LAWSON**  
CEO, Twilio
- DR. MAE JEMISON**  
NASA Astronaut, Author, Entrepreneur
- JEFF PULVER**  
VoIP Pioneer, Co-Founder Zula, Co-Founder Vonage
- MITCH KAPOR**  
Co-Chair, Kapor Center for Social Impact
- TIM O'REILLY**
- ETHAN KURZWEIL**
- JOSH STEIN**

<https://www.twilio.com/conference>

# FIX #3

# Hackathons



USA TODAY  
A GANNETT COMPANY

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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** [f 10](#) [TWEET 9](#) [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



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chromebook [Learn More](#)

**REASON #8**

**Your API is too  
complex**

**REASON #8B**

**You have your own**

**customs**

**(auth, protocol, formats)**



# **ISSUES**

**You still use SOAP**

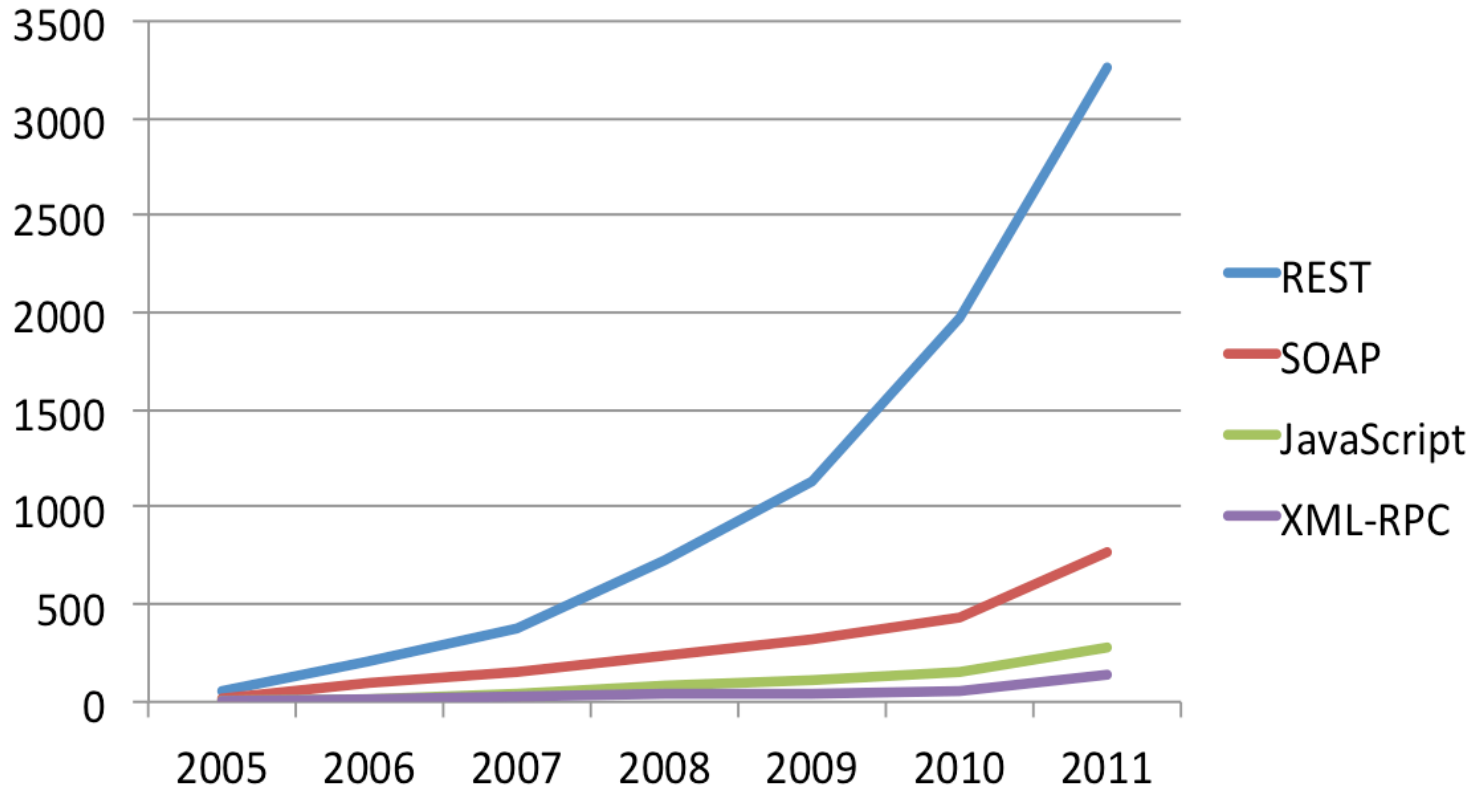
**No JSON support**

**Terse, cryptic error messages**

**Your “REST” API doesn’t use HTTP rules**

**FIX #1**

# Use REST

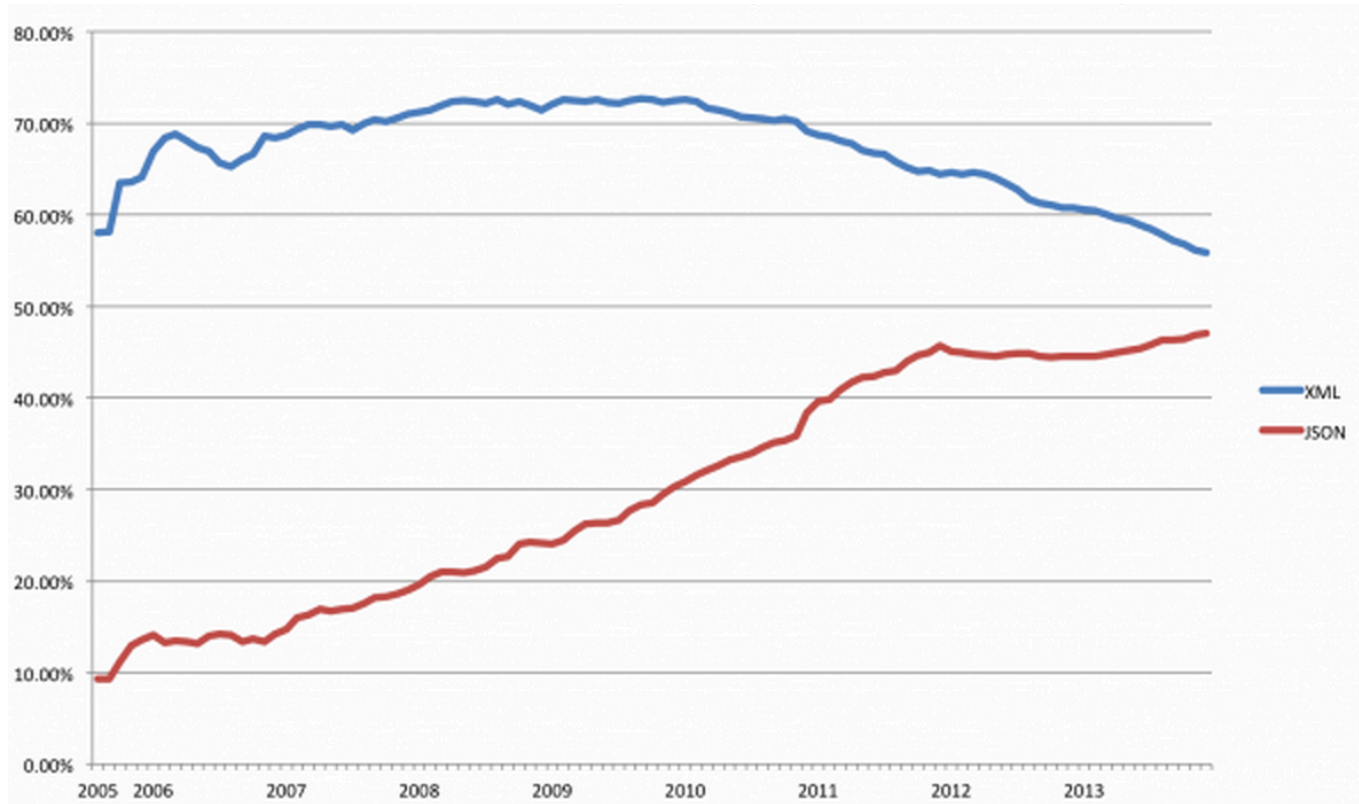


## API protocols and styles

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

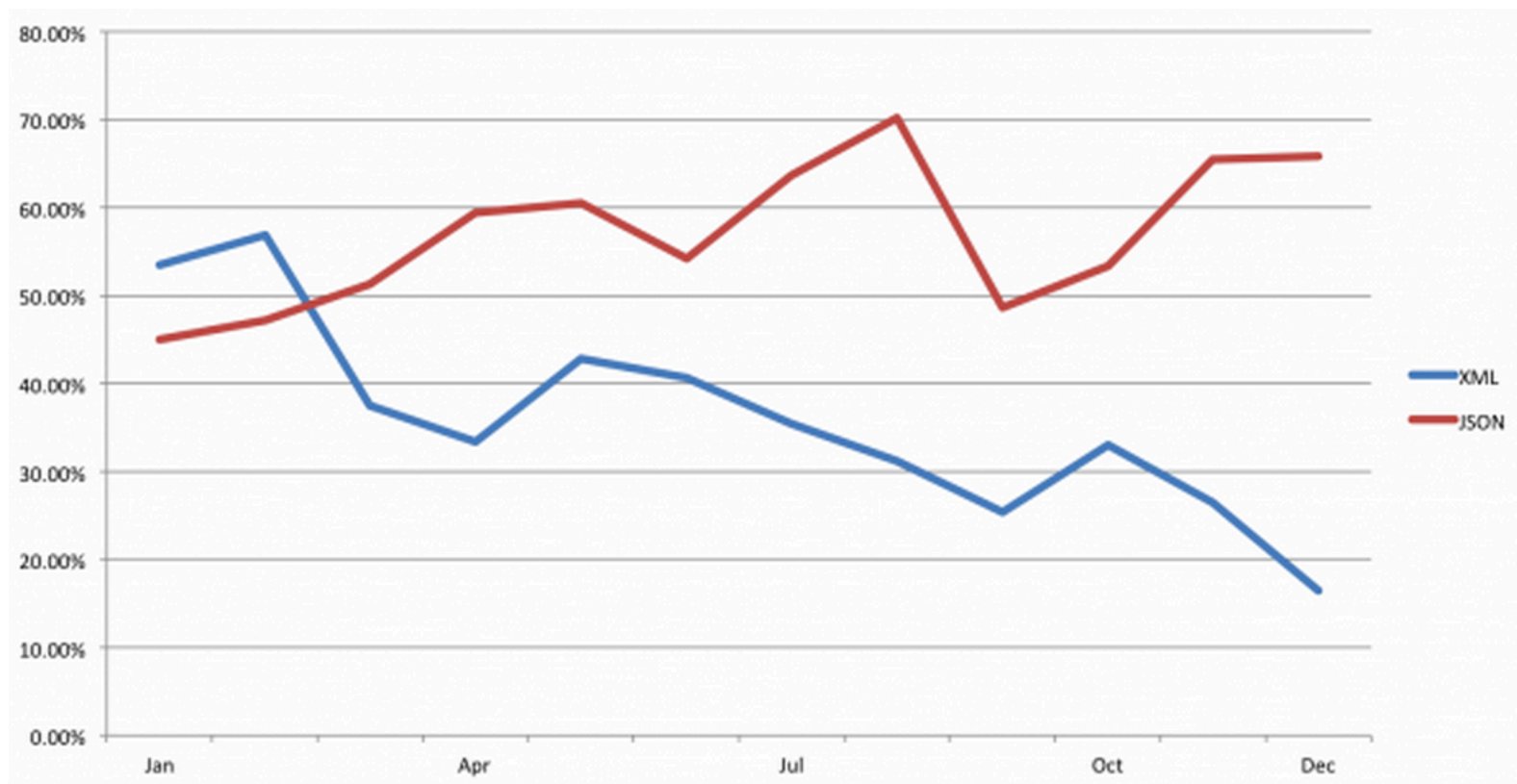
# **FIX #2**

# **Use JSON**



## **Percentage of APIs supporting JSON vs XML**

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

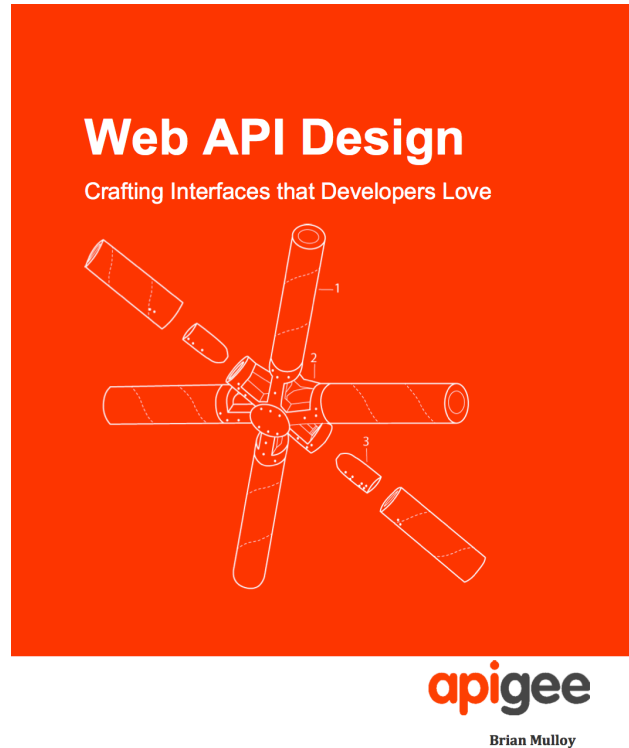


# XML vs. JSON in new APIs

*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**

# DEVELOPER EXPERIENCE



USER EXPERIENCE APPLIED TO DEVELOPERS, BECAUSE DEVELOPERS  
ARE PEOPLE TOO.

<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



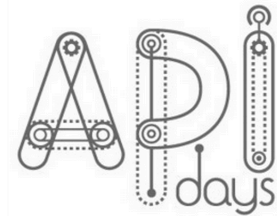
[www.qconferences.com](http://www.qconferences.com)



[www.gluecon.com](http://www.gluecon.com)



[apistategyconference.com](http://apistategyconference.com)



[apidays.io](http://apidays.io)



[iloveapis2013.com](http://iloveapis2013.com)



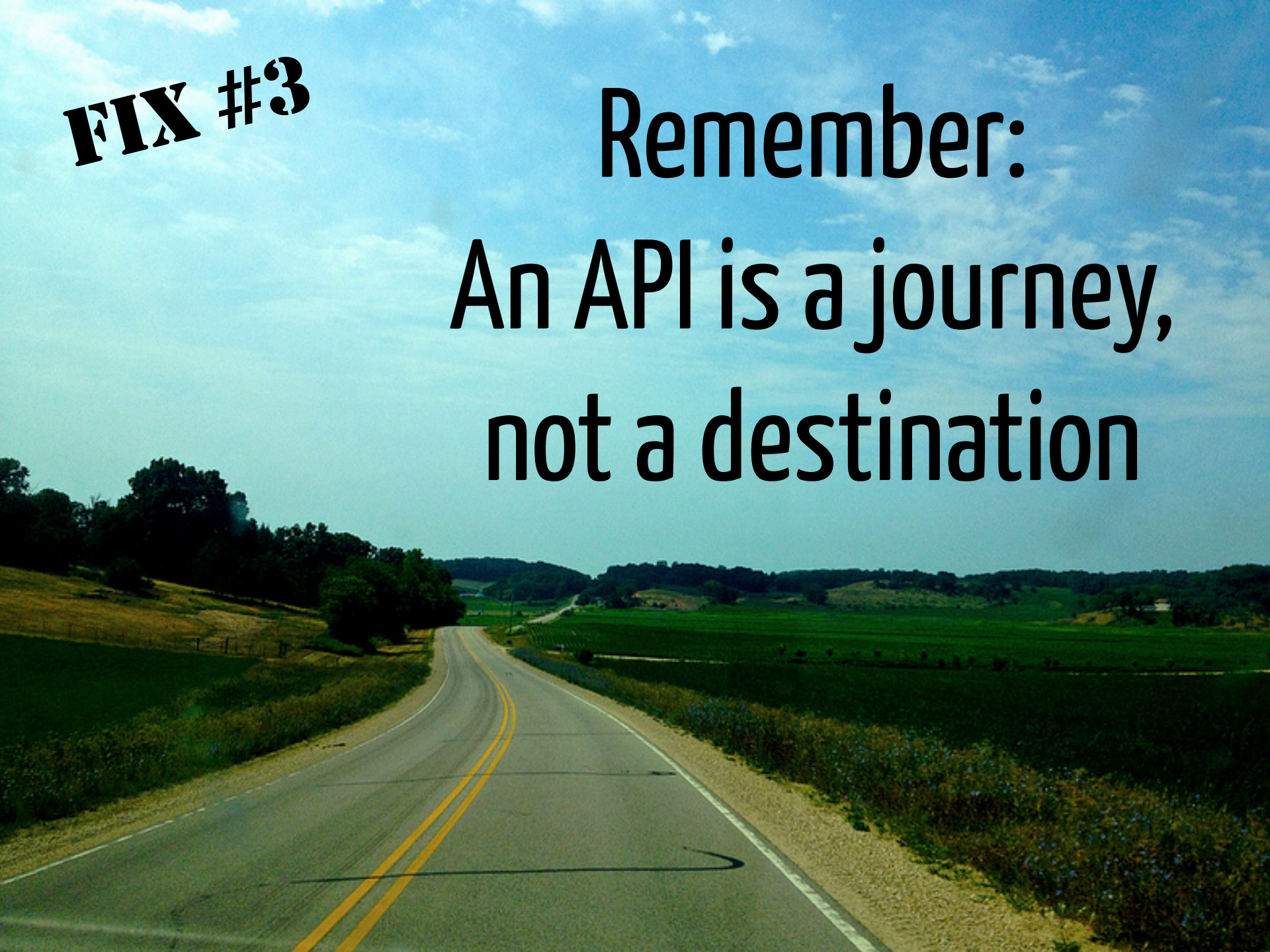
[apicon.programmableweb.com](http://apicon.programmableweb.com)



[apiconference.com](http://apiconference.com)

**FIX #3**

**Remember:  
An API is a journey,  
not a destination**



# Thank You

---

Questions, ideas, comments?

[john@apiscience.com](mailto:john@apiscience.com)

[@johnmusser](#)

# Photo credits

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