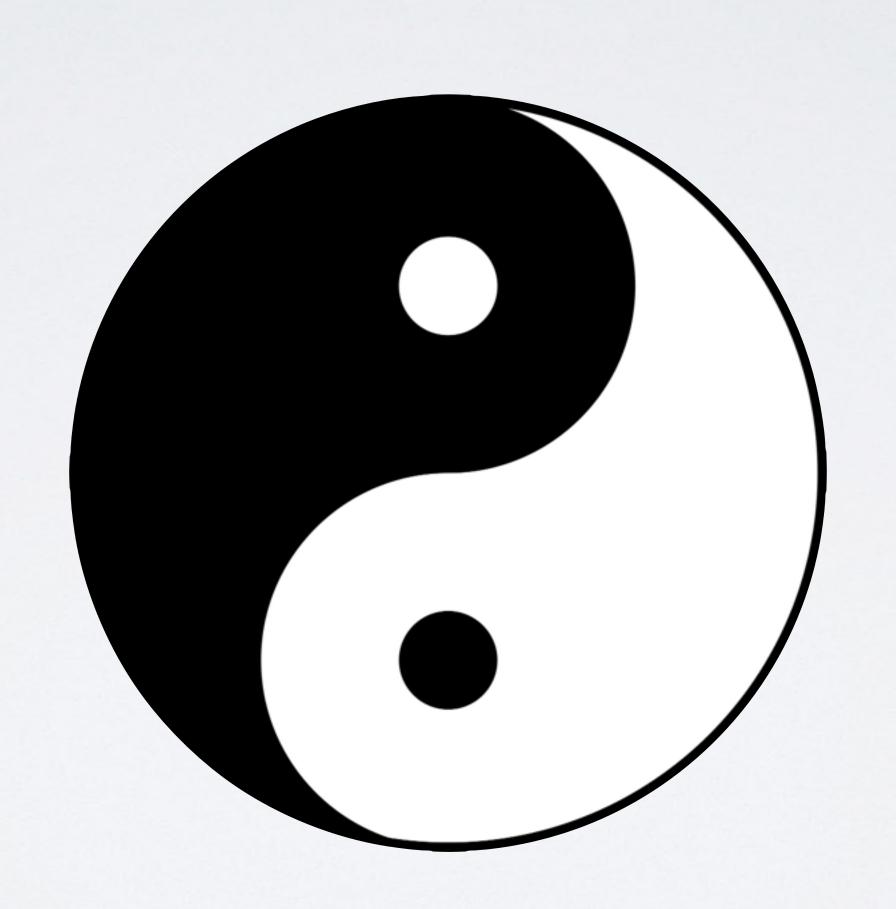
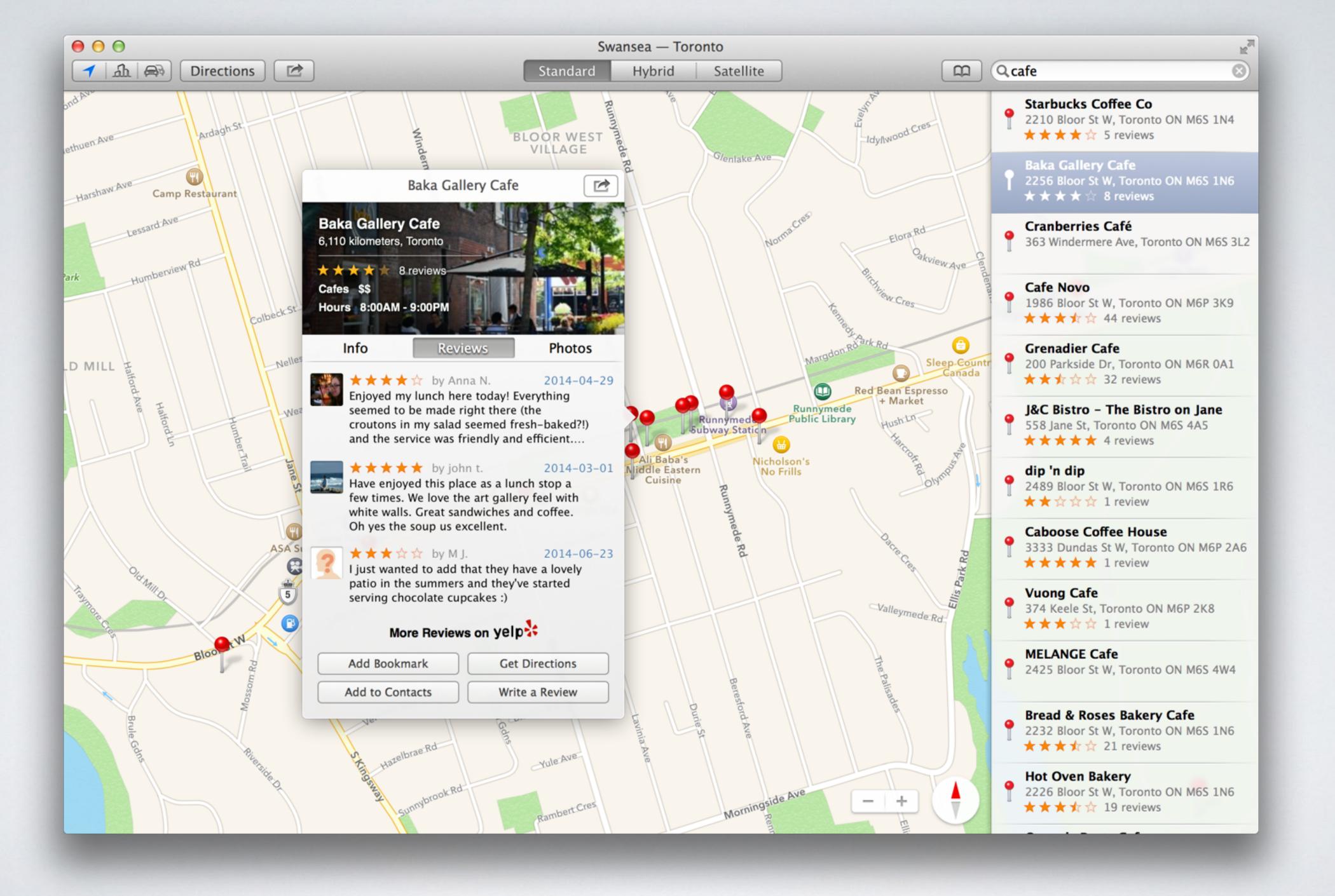
CAN'T WE ALL JUST GET ALONG?

Andrina Kelly - @andrina - Bell Media Diana Birsan - @DianaBirsan - Bell Media

WHY ARE WETALKING ABOUT THIS?

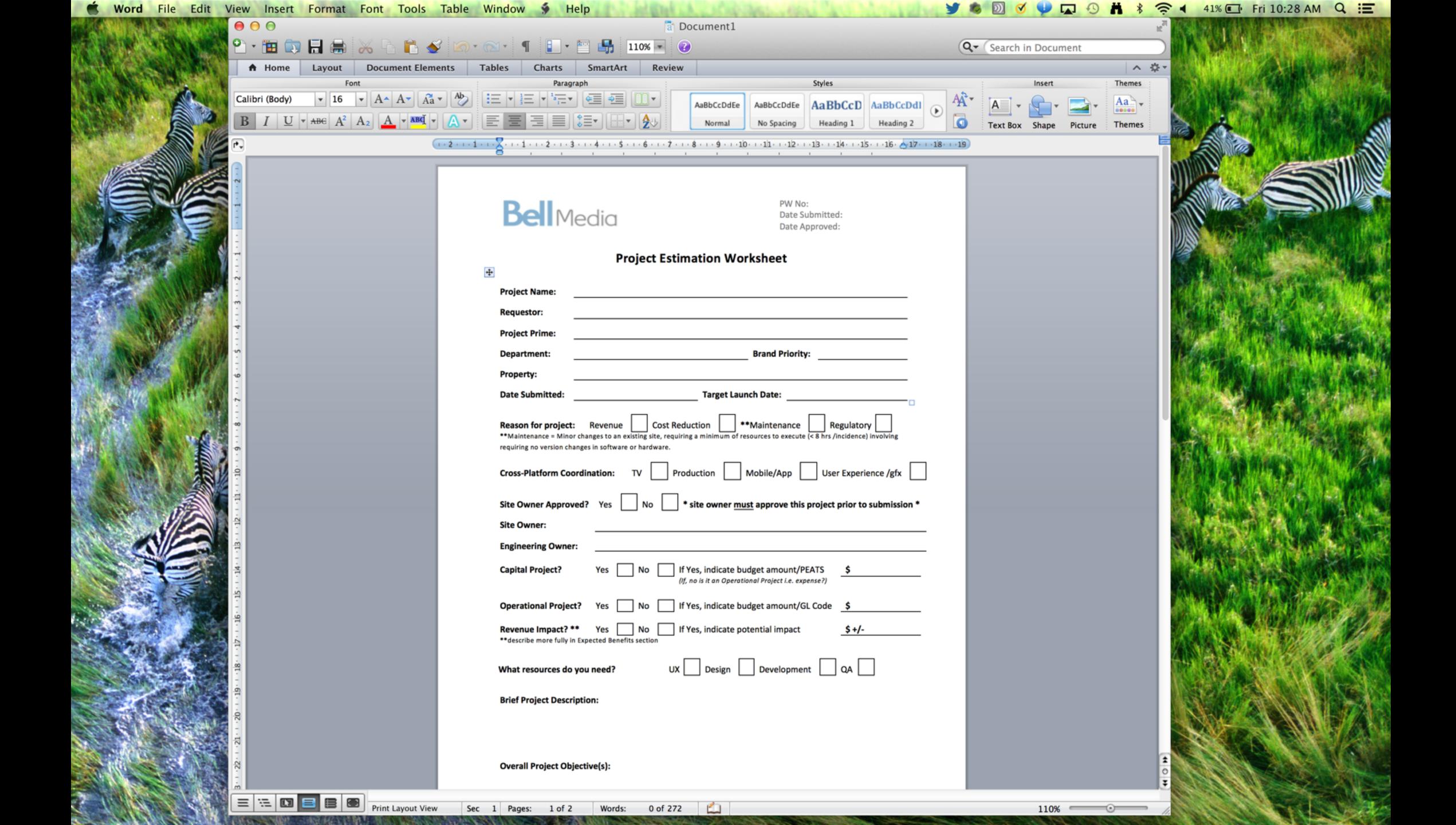




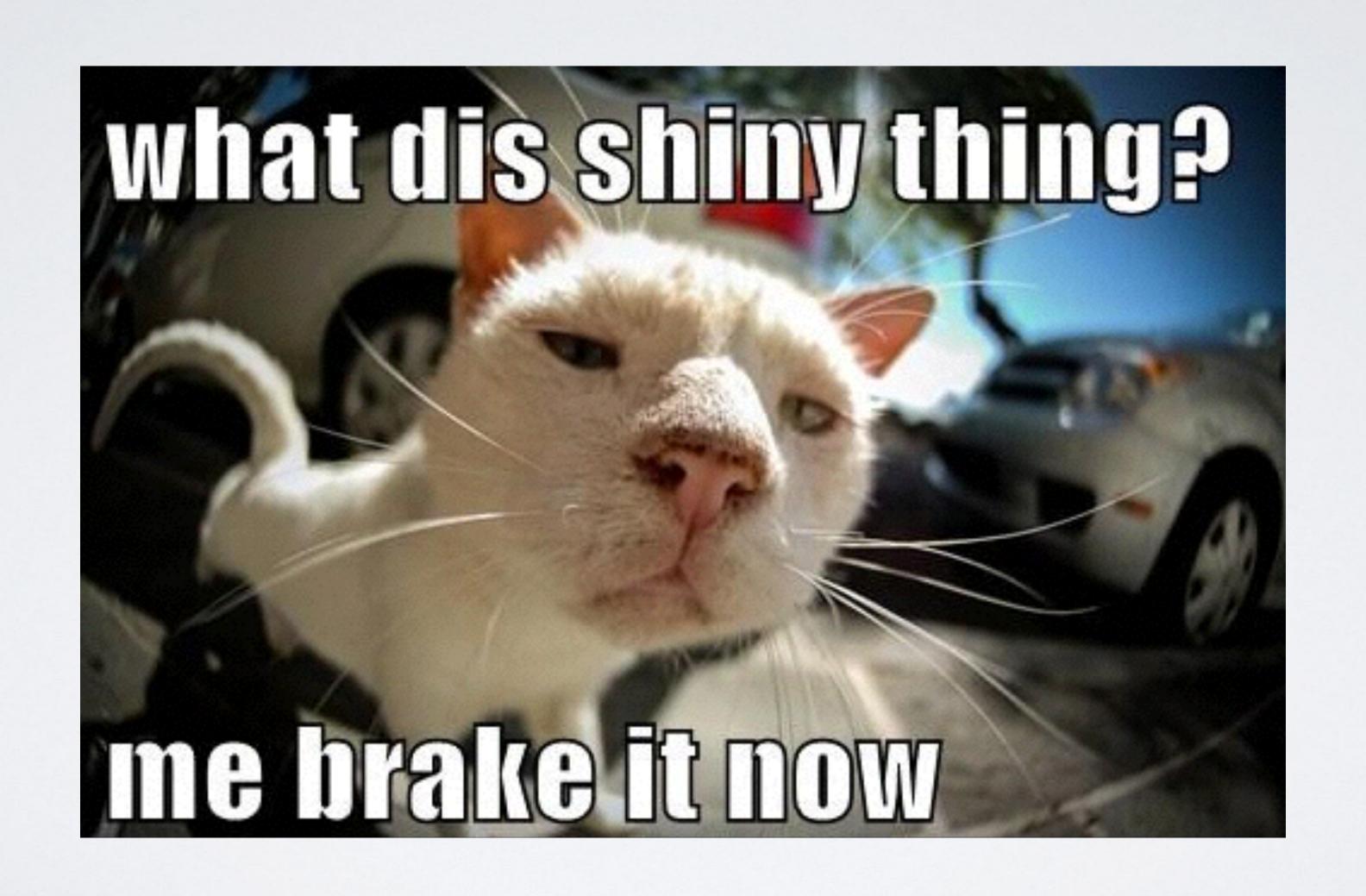
WHAT ARE WE GOING TO COVER?

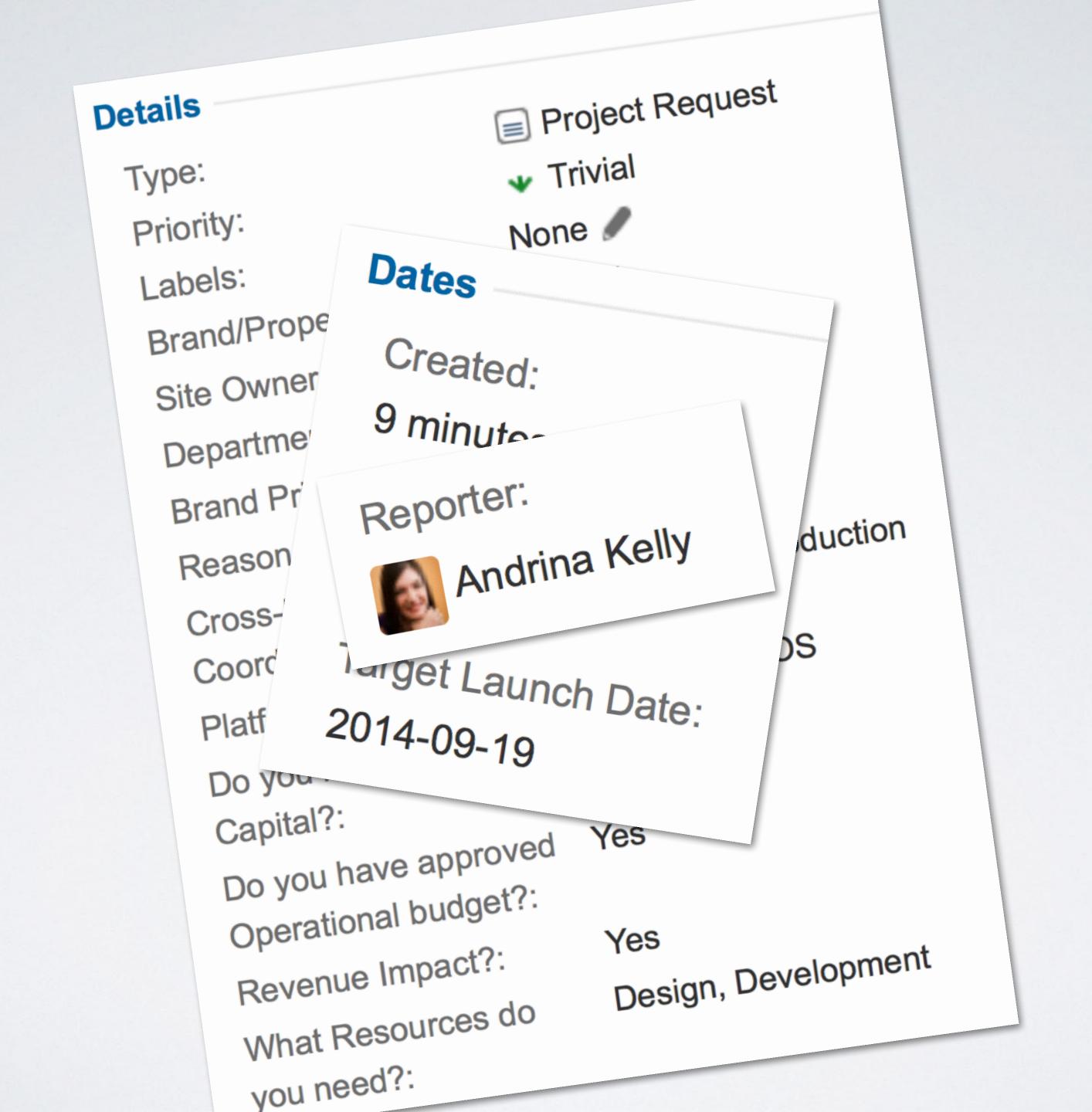
- · Clear up some acronym mysteries
- Lots of Show & Tell
- Fun!

Let's Solve a Problem



LOOK AT THE SHINY THING!





```
<h2>Please fill out the form below to submit your project request to the Project Management
Office.</h2>
<%= form_tag :action => :submit do %>
<b>Project Title</b><br>
  <%= text_field_tag :summary %><br>>
  <br/><b>Project Description</b><br/>
  <%= text_area_tag(:description, "", size: "60x12", class: "drag-target", :required => true)%>
  <br/>p><br/>br>
  <b>Site Owner Approved?<span </b><br>
 <%= radio_button_tag(:sowner, "Yes") %>
  <%= label_tag(:sowner_yes, "Yes") %>
 <%= radio_button_tag(:sowner, "No") %>
  <%= label_tag(:sowner_no, "No") %><br>
  <br/><b>Department</b><br/>
 <%= text_field_tag :department %><br>
  <%= select_tag(:priority, options_for_select([['High'], ['Medium'], ['Low']])) %><br>
```

```
jira_url = "https://username:*******@ts-jira.bellmedia.ca/rest/api/2/issue/"
project key = "PR"
issue_type = "10100"
summary = params[:summary]
description = params[:description]
reporter = session[:user_name]
brand = params[:brand]
sownerapp = params[:sowner]
department = params[:department]
priority = params[:priority]
capex = params[:capex]
opex = params[:opex]
revenueimp = params[:revenueimp]
launchdate = params[:launchdate]
date = Date.new(launchdate["date(1i)"].to_i, launchdate["date(2i)"].to_i,
  launchdate["date(3i)"].to_i).to_s
reasons = "{\"value\": \"#{params[:reason][0]}\"}"
(1..params[:reason].count - 1).each do |index|
  reasons += ", {\"value\": \"#{params[:reason][index]}\"}"
coordinations = "{\"value\": \"#{params[:coordination][0]}\"}"
(1. params[:coordination].count - 1).each do |index|
  coordinations += ", {\"value\": \"#{params[:coordination][index]}\"}"
```

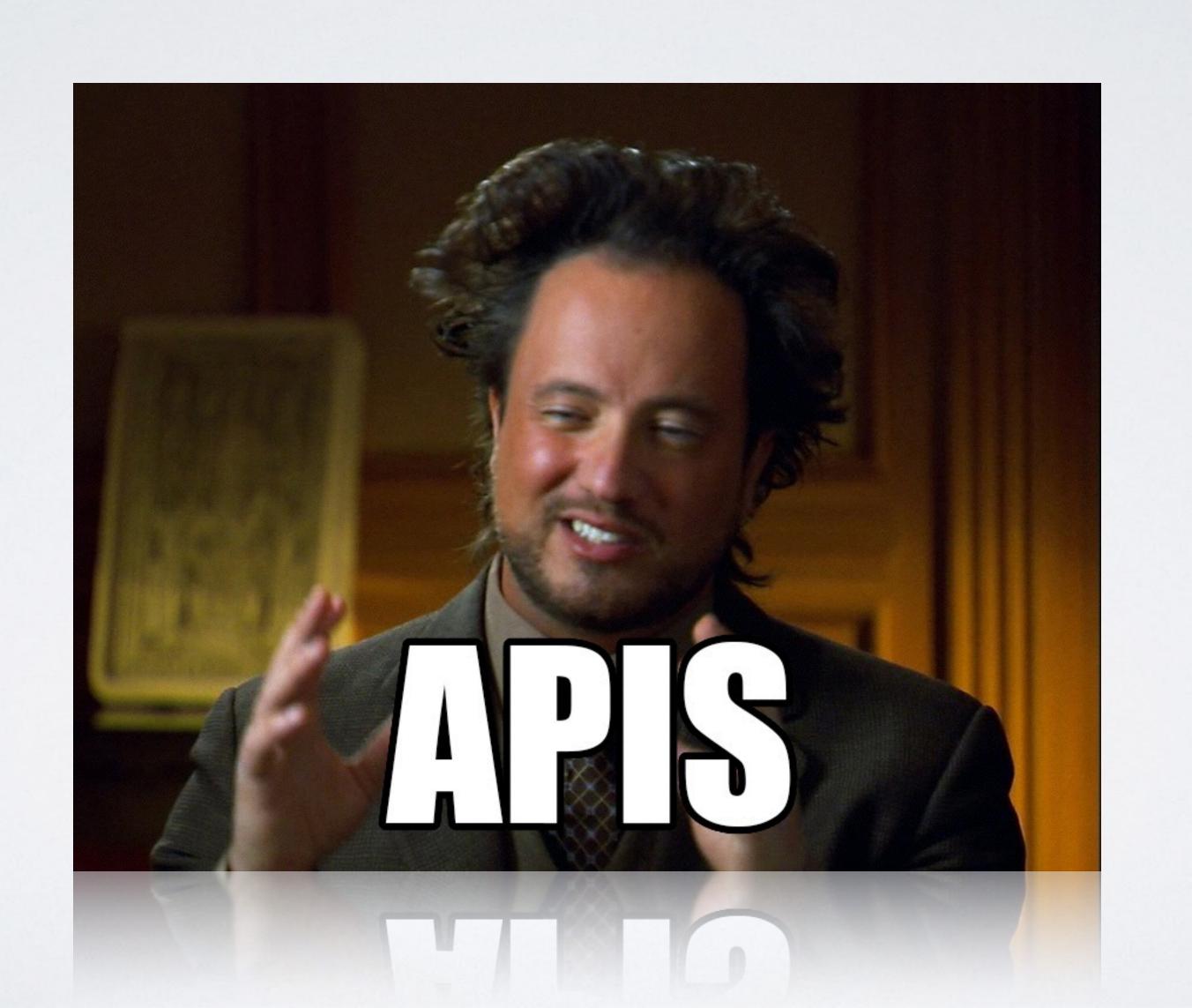
```
if summary.blank? || issue_type.blank? || brand.blank? || department.blank?
 priority.blank? | reasons.blank? | coordinations.blank? | platforms.blank? |
 capex.blank? | sownerapp.blank? | opex.blank? | revenueimp .blank? | resource
 blank?
 redirect_to :back
 flash[:notice] = "All fields must be completed"
 @request = RestClient.post(jira_url, '{ "fields": { "project": {"key": "' +
   project_key + '"}, "summary": "' + summary +'", "description": ' + description.
   inspect + ', "issuetype": {"id": "' + issue_type + '"}, "reporter": {"name": "' +
   reporter + '"}, "customfield_11903": {"value": "' + brand + '"},
   "customfield_11906": "' + department + '", "customfield_11907": {"value": "' +
   priority + '"}, "customfield_11908": "' + date + '", "customfield_11909": [' +
   reasons + '], "customfield_11910": [' + coordinations + '], "customfield_11911": ['
    + platforms + '], "customfield_11912": {"value": "' + capex + '"},
   "customfield_11914": {"value": "' + sownerapp + '"}, "customfield_11915":
   {"value": "' + opex + '"}, "customfield_11916": {"value": "' + revenueimp + '"},
   "customfield_11917": [' + resource + ']}}', :content_type => :json, :accept => :
   json)
  if @request
     request
     render "main/submit"
   render :partial => 'select'
```

TWEETYPY

```
import oauth2
import time
import urllib2
import json
url1 = "https://api.twitter.com/1.1/search/tweets.json"
params = {
    'oauth_version': '1.0',
    'oauth_nonce': oauth2.generate_nonce(),
    'oauth_timestamp': int(time.time())
consumer = oauth2.Consumer(key=""
                                                          ", secret="
                                                                             ", secret="
token = oauth2.Token(key="
params["oauth_consumer_key"] = consumer.key
params["oauth_token"] = token.key
for i in range(1):
   url = url1
    params["q"] = "macsysadmin"
    params["count"] = 5
    req = oauth2.Request(method="GET", url=url, parameters=params)
    signature_method = oauth2.SignatureMethod_HMAC_SHA1()
    req.sign_request(signature_method, consumer, token)
    headers = req.to_header()
   url = req.to_url()
   response = urllib2.Request(url)
   data = json.load(urllib2.urlopen(response))
   print data
f = open("outfile_" + str(i) + ".txt", "w")
json.dump(data["statuses"], f)
f.close()
time.sleep(5)
```

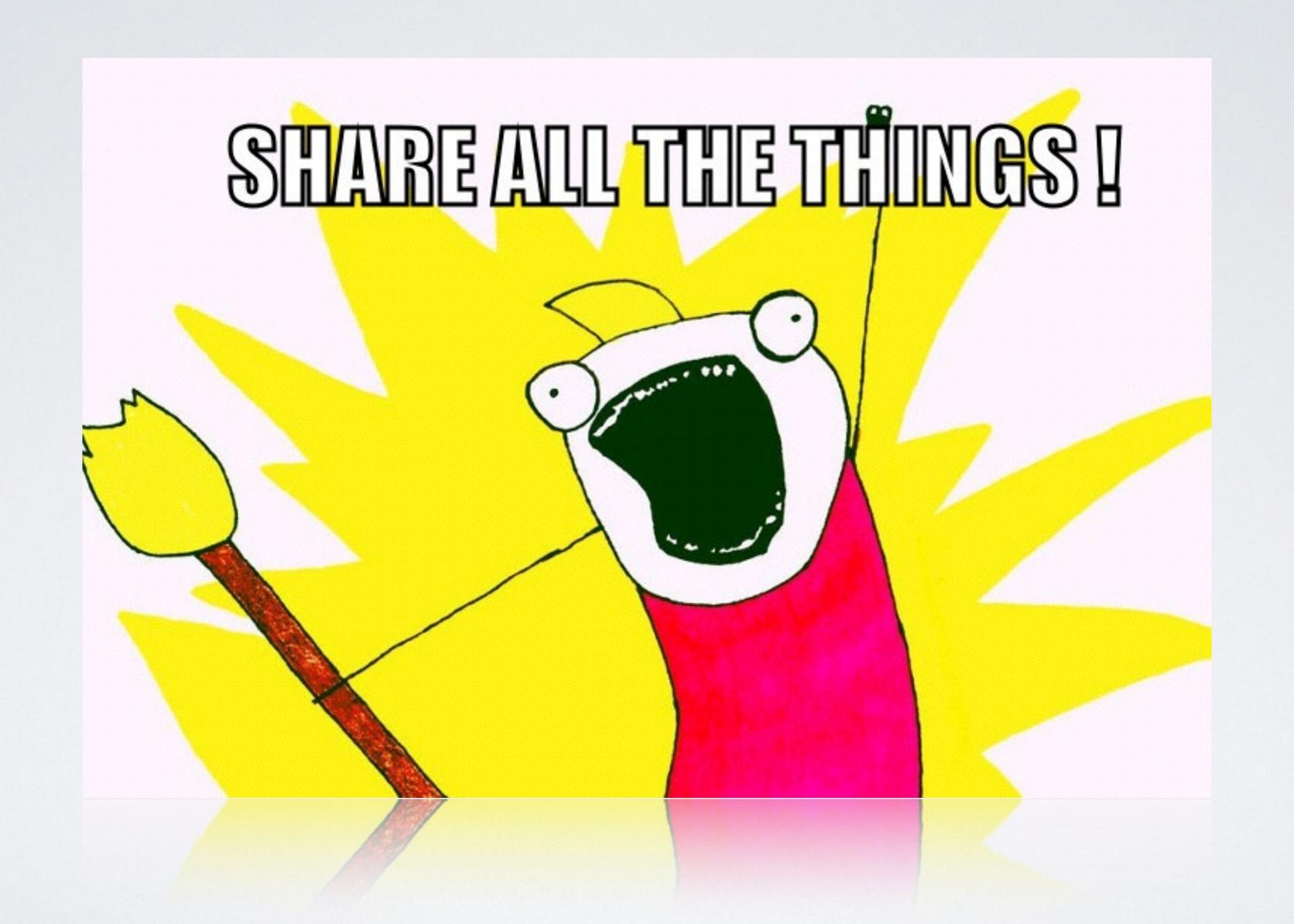
DEMO

WHAT IS AN API?



Analogy Time!

- Application Program Interfaces
- Instructions and Communication
- Predefined functions
- Structured remote calls or request messages



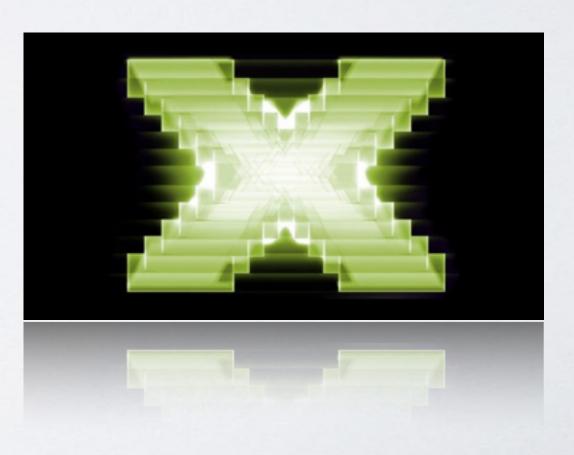




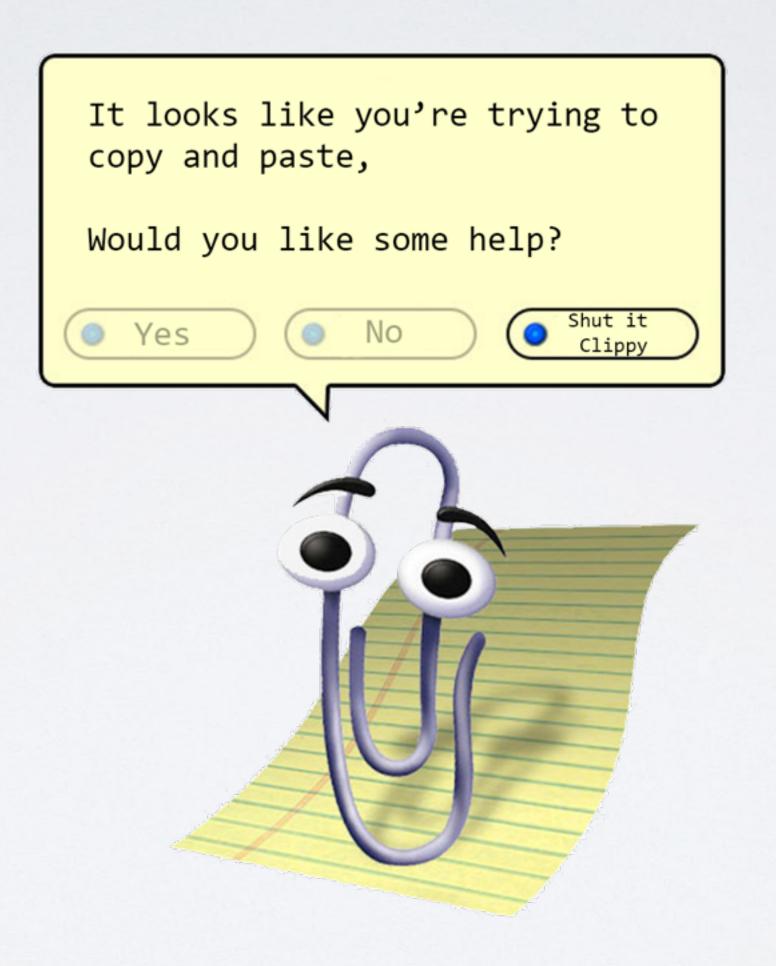


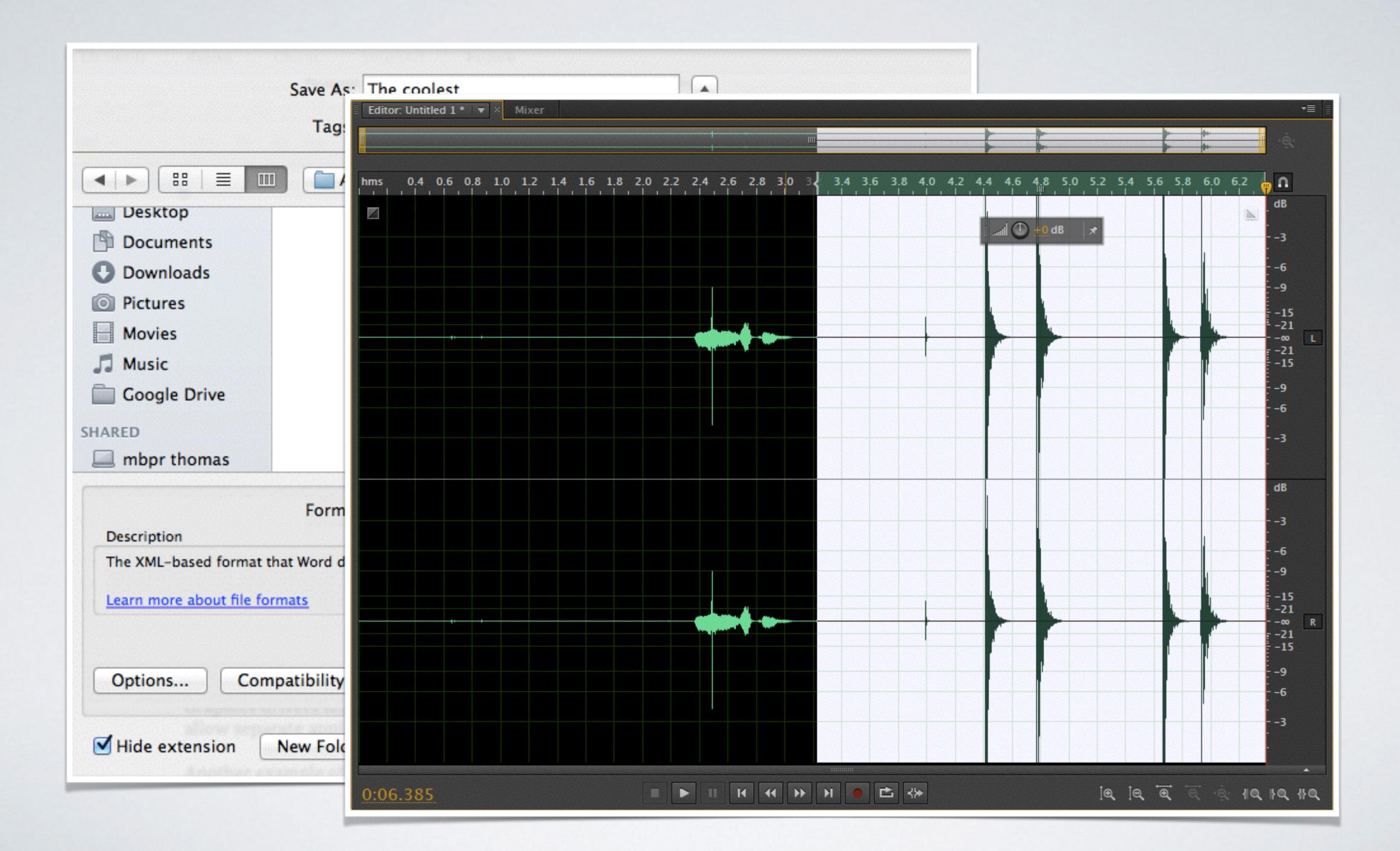


METELIX.



SYSTEMAPIS





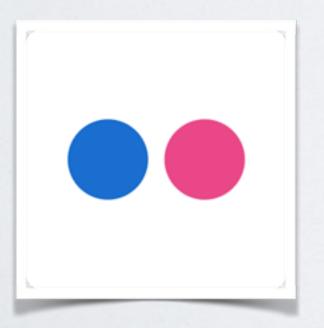
Game APIS

- Compatibility between configurations
- DirectX, OpenGL and Mantle
- Interfacing by making draw calls



WEB APIS

http://www.programmableweb.com









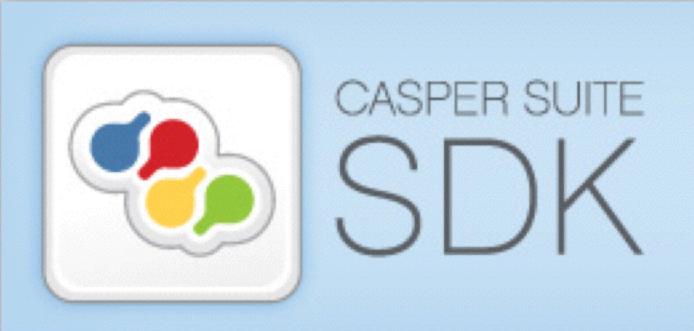


```
src="https://maps.googleapis.com/maps/api/js?key=@
sensor=true">
$.getJSON("https://api.flickr.com/services/rest/?method=flickr.photos.search&api_key=
                               &user_id=127371566@N05&has_geo=1&extras=geo&format=json&
jsoncallback=?", displayImages3);
                   //Get the url for the image.
                    var photoURL = 'http://farm' + item.farm + '.static.flickr.com/' +
item.server + '/' + item.id + '_' + item.secret + '_n.jpg';
                   htmlString = '<img src="' + photoURL + '">';
                    var contentString = '<div id="content">' + htmlString + '</div>';
                   //Create a new info window using the Google Maps API
                    var infowindow = new google.maps.InfoWindow({
                         //Adds the content, which includes the html to display the image
from Flickr, to the info window.
                         content: contentString,
//Using the Google Maps API to create the map.
var myLatlngCenter = new google.maps.LatLng(57.703347,11.955871);
var mapOptions = {
      center: myLatlngCenter,
          zoom: 14,
          mapTypeId: google.maps.MapTypeId.ROADMAP
```

DEMO

WHAT IS AN SDK?

- Software Development Kit
- Package of pre-written code that developers can re-use in order to minimize the amount of unique code that they need to develop themselves





Release Notes.pdf



Documentation & Resources



JSS API



Self Service API



WHAT IS SOAP?



WHAT IS SOAP?

- Simple Object Access Protocol
- Basic Messaging Framework
- Communication Protocol over HTTP
- Developed by Microsoft
- XML-based only

"XML IS WRONG, JSON IS THE WAY FORWARD!"





JavaScript Object Notation

XML

```
<speakers>
    <speaker>
        <firstName>Tycho</firstName> <lastName>Sjögren</lastName>
    </speaker>
    <speaker>
        <firstName>Arek</firstName> <lastName>Dreyer</lastName>
    </speaker>
    <speaker>
        <firstName>Marko</firstName> <lastName>Jung</lastName>
    </speaker>
</speakers>
```

JSON

```
{"speakers":
{"speaker":[
{"firstName":"Tycho", "lastName":"Sjögren"},
{"firstName":"Arek", "lastName":"Dreyer"},
{"firstName":"Marko", "lastName":"Jung"}
}
```

CONVERTING XMLTO JSON

- https://github.com/parmentf/xml2json
 - · Not native, requires npm to install
- Ruby is your friend

XML JSON

#!/usr/bin/ruby

```
require 'rubygems'
require 'active_support/core_ext'
require 'json'
```

```
xml = File.open(ARGV.first).read
json = Hash.from_xml(xml).to_json
```

File.open(ARGV.last, 'w+').write json

WHAT IS REST?



- Representational State Transfer
- Architectural Style behind WWW
- · Unique URI represents an object
- RESTful web services

CONSTRAINTS

- Code-on-Demand
- Uniform Interface
- Stateless
- Cacheable
- Client-Server
- Layered System

JSS REST API Resource Documentation

/accounts		Show/Hide List Operations Expand Operations	
GET	/accounts	Finds all accounts	
GET	/accounts/userid/{id}	Finds users by id	
POST	/accounts/userid/{id}	Creates a new user by id	
PUT	/accounts/userid/{id}	Updates an existing user by id	
DELETE	/accounts/userid/{id}	Deletes a user by id	
GET	/accounts/username/{name}	Finds users by name	
	/accounts/groupid/{id}	Finds groups by id	
	/accounts/groupid/{id}	Creates a new group by id	
	/accounts/groupid/{id}		

https://jss.jamfsw.com/jss/api/

```
#!/bin/bash -x
API_User='apiwrite' # Replace with your username
API_Pass='apiwrite' # Replace with your password
MAC_Address=$1 # Lowercase colon separated MAC address of the new Mac
Numeric_Site_ID='1' # Replace with desired Site or leave as -1 to not set a Site
JSS='127.0.0.1:8443'
read -r -d '' XML_Chunk <<EOF
<?xml version="1.0" encoding="UTF-8"?>
<computer>
    <qeneral>
        <name>${MAC_Address}</name>
        <mac_address>${MAC_Address}</mac_address>
        <site>
            <id>${Numeric_Site_ID}</id>
        </site>
    </general>
    <hardware>
        <os_name>Mac OS X</os_name>
    </hardware>
</computer>
E0F
echo "$XML_Chunk" | curl -T - --user "${API_User}":"${API_Pass}" --request POST
https://${JSS_FQDN}/JSSResource/computers/id/0
```

DEMO

WHAT IS THE DIFFERENCE BETWEEN SOAP & REST?

JSS EXTENSION ATTRIBUTE DEMO

```
#!/bin/bash
#
#Determine Computer Name
COMPUTER=`scutil --get ComputerName`

#Determine Machine ID based on Computer Name
ID=`curl -k -s -u apiread:apiread
https://127.0.0.1:8443/JSSResource/computers/name/$COMPUTER | xpath computer/general/id|
awk 'gsub(/<id>|<\/id>/,x)'`
```

```
#!/bin/bash
#
#Determine Computer Name
COMPUTER=`scutil --get ComputerName`

#Determine Machine ID based on Computer Name
ID=`curl -k -s -u apiread:apiread
https://127.0.0.1:8443/JSSResource/computers/name/$COMPUTER | xpath computer/general/id|
awk 'gsub(/<id>|<\/id>/,x)'`
```

<?xml version="1.0" encoding="UTF-8"?><computer><general><id>1<dots</pre><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address><alt_mac_address<<alt_mac_address<<alt_mac_address><alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_address<<alt_mac_addre

<id>1</id>

```
#!/bin/bash
#Determine Computer Name
COMPUTER=`scutil --get ComputerName`
#Determine Machine ID based on Computer Name
ID=`curl -k -s -u apiread:apiread
https://127.0.0.1:8443/JSSResource/computers/name/$COMPUTER | xpath computer/general/id|
awk 'gsub(/<id>|<\/id>/,x)'`
#Determine username based on Machine ID
USERNAME=`curl -k -s -u apiread:apiread
https://127.0.0.1:8443/JSSResource/computers/id/$ID | xpath //location/username| awk
'gsub(/<username>/,x)'`
```

dbirsan

```
JIRAISSUES=`curl -s -u apiread:apiread
http://localhost:8088/rest/api/2/search?jql=project%20=%20CTS%20AND%20created%20%3E=%20-
30d%20%20AND%20reporter%20in%20%28$USERNAME%29 | ruby -e "require 'rubygems';require
'json'; jj JSON.parse(STDIN.gets)" | grep '"CTS-' | awk 'gsub(/",/,x)' | awk 'gsub(/"key":
"/, "http://localhost:8088/browse/")'`
```

{"expand":"schema,names","startAt":0,"maxResults":50,"total":6,"issues":[{"expand":"operations,editmeta,changelog,transitions,renderedFields","id":"10005","self":"http://localhost:8088/rest/api/2/issue/10005","key":"CTS-6","fields":{"issuetype":{"self":"http://localhost:8088/rest/api/2/issuetype/3","id":"3","description":"A task that needs to be done.","iconUrl":"http://localhost:8088/images/icons/issuetypes/task.png","name":"Task","subtask":false},"components":[],"timespent":null,"timeoriginalestimate":null,"description":"h4. Now it's your turn!\n{color:#707070}Now that you know the basics of JIRA, there is so much more you can do, JIRA administrators can do the following:{color}\n\n* {color:#707070}Create your own project - return to [View All Projects|http://localhost:80]

```
"key": "CTS-6",
"key": "CTS-5",
"key": "CTS-4",
"key": "CTS-3",
"key": "CTS-2",
"key": "CTS-1",
```

```
http://localhost:8088/browse/CTS-6
http://localhost:8088/browse/CTS-5
http://localhost:8088/browse/CTS-4
http://localhost:8088/browse/CTS-3
http://localhost:8088/browse/CTS-2
http://localhost:8088/browse/CTS-1
```

DEMO

DEMO - XCODE - TWITTER

Takk Banks