Intro to Open311

Philip Ashlock  |  November 2017
What is 311?

A universal point of contact to ask questions & report problems

311 stats for Chicago
NYC 311 receives over 50,000 calls a day
Open311

An open communication standard for public services & local government
Open311 is not a product nor is it a specific piece of software
Open311 is a specification

When people say “Open311” they’re talking about the technical specification - or instances where tools implement the specification.

The technical specification for the Open311 GeoReport v2 API is http://wiki.open311.org/GeoReport_v2
## GET Service List

**Purpose**
provide a list of acceptable 311 service request types and their associated service codes. These request types can be unique to the city/jurisdiction.

**URL**
https://[API endpoint]/services.[format]

**Sample URL**

**Formats**
XML (JSON available if denoted by Service Discovery)

**HTTP Method**
GET

**Requires API Key**
No

### Required Arguments

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Notes &amp; Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>jurisdiction_id</td>
<td>This is only required if the endpoint serves multiple jurisdictions</td>
<td></td>
</tr>
</tbody>
</table>

### Response

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Notes &amp; Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>service_code</td>
<td>The unique identifier for the service request type</td>
<td></td>
</tr>
</tbody>
</table>
**Open311 is a protocol**

This particular kind of protocol is a web API (Application Programming Interface).

Specifically, the Open311 GeoReport v2 API is a web-based API that allows different applications to both view and create 311 service requests.
Open311 is a standard

Just as with other standardized technologies like the web or email, Open311 is a technical standard that many different products and services can implement.

If they comply with the standard, the tools are interoperable and can be used interchangeably.
Open?
“Open” is used to mean 2 things:

1. Open311 encourages 311 data to be open to the public.

2. Open311 is an open standard so anyone is free to use it and implement it without licenses, permission, fees, etc.
What is “open” 311 data like?
Service Request Count by Location
- 1 Request:
- 2 to 128 Requests:
- 129 to 255 Requests:
- 256 to 382 Requests:

The Department of Transportation referred this complaint to the appropriate Maintenance Unit for repair.

You are now viewing Service Requests that are open and recently closed. Recently closed is within five days of today.
Illustration: Pitch Interactive

Appeared in “What a Hundred Million Calls to 311 Reveal About New York” by Steven Johnson in Wired Magazine
Some Recent History
Potholes and Water

Reported in the Potholes category by Andy GRiffiths at 17:42 today
Sent to Stirling Council 2 minutes later.

There are several potholes at the junction of Milndavie road and Old Mugdock road on the east side of the junction. There is also water ponding across the road from the field which in cold weather freezes and is a serious hazard.

Provide an update

Please note that updates are not sent to the council. If you leave your name it will be public. Your information will only be used in accordance with our privacy policy.

Update:
Reinventing the Wheel

Should everyone have a custom app? Or just different branding?
Governments can’t easily manage or control all these different apps and communication channels.

People don’t always have clear expectations set for whether government can respond or act.

Many apps aren’t actually connected to the official government CRMs.

Most apps aren’t compatible with one another and everyone has a different app.
API
PC / Web
SaaS
Cloud Integration
CRM
SMS
Tablet
Mobile
Web
Smart Phone
Voice
IVR
SMS
CRM
Benefits of a web API

- Governments can control which apps connect and how they are used.

- Governments can provide automated responses and show SLA’s where appropriate.

- Many different apps and communication channels can simultaneously connect to the official CRM.

- With many apps and services working interoperably using the same API, people and government have more choice.
Benefits of an open standard

Interoperability
Consistency
Ubiquity
Efficiency
Shareability
How Open311 was born
Open 311

Posted by Vivek Kundra on March 03, 2010 at 12:48 PM EDT

I'm on the road today, joining San Francisco Mayor Gavin Newsom and San Francisco CIO Chris Vein for an event to highlight San Francisco's Open 311 API (Application Programming Interface) initiative. This is a great approach that ties together efforts in San Francisco, Boston, the District of Columbia, Portland, and Los Angeles to open more services to citizens, and to use data to drive progress in people's lives. Too often, people grumble that their complaints about government — be it city, county, state, or federal — get swallowed by the bureaucracy.

Open 311 is an answer to that problem, placing the role of service evaluators and service dispatchers in the power of citizens' hands. Through this approach, new web applications can mash publicly available, real-time data from the cities to allow people to track the status of their requests or improvements, while also allowing them to make new requests for services. For instance, I can use the same application to report a broken parking meter when I'm home in the District of Columbia or travelling to cities like Portland, Los Angeles, Boston, or San Francisco. This is the perfect example of how government is simplifying access to citizen services. Open 311 is an innovation that will improve people's lives and make better use of taxpayer dollars.

The event which will take place at the 311 Customer Service Center in San Francisco, California will be streamed live below starting at 2:30 p.m. EST/11:30 a.m. PST.

UPDATE: This event has concluded, but you can watch it in its entirety by clicking here.
Open311 Worldwide

See Map of North America
## United States of America
- Baltimore, MD
- Bloomington, IN
- Boston, MA
- Brookline, MA
- Chicago, IL
- Columbus, IN
- Grand Rapids, MI
- Peoria, IL
- San Francisco, CA
- Newark, NJ
- Raleigh, NC
- Richmond, VA
- Howard County, MD
- Huntsville, AL
- New Haven, CT
- Brookline, MA
- Washington D.C.
- Philadelphia, PA

## Germany
- Cologne
- Bonn
- Rostock
- Gießen
- Brühl
- Annaberg-Buchholz
- Siegburg

## Finland
- Helsinki
- Turku

## Canada
- Toronto, ON
- Quebec, QC *
- Surrey, BC *

## Others:
- Darwin, Australia
- Lamía, Greece
- Greenwich, UK
- Southampton, UK *
- Zürich, Switzerland *
- Zaragoza, Spain *
- Lisboa, Portugal *
- Dar es Salaam, Tanzania *
- Edo State, Nigeria *
- Cebu, Philippines *
~ 35 city endpoints

~ 10 vendor supported products

~ 5 open source servers

~ 7 open source clients

~ 6 client libraries

For details see:
http://wiki.open311.org/GeoReport_v2/Servers
http://wiki.open311.org/GeoReport_v2/Resources
Innovation from the Open311 Community
Tuesday
Day of week with the most service requests

Wednesday

TOP 5 SERVICE REQUESTS

1. Rodent Baiting / Rat Complaint (40%)
2. Street Lights All / Out (31%)
3. Graffiti Removal (19%)
4. Pothole in Street (15%)
5. Traffic Signal Out (13%)

COMPARE ALL SERVICE REQUESTS

Select service requests to compare

Street Light 1 / Out

6% (162/2706)

8% (100/1296)
Open311
Open Source

wiki.open311.org/Open_Source
Open311 Dashboard
San Francisco: 311 Requests in 2011 YTD

Downtown

<table>
<thead>
<tr>
<th>Request</th>
<th>Total</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS - Cancelled Queue</td>
<td>260</td>
<td></td>
</tr>
<tr>
<td>Sidewalk Cleaning</td>
<td>244</td>
<td></td>
</tr>
<tr>
<td>Illegal Dumping</td>
<td>238</td>
<td></td>
</tr>
<tr>
<td>RCS - Escalated KB</td>
<td>192</td>
<td></td>
</tr>
<tr>
<td>Dept. of Public Health</td>
<td>169</td>
<td></td>
</tr>
</tbody>
</table>

Low to High Density

340 - 398 EDDY ST
Top 5% of requests
Total Requests 13 during May 2011
Top Request: Sidewalk Cleaning
Open311 Dashboard
### Open311 on Joget

#### Open311 Request
- Open311 Dashboard
- Inbox

#### Admin Menu
- File new request
- Open311 Data List

#### Open311 Center

<table>
<thead>
<tr>
<th>Service Request ID</th>
<th>Service Name</th>
<th>Status</th>
<th>Description</th>
<th>Address</th>
<th>Date Created</th>
<th>Request Date</th>
<th>Agency Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>000005</td>
<td>Sidewalk or Curb</td>
<td>open</td>
<td></td>
<td>621 Folsom at San Francisco</td>
<td>2011-06-31</td>
<td>06/31/2011</td>
<td></td>
</tr>
<tr>
<td>000002</td>
<td>Litter Receptacles</td>
<td>open</td>
<td></td>
<td>548 Market St, San Francisco, CA 94104</td>
<td>2011-06-20</td>
<td>06/05/2011</td>
<td></td>
</tr>
<tr>
<td>000003</td>
<td>Sidewalk Cleaning</td>
<td>open</td>
<td></td>
<td>33 New Montgomery Street, San Francisco, CA 94107</td>
<td>2011-06-23</td>
<td>06/17/2011</td>
<td></td>
</tr>
</tbody>
</table>

3 items found, displaying 3 items.

[Export: CSV, Excel, XML, PDF]
Mark-a-Spot GeoReport v2 API

This demo simulates a client like a mobile app, backend CRM or something similar. This RESTful client requests and receives responses provided by a Mark-a-Spot Community-Instance at open311.may-city.com for San Francisco.

Click on the Submit button to post or send in a test report through a web form there.

Send Request

Simulating a Service Request with Method POST using random Coordinates and saving a PNG into the Mark-a-Spot instance.

Service Code is 490 “Curb and Gutter Repair”

URL: http://open311.may-city.com/open311/requests.xml
URL: http://open311.may-city.com/open311/requests.json

Request Header: 

```json
"Authorization"
"TREXREST" username=xsysdmirr@markaspot.org password=secret111!&apiKey=MarkASpot:
array('service_id' => '19491080',
'lat' => '-37.768275897894',
'lng' => '-122.415627559063',
'service_code' => '490',
'media_url' => 'http://makeat.org/img/make-logon.png');
```

Open311 on Mark a Spot
Open311 API for the mySociety FixMyStreet server

At the moment only searching for and looking at reports work.

The API implementation is work in progress and not yet stabilized. It will change without warnings in the future.

- Open311 initiative web page
- Open311 specification

At most 20 requests are returned in each query. The returned requests are ordered by requested_datetime, so to get all requests, do several searches with rolling start_date and end_date.

The following Open311 v2 attributes are returned for each request: service_request_id, description, lat, long, media_url, status, requested_datetime, updated_datetime, service_code and service_name.

In addition, the following attributes that are not part of the Open311 v2 specification are returned: agency_send_datetime, title (also returned as part of description), interface_used, comment_count, requestor_name (only present if requestor allowed the name to be shown on this site).

The Open311 v2 attribute agency_responsible is used to list the administrations that received the problem report, which is not quite the way the attribute is defined in the Open311 v2 specification.

With request searches, it is also possible to search for agency_responsible to limit the requests to those sent to a single administration. The search term is the administration ID provided by MapIT.

Examples:

- discovery_information
- list of services provided
  - http://barnet.fixmystreet.com/open311/v2/servicexms.list.xm?jurisdiction_id=Enfield
Open311 Server from Miami-Dade County
Open311 on uReport CRM from Bloomington
GeoReporter

By City of Bloomington

Open iTunes to buy and download apps.

Description

GeoReporter is an Open311 constituent reporting tool. GeoReporter should work for any organizations with an Open311 GeoReport v2 compliant endpoint server.

City of Bloomington Web Site » GeoReporter Support»

iPhone Screenshots

Bloomington, IN

No Service WiFi 11:07 AM

My Servers

Bloomington, IN
https://bloomington.in.gov/report/open311...

Boston, MA
https://mayors24.cityofboston.gov/open311...
Rolling out #Open311 and #ServiceTracker w @CodeForAmerica. Track services, get email updates, and submit pics. bit.ly/ata7Qd
Find out the status of your 311 service request

Request #, e.g. 12-01637177

Don't know your service request number? Call 311.

Recent Service Requests

<table>
<thead>
<tr>
<th>Request</th>
<th>Service Description</th>
<th>ID</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>#12-01637177</td>
<td>Street Lights All / Out</td>
<td>#12-01637177</td>
<td>1 hour ago</td>
</tr>
<tr>
<td>#12-01637174</td>
<td>Traffic Signal Out</td>
<td>#12-01637172</td>
<td>1 hour ago</td>
</tr>
<tr>
<td></td>
<td>Pothole in Street</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WARD: 2

OPENED: 2766
CLOSED: 2411

WARD: 3

OPENED: 1286
CLOSED: 978

# of service requests open for over a month
WARD: 2: 265
WARD: 3: 178

Average # of days to close a service request
WARD: 2: 16
WARD: 3: 16

Time of day when service requests are usually closed
WARD: 2: Afternoon
WARD: 3: Afternoon
WELCOME TO 311 LABS
Pushing the boundaries of civic data - one service request at a time

FEATURED APP:

The Daily Brief
Get a snapshot of what is going on in your city now based on Open311 data.

Check out cities that are currently using it:
Call center relevance?
Telephone & SMS Accessibility from a web API?
Speech Enabling Open311

August 9th, 2011 by Mark Headd

Since SpeechTEK is this week, I thought it was a good time to update a post I did several months ago on using speech recognition to capture a street address.

There are lots of reasons why you might want to collect a caller’s address over the phone.

In open government circles, there has been a lot of interest lately in using automated IVR systems to help gather non-emergency service requests for municipalities. This makes a lot of sense — many municipalities enable non-emergency service reporting through the use of a designated abbreviated dialing number — 3-1-1 — so there is a long history of reporting these issues using the telephone.

Address collection is used quite often in IVR systems, but typically relies on expensive proprietary or “black box” components that might not be suitable for all use cases. This is particularly true for municipalities and local governments who are under financial pressure and who need to do more with less.

In this post, I’ll show how to build a sophisticated address collection system that can be used for almost any city or town, large or small. All of the code for this example is on GitHub (and under active development) and many of the components I will use are free or open source.

Here is a screen cast demonstrating the system running on the Tropo platform.
Open311 Specifications

✓ GeoReport v2
✓ Inquiry v0.1
✓ Ideation: Answers/suggestions

Service Requests
FAQ Knowledgebase
Open311
&
OpenReferral (211)
Open311 & NextGen 911
Open311
&
NG 911 location

- Dispatch Location
- Requester Location
“That’s how we rescued the 11,000 people, leaning in on how the public was self-selecting to use social media, because they couldn’t get through on 911 calls.”

“We decided for the next disaster, we can’t be a pick-up game. We have to be looking in advance what we need to develop.”

A good, first step would be some sort of national guidelines that describe how agencies can and should use social media to help federal agencies during presidentially declared natural disasters, Stosz said.

“We need to come up with some kind of required national protocol for social media for geo-tracking and locating and targeting search and rescue,” she said. “We don’t have that yet.”

Vice Adm. Sandra Stosz
The Coast Guard’s deputy commandant for mission support

Source: Recent hurricanes have the Coast Guard rethinking social media’s role in rescue and response. Nicole Ogrysko, Federal News Radio, September 21, 2017
Thanks!
Open311
www.open311.org

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