NPR, Open Content and API’s

By Daniel Jacobson and Adam Martin

National Public Radio
Overview

- Background
  - Who is NPR?
  - History of NPR API
  - NPR’s API
    - Our Philosophies and Architecture
- API Stats and Usage
- NPR API Target Audiences
- Challenges in Building and Maintaining an API
- The Future of NPR API
Who is NPR?

- NPR (National Public Radio)
  - Leading producer and distributor of radio programming
  - *All Things Considered, Morning Edition, Fresh Air, Wait, Wait, Don’t Tell Me*, etc.
  - Broadcasted on over 800 local radio stations nationwide

- NPR Digital Media
  - Website (NPR.org) with audio content from radio programs
  - Web-Only content including blogs, slideshows, editorial columns
  - About 250 produced podcasts, with over 600 in directory
  - Mobile sites
  - Syndication
History of API

- Launched at OSCON last year
- Features Added in December, 2008
  - Mix Your Own Podcasts
  - Station Finder API
  - More content: Fresh Air, StoryCorps and Most Emailed stories
  - Improved query-ability (added requiredAssets)
- Coming this Monday…
  - All transcripts
  - Extended the MP3 audio archive back to 2001 (previously 2005)
  - Even more improved query-ability (mediaId and multimedia)
http://www.npr.org/api/queryGenerator.php
What is Different about NPR’s API?

- No rate-limiting
  - We don’t want to limit developers
- All stories that can be found on NPR.org (…almost)
  - Can’t distribute those we don’t have the rights to
  - Can’t distribute some stories in different systems
- Full text for all available stories
- Audio assets in a range of formats, including downloadable MP3
- Currently 8 outputs with more on the way…(NPRML, JSON, RSS, etc)
- Built completely in-house (not using an API vendor),
Philosophy of NPR Digital Media

- Build Content Management tools, not Web Publishing tools
  - COPE (Create Once Publish Everywhere)
  - Separate content/data from display/presentation
  - Content is modular/portable – HTML Addressing (tags separate from content)

- Understand Your Atom
  - Story is the Atom of NPR
  - Stories contain ‘Types’ and ‘Assets’
  - Stories belong to ‘Lists’

- Know When to Build and When to Integrate
  - Core systems built and/or managed internally
  - Other systems depend on cost/benefit
  - When possible, use Open Source solutions
Central Oracle 10g Database
(planning to migrate to an open source database)
Custom Built CMS
External Facing Templates
(including all transforms and presentations)

DATA ENTRY LAYER

DATA MANAGEMENT LAYER

DATA TRANSFORM LAYER

PRESENTATION LAYER

Database

Content Management System

XML Representation of Data (NPRML)

Editor1

Editor2

Editor3

Automated Script1

Automated Script2

NPR.org Transformation Engine

Mobile Transformation Engine

PDF/PSD Transformation Engine

Podcast Transformation Engine

RSS Transformation Engine

API Transformation Engine

FUTURE Transformations For Unknown Outputs

SimpleXML

NPR.org Page

Mobile Pages

HD Radio Display

Podcast Episode

RSS Feed

API Feed

FUTURE Other Unknown Outputs

Internet Responses

PHP5
Caching and Performance
High-Level Stats

- Over 2,000 registered users
- Over 24M external requests
- Average more than 2M per month
- More than 3M in June
- Roughly 10% growth in requests each month since October, 2008
- Over 50% of requests are for NPRML
- Almost nobody uses Atom (less than .1%)
- ‘Widgets’ account for roughly 20% of requests
- Podcast output is not as popular as expected (only about .15%)
Target Audiences for the API

- **NPR**
  - Supports the entire infrastructure of our new site
  - Improvements to CMS to enable custom feeds by Editorial and Design
    - Custom Podcast and Topic Feeds
- **Stations**
  - Enables us to serve content to our member stations more easily
  - Enables our stations to serve their communities better
- **Partners**
  - Created new opportunities because - easy to implement with very little integration cost
  - Made existing opportunities easier to maintain and grow
- **Public**
  - Engages the community – part of NPR’s Public Service Mission
  - Lots of great widgets, tools, sites built using the API
NPR
Mix Your Own Podcast is a tool that allows you to build your own podcast based on mashups of search terms, programs, topics, NPR personalities, and other lists found in the NPR API.

Enter the title of your custom podcast

Type in terms that the system knows about (e.g., Fresh Air)

Type in your own search terms (e.g., comedy)

Output from your query terms

Direct links to iTunes/Zune and the Podcast URL
Manage API Resources

Add/edit resource

Internal title *
Daniel's Simple Query

Display title
My Awesome Simple API Query!

Search query *
Fresh Air from WHYY
Movies

Sort order
Oldest first

Number of results
5

Display style
Simple

* = required

My Awesome Simple API Query!
Film Critic John Powers on 'Ocean's Eleven'
Screenwriter Mike White
B-movie actor Bruce Campbell
Actor Sean Penn
Actor Clint Eastwood
API Query *

My Awesome Custom API Query!

Display style: Simple

My Awesome Custom API Query!
Film Critic John Powers on 'Ocean's Eleven'
Screenwriter Mike White
B-movie actor Bruce Campbell
Actor Sean Penn
Actor Clint Eastwood
Covering The Front Lines Of War In Afghanistan

July 14, 2009

The new U.S. offensive in Afghanistan launched earlier this month is meant to bring stability to a region that has been a stronghold for the Taliban.

About 4,000 Marines are engaged in the largest American military operation in years. They are focusing on rooting out the Taliban in Helmand province in the southern part of the country.

Two NPR staffers All Things Considered producer Graham Smith and staff photographer David Gilkey are traveling with Marines with the 2nd Battalion, 8th Regiment. The unit, known as "America's Battalion," is part of the massive operation.

They have just returned from Helmand province and spoke to NPR from Kabul, the Afghan capital.

Madeleine Brand: I understand that you were split up. You were with two separate companies and have two distinctly different stories.

Graham Smith: I went in with a group called Fox Company. There are three different infantry companies and we were assigned as the forward element of Fox Company. The mission was to work with the Afghan National Police to try to create stability in the region. As we drove into the area, we began to hear mortar and rocket fire. This continued for about an hour and a half. Then they started firing into our position. It got very intense very quickly.

David Gilkey: I was with the 2nd Battalion, 8th Regiment. We've been here a little more than a month. It's been a very intense time. We've been fighting all over the place. We've been hit by mortar, we've been hit by IEDs. It's been very intense. We've been living in the field for a little over a month. We've been sleeping in tents, living in foxholes, eating MREs for a little over a month. It's been a very intense time for us.

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Will New Surgeon General Make A Difference?

Essentially, she is the public relations person for other people making the important decisions.

Obama Pivots On Economy: No More Blame-Game

For months, the White House laid the economic crisis at the feet of President George W. Bush.

Rep. Reyes: CIA 'Deliberately Lied' To Intel Panel

House Intelligence Committee chairman says he thinks the CIA violated the National Security Act.

most hear

Dress Code Seen As Discriminatory

"I don't look like everyone else here."

Design Within Reach
Merchants of Modern Design™

most popular

1. South Carolina Governor Says He Was 'Unfaithful'
Clinton Emerges, Reasserting Her Diplomatic Stature

Morning Edition
Jul 16, 2009 | More on NPR.org

Hillary Clinton's recent absence led some to question whether she was being eclipsed by her boss.
STATIONS
MPR newsQ
Minnesota’s Online Source for News That Matters

All Things Considered®
with Tom Crain in St. Paul

Monday, July 13, 2009

MINNESOTA PUBLIC RADIO STORIES

NATIONAL PUBLIC RADIO STORIES

Sen. Grassley: Sotomayor Off To ‘Good Start’
Republican Sen. Charles Grassley of Iowa, a member of the Senate Judiciary Committee, discusses the start of confirmation hearings for Supreme Court nominee Sonia Sotomayor. “She was very positive in saying today that fidelity for the law is going to be her benchmark,” he says.

Rubble Removes, But Gaza Waits For Reconstruction
Six months after the Israeli assault on Gaza Strip ended, the U.N. has launched a $12 million project to clear away the rubble, but there is no indication when a reconstruction will start. Israel continues to block cement, steel and other building materials from entering Gaza.

How To Choose The Right Camera For You
NPR's multimedia director Keith Jenkins gives tips as to whether your camera

Politics

Community colleges get boost from federal money
Cash-strapped community colleges in Minnesota are poised to benefit from a multi-billion-dollar investment. President Obama will announce Tuesday afternoon to help two-year institutions nationwide.

Polinault Blog
Bachmann sings?
1:20 p.m.
Rep. Michele Bachmann gets crossed with Cher, sort of

Policast
Policast for July 14, 2009
Minnesota’s senators talk to Sotomayor; no consensus on health care changes

FROM MPR
CIA, Cheney, Congress And Torture
Special Coverage:
Sotomayor Hearings
Sotomayor Defends ‘Wise Latina’ Comment
Administration Would Like To Move Past Torture
Lawmakers’ Knowledge On CIA Limited By Design
Abortion Issue Could
Sotomayor Shows She's No Shrinking Violet

By Liz Halloran
Published July 14, 2009 2:07 PM

Sonia Sotomayor has been described as a judge who doesn’t hesitate to challenge lawyers to back up their assertions or to engage from the bench in the finer points of law and precedent.

Put it this way: No one who has seen her in action has ever described the Bronx-born Sotomayor, 55, as a milquetoast during her 17 years as a district and an appeals court judge.

That straight-up judicial personality was on full display Tuesday as the nation — and senators on the Senate Judiciary Committee — got their most extensive view yet of the woman on track to become the first Hispanic member of the U.S. Supreme Court.

President Obama’s first nominee to the high court remained unflappable, almost compulsively taking notes, during a barrage of aggressive and persistent questions from Senate Republicans about her most controversial decisions and off-bench statements, most regarding her Puerto Rican ethnicity.

But she did not hesitate, in responses forceful and deliberate, to push back on assertions made by GOP senators whom she suggested were making broad generalizations about her past, narrower court decisions on issues ranging from gun control to reverse discrimination.

And she rebuffed repeated suggestions by ranking Republican Sen. Jeff Sessions of Alabama that her past statements strongly hint that ethnicity and gender would color her decisions as a member of the high court.

“I believe my record of 17 years demonstrates fully that I do believe that law — that judges must
Top Stories from NCPR News

TUESDAY, JULY 14, 2009

Border re-opens; Mohawks not alerted

Listen to audio | Download audio (2:10)

For the first time in six weeks, the general public could cross the border between Massena and Cornwall, Ontario yesterday morning. Canada set up a temporary checkpoint on the Cornwall end of the bridge. The move brought relief to a region that’s been hammered economically by the closure. But it also raised new questions about long-term fixes for the port of entry. David Sommerstein reports.

Green groups merge to "Protect the Adirondacks!"

Listen to audio | Download audio (4:45)

Two of the best-known green groups in the Adirondack Park announced a merger yesterday. Following a weekend vote in Lake Placid, the Association for the Protection of the Adirondacks and the Residents Committee to Protect the Adirondacks have joined forces. The new group will be called "Protect the Adirondacks!" Martha Foley talked with Adirondack Bureau Chief Brian Mann about how the merger may change the conservation landscape in the park.
PARTNERS
# NPR Mobile Apps

<table>
<thead>
<tr>
<th>NPR SYMBIAN APP</th>
<th>PUBLIC RADIO PLAYER</th>
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<tr>
<td><img src="image1.png" alt="NPR SYMBIAN APP" /></td>
<td><img src="image2.png" alt="PUBLIC RADIO PLAYER" /></td>
</tr>
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**NPR SYMBIAN APP**
- **Sotomayor Shies Away From Hot-Button Issues**
  - From abortion and gun rights to gay marriage and assisted

**PUBLIC RADIO PLAYER**
- **Walter Cronkite**
  - Bernard Shaw Remembers Walter Cron...
  - From The Archives: Cronkite, Live Via ...
  - Final Words: Cronkite's Vietnam Com...
  - Bob Edwards Weekend: Linda Lotrigd...
  - From The Archives: Cronkite, Live Via ...
  - WFMU's The Dusty Show with Clay Pig...
  - Week In Review With Daniel Schorr

- **Wyoming Public Radio**
Yahoo! Widget and iGoogle Gadget
PUBLIC
Perl and Ruby Code Wrappers

Net::NPR::Query
by allolex

A Perl module for querying the NPR (http://www.npr.org) for purposes, as long...

Net::NPR::API is a Perl module that allows you to access NPR content. The content is free to use for any purpose. You can find out more about the API by visiting the provided URL.

Dependencies
JSON, WWW::Mechanize

Install
perl Build.PL .Build .Bundle

README.txt
Path: README.txt

Ruby-NPR
by Tiffani Bell (tiffani@thinkpositive.com)
http://the.commented.it

How do I install?
sudo gem i rubynpr

How do I get started?
@client = NNR::Client.new(:api_key => 'your NPR API key')

Pass a new Client instance your NPR API key which you can get here.

Accessing Stories
Use the Client#query method to find content by accessing stories directly or via lists of stories from specific NPR topics.
$client.query(:id => 959659641)

Client#query always requires the :id option and in this particular case, this accesses a story directly. The Story is accessible from $client.results.list[0].

Client#query accepts a single ID value (for either a story or a topic), as above, or a list of IDs in the form of an array.

See Client#query for more details.
Goosebumps And Guffaws In Stine's 'HorrorLand'


Keywords: children • 1990 • gold • copies • R.L. Stine • Goosebumps • HorrorLand • emGoosebumps

Iraq Seeking Doctors To Rebuild Health System

Oct 31st, 2008 • The war in Iraq has driven out much of the country's intellectual capital, including engineers, administrators and doctors. The health care system has been hit particularly hard, and the Health Ministry is offering high pay and...
Ten Teens Study To Guard Their Native Language
Rural, Salt Lake City, UT, US
Shoshone is one of many American Indian languages that is in danger of becoming extinct. But 10 Shoshone high school students from rural Idaho, Utah and Nevada hope to become future guardians of the language. This summer, they're spending six weeks at the University of Utah for the Shoshone Youth Language Apprenticeship Program. Jenny Brundin of member station KUER in Salt Lake City reports.
NPR

- Barack Obama's Grandmother Dies - Mon, 03 Nov 2008
- NPR
- All Things Considered

Some Chicagoans will go to great lengths to get tickets to the Barack Obama event in Grant Park on election night. On Tuesday, 1 million people are expected to descend on Chicago's Grant Park where Obama will hold an election night rally.
Challenges in Maintaining API

- Redesign
  - Forced architectural changes
  - Maintained backward compatibility in API
  - Need to modify base XML to support new features of Redesign
- Terms of Use
  - Growing Usage Means More Requests
  - More systems dependent on it
  - Partner relationships (and legal contracts) depend on availability
  - Unexpectedly required an SLA
- Stations have needs that were unforeseen
The Future of the API

- Releasing on Monday
  - Full transcripts to all stories in the archive
  - More MP3 files for our deep archive
- Releasing over time
  - Video
  - Blogs
  - Improved image availability and sizing capabilities
  - More station content
  - PBCore
  - NewsML
Questions?

- Daniel Jacobson
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Twitter: @daniel_jacobson

- Adam Martin
amartin@npr.org | Twitter: @adamjmartin

To see the API:  http://www.npr.org/api
To follow the API development: http://www.npr.org/blogs/inside